

**CABINET OFFICE
HISTORICAL SECTION
LIBRARY**

Catalogue No. C. 15

Copy No. 2

NOTE

**To be returned to
the Chief Clerk, Historical Section**



HISTORY OF
THE SECOND WORLD WAR

UNITED KINGDOM CIVIL SERIES

Edited by SIR KEITH HANCOCK

The authors of the Civil Histories have been given free access to official documents. They and the editor are alone responsible for the statements made and the views expressed.

MERCHANT SHIPPING AND THE DEMANDS OF WAR

BY

C. B. A. BEHRENS

Fellow of Newnham College, Cambridge



LONDON: 1955

HER MAJESTY'S STATIONERY OFFICE
AND
LONGMANS, GREEN AND CO

First published 1955

Crown Copyright Reserved

HER MAJESTY'S STATIONERY OFFICE

London: York House, Kingsway, W.C.2 & 423 Oxford Street, W.1
Edinburgh: 13a Castle Street Cardiff: 109 St. Mary Street
Manchester: 39 King Street Bristol: Tower Lane
Birmingham: 2 Edmund Street Belfast: 80 Chichester Street

LONGMANS, GREEN AND CO LTD
6 and 7 Clifford Street, London, W.1
Boston House, Strand Street, Cape Town
531 Little Collins Street, Melbourne

LONGMANS, GREEN AND CO INC
55 Fifth Avenue, New York, 3

LONGMANS, GREEN AND CO
20 Cranfield Road, Toronto, 16

ORIENT LONGMANS, LTD
Calcutta, Bombay, Madras
Delhi, Vijayawada, Dacca

Price £1 15s. od. net

CONTENTS

	<i>Page</i>
EDITOR'S NOTE	xv
FOREWORD	xvii

PART I: THE PRE-WAR PLANS

CHAPTER I: THE PROBLEM OF PLANNING FOR WAR IN THE NINETEEN-THIRTIES	
i. Shipping	1
ii. United Kingdom Ports	10
<i>Appendices I-VII</i>	17
CHAPTER II: THE PRE-WAR ASSUMPTIONS AND PREPARATIONS	
i. The United Kingdom Ports	24
ii. Shipping	34

PART II: FROM THE OUTBREAK OF WAR TO THE FALL OF FRANCE

CHAPTER III: FROM THE OUTBREAK OF WAR TO THE GERMAN INVASION OF THE WEST: THE TASK OF SUPPLYING THE UNITED KINGDOM	43
<i>Appendices VIII-X</i>	69
CHAPTER IV: FROM THE GERMAN INVASION OF THE WEST TO THE FALL OF FRANCE	
i. The French Demands	72
ii. The Threat to the Ports	80
<i>Appendices XI-XIII</i>	85

PART III: FROM THE FALL OF FRANCE TO PEARL HARBOUR

CHAPTER V: THE CALM BEFORE THE STORM	
i. The Ships of the Conquered Nations	91
ii. The Shape of Things to Come	104
<i>Appendices XIV-XVIII</i>	112

	<i>Page</i>
CHAPTER VI: THE BATTLE OF THE PORTS	
i. The Ships with Cargo	126
ii. The Ships in Need of Repair	142
<i>Appendices XIX-XXV</i>	146
CHAPTER VII: THE CREWS	154
<i>Appendices XXVI-XXX</i>	178
CHAPTER VIII: THE FALL IN UNITED KINGDOM IMPORTS AND THE APPEALS FOR AMERICAN HELP	188
<i>Appendix XXXI.</i>	201
CHAPTER IX: 'THE INDIAN OCEAN AREA'	
i. The Problems	202
ii. The Ports	206
iii. The Troopships and the W.S. Convoys	216
iv. The Civil Demands and the Cross Trades	225
<i>Appendices XXXII-XL</i>	241
CHAPTER X: THE SHIPPING SITUATION BEFORE AND AFTER PEARL HARBOUR	250
<i>Appendices XLI-XLII.</i>	264
PART IV: FROM PEARL HARBOUR TO THE DEFEAT OF THE SUBMARINES	
CHAPTER XI: THE TROOPSHIPS, JANUARY TO JUNE 1942	269
<i>Appendices XLIII-XLVI</i>	277
CHAPTER XII: THE BEGINNINGS OF THE ANGLO-AMERICAN ALLIANCE	284
<i>Appendices XLVII-L</i>	293
CHAPTER XIII: THE CARGO SHIPS AND THE MILITARY DEMANDS, FROM PEARL HARBOUR TO THE NORTH AFRICAN CAMPAIGN	297
<i>Appendix LI</i>	309
CHAPTER XIV: THE EFFECTS OF THE NORTH AFRICAN CAMPAIGN AND THE BEGINNINGS OF THE WORLD SHIPPING CRISIS	312
<i>Appendices LII-LV</i>	323

CONTENTS

vii

Page

CHAPTER XV : 'THE SHORTAGE OF SHIPPING A STRANGLE- HOLD ON ALL OFFENSIVE OPERATIONS'	328
<i>Appendix LVI</i>	336

CHAPTER XVI : THE SHORTAGE OF SHIPPING A STRANGLE- HOLD ON ESSENTIAL CIVILIAN SERVICES	340
<i>Appendices LVII-LIX</i>	354

PART V: FROM THE DEFEAT OF THE SUBMARINES TO THE END OF THE WAR

CHAPTER XVII: PLANNING FOR VICTORY: THE WORLD SHIPPING BUDGETS	
i. The Problem	359
ii. The United Kingdom Import Programme	362
iii. Combined Strategy	366
iv. The Future Prospects and the Demands of the Overseas Territories	373
<i>Appendices LX-LXII</i>	378

CHAPTER XVIII: THE PROGRESS TO VICTORY IN THE WEST	
i. The 'Not Unmanageable Deficits' and the Search for Economies, May to August 1943	386
ii. The 'Surpluses' and the Invasion of the West	392
<i>Appendix LXIII</i>	408

CHAPTER XIX: THE 'UNMANAGEABLE DEFICITS' AND THE CRISIS OF THE ANGLO-AMERICAN ALLIANCE, SEPTEMBER 1944 TO FEBRUARY 1945	
i. From the Quebec ('Octagon') Conference to the Completion of the Washington Survey, Septem- ber 1944 to January 1945	409
ii. The Argonaut Conference	416
<i>Appendices LXIV-LXIX</i>	419

CHAPTER XX: THE END OF THE CRISIS AND THE ACHIEVE- MENTS OF THE ANGLO-AMERICAN SHIPPING ALLIANCE	431
<i>Appendix LXX</i>	452

GLOSSARY OF TECHNICAL TERMS	465
---------------------------------------	-----

INDEX	469
-----------------	-----

APPENDICES

	<i>Page</i>
I. Changes in world tonnage, 1914-37	17
II. Note on the use of the term carrying-capacity and on the factors by which carrying-capacity was determined in different periods of the war	18
III. World tonnage laid up, 1929-38	21
IV. British new building, 1910-13 and 1918-38	22
V. British tankers 1914 and 1938	22
VI. Distribution of imports by port areas, 1927-29 <i>facing p.</i>	22
VII. World tonnage by flag, 1939	23
VIII. Dry-cargo merchant shipping under British control, 1,600 gross tons and over, 3rd September 1939 to 30th September 1945	69
IX. Estimated dry-cargo imports in the first year of war assuming that Germany had not attacked in the West	70
X. Review of import programme April 1940	71
XI. Ships in the French coal trade and tons of coal loaded for France and North Africa from the United Kingdom, September 1939 to May 1940	85
XII. Note on the amount of British tonnage allocated to France and the consequent loss of imports to the United Kingdom	86
XIII. The extent of the diversion of shipping from the east coast to the west in October 1939	87
XIV. Approximate proportion of the Belgian, Dutch, Danish and Norwegian ocean-going dry-cargo fleets captured by the enemy in 1940	112
XV. Foreign dry-cargo ships, 1,600 gross tons and over, under British control (other than United States and Canadian ships transferred to the British flag) in service and lost at various dates	113
XVI. Note on the estimate of port capacity of September 1940	119
XVII. Net losses and importing-capacity in the second year of war	120
XVIII. The Ministry of Shipping's estimate of importing-capacity of 1st August 1940	121
XIX. The loss of imports due to delays in port in the winter of 1940-41	146
XX. Percentage increase or decrease in tonnage arriving in the west coast port areas	147
XXI. Note on inland sorting depots	148

CONTENTS

ix

	<i>Page</i>
XXII. Estimated loss of shipping in Liverpool and Birkenhead from various causes resulting from the raids on 1st-8th May 1941	151
XXIII. Number of ships in the Port of London, January to June 1941	152
XXIV. Departures of shipping in the foreign trade, Liverpool and Manchester, January-August 1941	152
XXV. British and British-controlled dry-cargo vessels, 1,600 gross tons and over, repairing, damaged, or not in use	153
XXVI. Deaths among the crews of merchant ships that were lost by enemy action	178
XXVII. Nationality of seamen, other than Lascars, employed on 15th June 1936 in sea-going vessels (except yachts and fishing vessels) registered in the United Kingdom, the Isle of Man and the Channel Islands	179
XXVIII. Deaths among British merchant seamen, excluding Lascars, due directly to enemy action, and estimated deaths and 'permanently damaged lives' due indirectly to enemy action	181
XXIX. Loss of importing-capacity because of delays to merchant ships as a result of crew difficulties	185
XXX. Note on the loss of merchant seamen to shore employment between the outbreak of war and the introduction of the Essential Work Order	186
XXXI. Net consumption of imported supplies	201
XXXII. Periods in 1941 when the Suez Canal was closed to through traffic	241
XXXIII. Tonnage employed in trooping (including tonnage under repair) and trooping-capacity 1st October 1941 to March 1944	242
XXXIV. Number of personnel carried per 1,000 gross tons	243
XXXV. Total personnel embarked from the United Kingdom in W.S. convoys (including civilians and ships' crews); August 1941 to the beginning of the North African campaign	244
XXXVI. Numbers and destinations of troops carried in W.S. ships	245
XXXVII. Troopships lost from all causes, 3rd September 1939 to 30th June 1943	246
XXXVIII. Egypt's principal imports, 1936-38 average, 1940 and 1941	247
XXXIX. Loss of imports to United Kingdom as a result of the shipment of civil supplies to the Middle East in cross trades other than from North America	248

	<i>Page</i>
XL. Entrances and clearances of overseas shipping on commercial services, with cargo and in ballast, Commonwealth of Australia	249
XLI. American help to British programmes in 1941	264
XLII. Sailings of British ships to North Russia, August 1941 to June 1945	265
XLIII. Principal troop movements in convoys other than W.S. convoys, last quarter 1941 to third quarter 1942	277
XLIV. Voyages of the 'Monsters'	279
XLV. Note on the causes of the increased rate of movement on the W.S. route, comparing the second half of 1941 and the first half of 1942	282
XLVI. Arrivals of United States personnel in the United Kingdom	283
XLVII. British and United States net gains and losses, dry-cargo ships, 1942 and 1943	293
XLVIII. Changes in employment of United States-controlled dry-cargo tonnage, 1st March 1942 and 10th October 1942	294
XLIX. Approximate amount of dry-cargo tonnage employed (wholly or primarily) in the service of the British armed forces, before the North African campaign	295
L. Sailings of United States and British-controlled dry-cargo ships to the Indian Ocean area in fulfilment of British programmes	296
LI. i. Shipments of military cargo from the United Kingdom to the Indian Ocean area (Middle East, Persian Gulf and India) in fulfilment of British programmes	309
ii. Shipments of military cargo from North America to the Indian Ocean area (Middle East, Persian Gulf and India) in fulfilment of British programmes	309
iii. Shipments of vehicles from United Kingdom to destinations other than the Indian Ocean area in fulfilment of British programmes	310
iv. Shipment of vehicles from India to the Far East, Middle East and Persian Gulf in fulfilment of British programmes	310
v. Shipments of vehicles from North America to destinations other than the United Kingdom and the Indian Ocean area in fulfilment of British programmes	311
LII. Sailings of British ships from the United Kingdom to North Africa, August 1942 to June 1943	323

CONTENTS

xi

	<i>Page</i>
LIII. Note on the military reserves in the Middle East	324
LIV. United Kingdom stocks of food (other than on farms) and of imported raw materials	325
LV. Note on the saving in shipping-space that resulted from the crating of vehicles	326
LVI. i. Personal letter from Lord Leathers to the Chiefs of Staff	336
and	
ii. Reply by Sir Alan Brooke, Chief of the Imperial General Staff, to Lord Leathers, 4th March 1943	339
LVII. Loadings of civil supplies for the Middle East other than coal (including supplies for the British forces) (a) from North America and the United Kingdom, (b) from other sources, 1941-45	354
LVIII. Note on the amount of shipping that would have been required to meet the demands for nitrates and for grain that could not be met in March 1943	355
LIX. Shipments of grain to India, 1942-45	356
LX. Specimens of British and United States shipping budgets	
i. The United States shipping budget presented to the Washington ('Trident') War Conference	378
ii. Estimate of British shipping availability presented to the Shipping Committee, 29th March 1943	379
iii. British shipping budget presented to the Cairo ('Sextant') War Conference, November to December 1943	380
A. Note on the budget and on the various forms of American help	380
B. The budget	381
LXI. Attempted assessment of the extent of the British and American shipping deficits at the Washington ('Trident') War Conference, May 1943	382
i. The British deficit	382
ii. The United States deficit	383
LXII. Approximate amount of United States help to British programmes in terms of tonnage in continuous employment	384
LXIII. Approximate percentage of vehicles carried across the Channel by tank landing craft and landing ships, and by merchant ships (M.T. ships) during 'Overlord', July 1944 to May 1945 (inclusive)	408
LXIV. United States help to British programmes, by quarter years, July 1944 to June 1945	419

	<i>Page</i>
LXV. Scaling down the British deficits	420
LXVI. The United States shipping budgets drawn up in Washington in January, and at the 'Argonaut' Conference in February 1945, in terms of tonnage in continuous employment	421
LXVII. i. Note on the extent of the waste of shipping in the British-controlled fleet	424
ii. Estimated extent of the annual rate of waste of United States dry-cargo tonnage at the beginning of 1945, as a result of the misuse of ships	425
LXVIII. Proportion of total United States requirements represented by civil requirements	428
LXIX. Message sent by the President to the United States Theater Commanders, 9th December 1944, instructing them to put an end to the more extravagant forms of waste	429
LXX. Documents to illustrate the problems of planning the use of deep-sea dry-cargo ships	
i. The programmes of requirements	452
The United Kingdom import programme by sources of supply, 23rd June 1944	453
The programmes of the overseas territories by sources of supply, 23rd June 1944 <i>facing p.</i>	454
ii. Allocation of tonnage, 1,600 gross tons and over	
A. Statistical data on the deployment of the fleet	455
Analysis of tonnage by area, 30th April 1944	457
Estimate (projection) of tonnage by area for six months ahead, 7th January 1944	458
Analysis of the port position in a theatre of war	459
B. Relating the programmes of requirements and tonnage	
i. Overall estimate of the relationship between demand and supply for nine months ahead (the British budget drawn up at the Cairo ('Sextant') War Conference, 7th December 1943)	459
ii. Estimates of the tonnage required for individual services for various periods ahead	459
For the cross trades	459
For the United Kingdom import programme <i>facing p.</i>	460
For military maintenance	461
For military operations <i>facing p.</i>	462

MAPS AND DIAGRAMS

	<i>Facing page</i>
1. Indian Ocean area	203
2. Route of Convoy W.S.10, sailed from United Kingdom 2nd August 1941	226
3. Route of Convoy W.S.18, sailed from United Kingdom 15th August 1942	274
4. Homeward voyages of ships in Convoy W.S.18	274
5. Diagram of a ship loaded with military cargo	314
6. Principal importing countries in the Indian Ocean area and principal imports of bulk commodities (other than oil)	354

ILLUSTRATIONS

Most of the following photographs are Crown Copyright and are reproduced by courtesy of the Imperial War Museum and the Ministries concerned. For permission to reproduce No. 1 the author is grateful to the Mersey Docks and Harbour Board; for No. 2 to the Port of London Authority; for No. 3, which is from the painting by A. J. W. Burgess, R.I., R.O.I., to Messrs. Scruttons Ltd., and for the fourth photograph of No. 7 to the Keystone Press Agency.

	<i>Between pages</i>
1. Transit sheds	14-15
2. Merchant ships discharging overside in the Port of London	14-15
3. Merchant ships discharging overside in the emergency port in the Clyde Estuary	154-155
4. Ships in convoy	154-155
5. British and Allied masters at a convoy conference	154-155
6. British merchant navy ratings	158-159
7. Atlantic toll	166-167
8. Types of British masters	174-175
9. Invasion of Europe: 'Mulberry' harbour	394-395
10. Invasion of Europe: merchant ships discharging cargo	394-395

EDITOR'S NOTE

AS WAS EXPLAINED in the Preface to *British War Economy*, the histories in this series deal with subjects rather than departments. The present history by no means covers all the activities of the Ministry of War Transport, nor indeed the relevant activities of some other Ministries which were much concerned with merchant shipping. It does not, for example, discuss merchant shipbuilding, which is dealt with in the war production volumes of this series. Nor does it discuss naval matters, except here and there in sketching the background, for these are dealt with in a companion series of war histories. Nor does it discuss tankers nor coastwise shipping. These last omissions may seem particularly strange, for both the tanker story and the coastwise shipping story belong most intimately to the war-time experience of the Ministry of War Transport. Nevertheless, from the standpoint of economic function, coastwise shipping can best be considered alongside the railways, roads and canals of this country; it belongs to the History of Inland Transport which Mr. C. I. Savage is preparing. Similarly, it has seemed to the editor logical, and on balance convenient, to absorb the tanker story into the History of Oil, for which Mr. D. J. Payton-Smith is responsible.

These various excisions take away a great deal. Nevertheless, they have left for Miss Behrens a large and very complicated theme, as she will explain in her own Foreword.

This history is published in a form somewhat different from that of the other books in the series; it contains many more appendices than do the others, and the appendices have been placed after the chapters to which they relate instead of being collected together at the end of the book. The nature of the theme seemed to make this procedure necessary. For the theme is the 'shipping situation', that is, the relationship between the supply of shipping and the large number of demands on it, and this relationship could only be established after long and detailed study of the statistics. The statistics often provided the only objective guide to the magnitude of the various problems, and in many cases they were the only test of success or failure. Without them the more conventional kinds of historical evidence would have been meaningless or unmanageable. This does not mean that the history is a study in statistics for the statistics were only one among many different sources of evidence. Moreover, they themselves would have been meaningless without the aid of the people who compiled them and by themselves they would be quite unintelligible to future generations. They were raw material for the historian to work upon; it seems proper, therefore, to include in the published text the tables that Miss Behrens compiled and the calculations that she based on them.

W. K. HANCOCK.

FOREWORD

IT MUST BE explained what this book is about. It is called 'Merchant Shipping and the Demands of War'. This means that the book is only concerned with one set of problems: with the tasks which the British-controlled fleet of merchant ships had to fulfil, with the extent to which it did in fact fulfil them, and with the principal problems to which the attempt to fulfil them gave rise.

This book is therefore something more than a history of merchant shipping, but it is also something much less. It is something more because it considers, although only in a broad and superficial way, the nature of the demands that had to be met, the measures that had continually to be taken to cut them down and adjust them to the supply of shipping, and the effects that cutting them down had on the course of the war. These questions have often taken the author into fields that must seem a long way removed from the sea and ships. But they are not in fact so far removed as might appear at first sight. For merchant ships exist to provide services for many different customers, and the only way of discovering how far they fulfilled their functions in war is to discover how their various customers fared.

Nevertheless the ships and those who serve in them have an interest in their own right. The men who serve in them are human beings and not merely means to ends; the ships themselves to those who know them do not seem merely means to ends; even the various organisations concerned with them during the war all had their own personalities and are interesting subjects of study from many different points of view—from the point of view of the lawyer, the statistician, the economist, the students of business or national administration, of government, and even, since many of the ships in the British-controlled fleet were foreign ships, of diplomacy and international relations. Indeed, during the war the British-controlled fleet of merchant ships touched the lives of so many nations at so many points that even that Jack-of-all-trades, the historian, can rarely have been faced with a subject that raises so many different kinds of problems.

But all these problems could not form the subject matter of one book. If all were to be given their due they would need many books, and indeed the files of the Ministry of War Transport provide the material from which many interesting books could be written if the skill to write them were forthcoming.

This book is therefore something much less than a history of merchant shipping because it is only one book and has only taken one set of problems into account, and because, moreover, editorial

policy, as the Editor has explained in his note, has required the author, when considering even these problems, to omit several that are relevant.

Moreover, the author is aware that, besides these omissions which were deliberate, many readers may find others that were inadvertent. The Director-General of the Ministry of War Transport once described the activities of his department as 'a great adventure and achievement'. But the adventure was of a complicated kind and the achievement, too, cannot be explained in simple terms. There is always a risk in such circumstances that if justice is done to the actors in the drama in one sense it will not be done in another; and that the grandeur of the adventure may be obscured in the endeavour to describe what it involved. Since the theme of this book is what used to be known during the war as 'the shipping situation' and, since the shipping situation was always the result of a large number of other situations that were of different kinds at different times, the author has been forced constantly to bring new groups of people on to the stage and then to remove them as soon as their particular stories ceased to form a part of the central story. In such circumstances there is always a risk that the various individual achievements may find too small a place because of the need to make clear the magnitude of the great achievement that was the sum of them all. The author has always been aware of these risks, and of her own inadequacies when faced with a task that needed a great writer to do it justice.

The author would like to express the deep debt of gratitude she owes to the Statistical Adviser to the Minister, Sir William Elderton, and to his deputy, Mr. John H. Gunlake. The book would never have got started and taken shape without the constant help and encouragement which Sir William provided, and without his wise judgment on many matters besides statistical ones. Mr. Gunlake, at a very great expenditure of time and labour, read the whole book through in draft form and checked all the calculations, though he is not responsible for the original data nor for any mistakes that may have crept into the final version when, as a result of his advice, the calculations were redone.

The author has many debts to acknowledge besides these. The work would never have been possible without the help not only of Sir William Elderton and Mr. Gunlake, who left the Civil Service shortly after she arrived, but of the officials who remained in the Ministry and, particularly, of the Permanent Secretary, Sir Gilmour Jenkins, whose constant encouragement, kindness and forbearance were principally responsible for the fact that the formidable task was finally achieved. The author also wishes to thank many people in the shipping and port industries for their help and instruction.

Among her research assistants she is indebted to Miss P. Bower, now Mrs. Mars, for much of the information relating to foreign ships that appears in Chapter III, and to Mr. John Williams who helped, among other things, to collect the facts relating to the D-Day operations. She is greatly indebted to Mr. R. J. Lawrence for his help in collecting some of the facts about the civil demands of the overseas territories which appear in Section iv of Chapter IX; this help was given at a crucial moment, and made it possible to complete within a reasonable time the scheme for the history as a whole. She acknowledges a particular debt to Mrs. Garrard, without whose unflinching competence, accuracy and reliability the mass of material would have proved unmanageable, and to her clerk, Miss Madeleine Ingham, who did all the typing, and much of the arithmetic and compiling of the tables, and who developed a skill in these various crafts that proved absolutely indispensable.

B. BEHRENS.

Newnham College,
Cambridge.

December 1954.

PART I

The Pre-War Plans

CHAPTER I

THE PROBLEM OF PLANNING FOR WAR IN THE NINETEEN-THIRTIES

(i)

Shipping

THE BRITISH are a seafaring nation and they cannot live or fight without ships. In all their wars for many centuries their strategy has been based upon sea-power—on the power, exercised by the Royal Navy in earlier wars and by the Royal Navy and the Royal Air Force in the last war, to defend these islands and the other Commonwealth territories from invasion and to keep the seas open, so that the populations and war industries of the Commonwealth, and particularly of the United Kingdom, can be nourished from abroad, and so that in due time British armies can strike at the enemy. But because one of the principal functions of British sea-power has always been to make available to these islands the resources of other countries and continents, while denying them to the aggressors on the European mainland, it is in its nature largely purposeless without merchant ships; for it is merchant ships that carry the food and raw materials from overseas on which the United Kingdom has increasingly come to rely, and that must bear a large part if not all of the burden of transporting British troops and their supplies to the theatres of war.

A flourishing Merchant Navy has in consequence seemed not only the barometer of British economic health, and a necessary means to it, but a prerequisite of national defence. Since the nineteenth century the state of their Merchant Navy has been a matter of greater importance to the British than to any other nation, because of the greater dependence of the United Kingdom on imported commodities, and because the United Kingdom is the principal ship-owning country of a Commonwealth largely dependent in peace and war on sea communications.

In the nineteen-thirties as the threat of war increased, the state of the Merchant Navy gave increasing cause for alarm. As a whole the period between the wars was a bad one for British shipping. It was, indeed, bad for all ship-owning countries, but worse for the British than for most. In general British owners suffered from

capital and operating costs higher than those of any other seafaring nation, the United States excepted. The tramp-owners laboured under an additional disability in the 'thirties because of the catastrophic fall in British coal exports, on which the prosperity of the tramp industry had originally been built up. To these were added the disadvantages created by the various forms of protection accorded to foreign ship-owners by their governments. Not only the totalitarian governments, but also the Scandinavian and French democracies and the United States, attempted to increase their share of the world's carrying trade by bestowing subsidies on their merchant fleets and by various other devices designed to serve the same purpose—for example, by regulations providing that certain categories of exports should only be carried in the vessels of the exporting country. In varying degrees the foreign seafaring nations of the world were reverting to the practices which had prevailed at the time of the Navigation Acts. The British Merchant Navy, on the other hand, received no protection of any sort, and no loans or subsidies before 1935—when those that were then provided were too little or too late to have significant results on the size of the fleet before war broke out.¹ On most of the world trade routes in the nineteen-thirties the British liner companies found their trade diminishing as a result of Scandinavian, Japanese, German and American competition. The tramp-owners, subject to peculiar difficulties of their own and exposed to the full effects of this competition since they had not even such protection as the liner conferences afforded to the liner companies, suffered even more severely.

The years 1930 to 1935 were the worst, it was claimed, 'ever experienced by British shipping'.² Between 1931 and 1933 from 3 to 3½ million gross tons of British shipping were laid up.³ The output of British yards, which between 1911 and 1914 had averaged approximately 2 million gross tons annually, never, in any year between 1931 and 1938, reached the 1 million gross tons mark, and in many years fell much below it.⁴ Between 1936 and 1938 things improved, but not enough to arrest the decline of the British Merchant Navy compared with the merchant navies of other nations. In 1914 nearly 48 per cent. of the world's merchant

¹ In 1935 the British Government made available for tramp-owners a subsidy of £2 million in that year and the next, and promised an equivalent amount in 1937 should freight rates fall below a certain point. At the same time it authorised loans on favourable terms up to a maximum of £10 million to assist ship-owners to build cargo tonnage on condition that they scrapped twice as much obsolete tonnage. Approximately 186,000 gross tons at a cost of just over £3½ million had been built under this scheme by the end of 1938. A second and more comprehensive scheme of assistance to ship-owners was formulated in 1939, but it was shelved on the outbreak of war.

² *Sixth Report of the Tramp Shipping Administrative Committee*, Cmd. 5750, 1938.

³ See Appendix III, p. 21.

⁴ See Appendix IV, p. 22.

tonnage was British; in 1937 the proportion was only 32.5 per cent.¹

Moreover in some significant respects the decline was absolute as well as relative. Taking all classes of ships together, the British Commonwealth possessed virtually as much tonnage in 1939 as in 1914; the figure was round about 20½ million gross tons in both cases;² but the tonnage registered in the United Kingdom—the only tonnage over which the British Government had any control—was about 1½ million gross tons less than in 1914; the tonnage registered in the Dominions had increased by about 80 per cent., from just over 1.6 million gross tons to nearly 3 million.³ These figures, moreover, do not distinguish between dry-cargo ships and tankers. Because of the increased demand for petroleum products, the tanker fleet increased between the wars. In 1914 less than 1 million gross tons of tankers was registered in the United Kingdom. In 1938 the figure was 2.7 million;⁴ and meanwhile the volume of dry-cargo tonnage, with which this narrative is concerned, had declined correspondingly. At the end of the nineteen-thirties the dry-cargo tonnage that could be brought under the control of the British Government on the outbreak of a future war was some 18 per cent. less than in 1914,⁵ while the population had increased, and consumed more imported commodities per head.

These were disturbing facts. Would the diminished volume of dry-cargo tonnage suffice to meet British needs in war? This question was inevitably asked when war became imminent, but in the nature of the case it was extraordinarily hard to answer, for the answer could only be expressed in terms of the relationship between a supply and a demand each compounded of many different elements, most of which were to a greater or less extent dependent on the others.

Admittedly there could be no doubt about the categories of demands that would have to be met. The United Kingdom would need ships to bring it the food and raw materials without which its populations could not live or work, and to carry its commercial exports; the Fighting Services would need ships for various purposes, including the transport of troops and their equipment to the theatres of war; other nations and territories would have claims on the United Kingdom's ships—the Colonies, for example, the Dominions

¹ See Appendix I, p. 17.

² See Appendix I. See note to Appendix VII, p. 23, for the apparent discrepancy between this Appendix and Appendix I.

³ See Appendix I.

⁴ See Appendix V, p. 22.

⁵ This figure, which is only roughly correct, has been arrived at by subtracting from the figures for United Kingdom registered tonnage in 1914 and 1937 (given in Appendix I) the tanker tonnage registered in the United Kingdom in 1914 and 1938 (given in Appendix V).

whose small merchant fleets were insufficient for their own requirements, the French, to whom the British had had to lend ships during the First World War and whom, it was clear, they would have to help again.

It could not, however, greatly illuminate matters to state the problem in such a general way. What would all these needs amount to in terms of tons of commodities and numbers of troops to be transported from one place to another? The answers to this question could only be reached by means of a large number of separate yet inter-related calculations which could with difficulty be embarked on—if indeed they could profitably be embarked on at all—without some reasonably clear idea of how much it would be possible to transport.

Yet, on the other hand, how much could be transported depended to a large extent on the nature of the needs; for even if one knew or could assume that x million tons of shipping would be available, one still would not know how much it would be able to import into the United Kingdom, and into the other countries to be supplied, and that it would be able to export to the theatres of war. In order to answer these questions the carrying-capacity of the fleet—that is, speaking roughly, the amount that it could carry, in a given period of time, to the destinations it would be required to serve—had to be taken into account. But carrying-capacity is determined by an enormous range of causes—of which an analysis is attempted in Appendix II—among others by the types of cargo to be moved; by the extent to which it is possible to combine them so as to make the best use of the ships' space and weight-carrying capacity; by the distances to be traversed; by the degree to which the various shipping services can be dovetailed in together. None of these things could be known until the needs were known.

Few if any tasks, in fact, can be so complicated as the task of determining the relationship between needs and resources in conditions such as these, where the answer to each question turns on the answers to most of the other questions. It is a task that can only be accomplished by the co-operation of a large number of authorities from the worlds of politics, administration and commerce; it demands a high degree of experience and judgment; it also requires statistical knowledge and skill. Many of the basic data must be statistical; the answer must be expressed in statistical terms.

In the nineteen-thirties, however, one of the most necessary pieces of statistical information was lacking. It was not known how much tonnage would be at the disposal of the Allies in the early stages of a war. This was not only because it was to be expected that ships would be sunk, and it is always impossible before a war breaks out to estimate correctly the results of enemy attack; it was also because

no one could say how many ships would be available even if enemy attack were left out of account. It seemed clear that the number must be something more than what was owned by the British and the French, but how much more? As a result of the Neutrality Acts nothing was to be expected from the United States, but the European shipping-owning countries which it was presumed would be neutral would be able to provide a certain, perhaps a large amount. In peace they were accustomed to carry a considerable part of this country's imports, for while the British Merchant Navy, still by far the largest in the world, had ships scattered all over the world,¹ roughly 44 per cent. by weight² of the commodities imported into the United Kingdom came in foreign (principally Scandinavian) ships, although their contribution was less than this proportion suggests because they mainly sailed on the shorter routes. Would war increase or diminish this proportion?

In 1937 the dry-cargo fleets of Holland, Belgium, Norway, Sweden, Denmark, Greece and Jugoslavia totalled roughly 8 million gross tons, that is roughly 49 per cent. of the British and French dry-cargo fleets combined.³ These countries would not be able to employ the whole of so large a quantity of shipping in their own services; the British blockade, it was to be assumed, would prevent the enemy from using any of it; but how much more than normal would the neutral countries need themselves in order to build up their stocks, as all countries seek to do after war has broken out? How much might the owners be forced to lay up because of enemy pressure or the dangers at sea?—for there will always come a point, however high the freights, when owners will not expose their ships nor crews their lives in a war in which they are not themselves involved. How much of what was left would the British be able to afford to charter for service to the United Kingdom? How much could they get by applying the various means of pressure open to them? How much, because the terms were too high and the pressure ineffective, would they have to relinquish to the safer traders and the higher bidders?

¹ There are unfortunately no statistics, except for the war years, to show the volume or proportion of British tonnage engaged in the trades of countries other than the United Kingdom. Professor Kendall, however, in the *Journal of the Royal Statistical Society* (Vol. CXI, Part II, 1948) estimated that 33·5 per cent. by value of the goods carried in United Kingdom registered ships in 1936 was carried in these trades—15 per cent. in trades between foreign countries, and 17·7 per cent. in inter-Commonwealth trades or in trades between the countries of the Commonwealth and foreign countries.

² This statement is based on a paper, written for the War Cabinet on 12th March 1941, which confessed that hitherto there had been no statistics by weight of the imports brought respectively in British and foreign ships. The paper estimated, however, that the peace-time average brought in foreign dry-cargo ships might be put at about 24 million tons, total British dry-cargo imports (see Chapter II, footnote 1 to p. 38) being on an average 55 million tons.

³ See Appendix VII, p. 23.

The answers to these questions, which were fundamental to the whole argument, could only be guessed. The guesses admittedly were no more likely to be wrong than many others that must be made in peace about the likely effects of war; there was, however, another major unknown of which even this much could not be said.

If one is attempting to discover the quantities of goods and the numbers of persons that will need sea transport, and how far it is likely that there will be enough ships for the task, what happens in port must be taken into account. Deep-sea dry-cargo ships ordinarily spend a considerable part of their life in port.¹ In war they may spend more and this may mean that a larger number will be required, since the time taken over the round voyage will increase. It may, however, mean exactly the opposite; for if the ports in any country become congested, that is reach saturation point, that country's need for ships diminishes. Any estimate of needs² and of carrying-capacity is therefore liable to be rendered valueless by port congestion.³

Even during the First World War there had been congestion not only in the French ports subjected to enemy attack but in the ports in this country which were not attacked at all, but merely disorganised by the unprecedented volume and types of cargo they had to handle. In the nineteen-thirties, particularly since heavy bombing was expected, it was to be supposed that these misfortunes would occur again. If they occurred how serious would they be? How long might they be expected to last?

Here, however, there could be not only no certain answers but not even any plausible assumptions except in the most general terms; for the causes that determine the capacity of the ports in any area (like the causes that determine the carrying-capacity of a fleet, of which the time spent in port is one of the most important) are so many and so closely inter-connected that even if the effects of enemy attack are left out of account, it is impossible to begin to estimate how much can move inwards and outwards unless one can first estimate what kind of cargoes have to be moved, and to and from

¹ Coasting ships, of course, spend a larger proportion because their voyages are shorter.

² i.e. if port capacity is a limitation on the ability to import, the kind as well as the quantity of commodities required will be different from what it would be otherwise, among other reasons because many processing facilities—e.g. sugar refineries and flour mills—are located in the port areas and will be unusable or incapable of being used to the normal extent. See Section (ii) to this chapter.

³ It is, of course, impossible for a shortage of ships and port congestion to occur together in the same place; by definition they are mutually exclusive; nevertheless it may very easily happen, and was frequently the case in many of the major ports of the world in the Second World War, that if there had been more port capacity there would have been a smaller need for ships. This must be true whenever ships are being worked unduly slowly for lack of the necessary facilities, but when nevertheless a state of congestion has not been reached. It is also true in such conditions as existed in the United Kingdom before the launching of big operations when ships had to be held idle in anchorages, because the number of berths available only permitted their being loaded in relays.

what inland destinations. An estimate of this sort, however, presents the greatest difficulties, and even the need for it was not recognised for a long time.

In the nineteen-thirties, therefore, to attempt to answer the necessary questions about needs and resources was to embark on a sea of uncertainties. Where the imponderables, and possible combination of imponderables, with which the Fighting Services had to reckon could be counted in tens, those that faced the authorities responsible for merchant ships could be counted in thousands at the least. Nevertheless, common sense and past experience made some predictions possible. They suggested that from the start of a war either ships, or port capacity, and probably both at once, would be scarce.

These misfortunes are likely at the beginning of a war because all the neutral states—as well as the belligerents if it is possible for them—will seek to import more than in peace for purposes of rearmament and stockpiling, and because even if the attack on ships is not severe precautions must be taken against it. Their introduction, as well as the attack when it comes, must to a greater or less extent disrupt existing routines and therefore slow down—perhaps very considerably—the processes of transport and distribution; and even when the dislocation has been overcome, the protective measures—for example convoys and evasive routeing—must cause ships to spend longer at sea than in peace, and must complicate port operations; for ships in convoy arrive in port together and in much larger numbers than is normal.

The experience of the First World War had shown the kind of action that is necessary in these circumstances. Whether imports are limited by lack of ships, or lack of port capacity, or both, the result must be the same—a shortage of supplies. If supplies are scarce, the Government must purchase and ration the essential commodities and their substitutes, and must acquire and build up the stocks that will be needed—in quantities much larger than in peace when there are regular shipping services and plentiful resources to draw on—in order to honour the rations and provide against the temporary interruption of sea-borne trade and other hazards of war. If ships are likely to be scarce the Government must requisition them in order to be able to direct their movements as well as to determine the freights they charge and the cargoes they carry; if port capacity is likely to be scarce there are, equally, certain precautions, that will be described elsewhere, that can profitably be taken.

Without these controls it will be impossible to ensure that ships will be available at the right moment for the services that need them, that the more rather than the less essential cargoes will be imported, and that scarce resources will be distributed fairly enough

to prevent the emergence of grievances that may disrupt national solidarity. Above all, without government control over ships and commodities it will be impossible to see far enough ahead to make the necessary plans. A government will become the victim of chance that cannot, for example, estimate the likely size of its stocks six months hence (and it cannot begin to make the estimate if stocks are in private hands and at the mercy of irregular shipments and irregular demands), or that cannot order the disposition of its merchant fleet as it sees fit. The elaborate planning which military operations demand in modern war will be wholly impossible without controls of this sort, and once a war has begun, whatever the appearances beforehand or to start with, no one can foresee what crises may develop, or how soon disaster may threaten.

The experiences of the First World War had also demonstrated that while government control is necessary, it is also necessary that it should be made as soon as possible as complete as the competence of the administration and the intelligence and discipline of the population will permit. A half-way house may have to be, indeed at the beginning must be tolerated, but only *faute de mieux*.

It had taken a long time to grasp this truth during the First World War. The immense variety and complexity of shipping and trading operations, and the obvious impossibility of their being comprehended by a single mind, fostered the belief in 'business as usual', and that the ship-owners and other business men concerned must be left to manage their own affairs—although the conditions in which they had to manage them bore increasingly little resemblance to the ones to which they were accustomed—unless it were obvious that they were not doing so to the national advantage.

The controls, in consequence, were introduced not only piecemeal, as was to some extent inevitable, but haphazard and behind the needs and possibilities. From the beginning there had been a shipping shortage, which grew progressively more acute with the mounting claims of the Allies on British tonnage and with the successes of the submarines. From the beginning the Government had had to take up ships for the Fighting Services and—in order not to bid up the market and to protect itself from rising freights—had requisitioned them at what were known as 'Blue Book' rates—that is, at rates fixed by a committee of Civil Servants and ship-owners that rapidly fell below the market rate. As a result, the owners of requisitioned ships found themselves at a disadvantage compared with the owners of free ships and in consequence, among other inconveniences, it became difficult to induce tramp-owners to undertake short voyages, since the shorter the voyage the greater the amount of time spent in United Kingdom ports, and it was in United Kingdom ports that ships were requisitioned. Because, therefore, the Government had

found it necessary to requisition for the Services, and to requisition at fixed rates, it became obliged very quickly to requisition tramps for the carriage of Canadian wheat, since an insufficient number of tramp-owners would otherwise have been willing to undertake the Atlantic voyage.¹ So the process went on. The immediate reason for each separate act of requisition varied from case to case, but the same fundamental causes operated in all cases. They were, first, the discrepancy between supply and demand which was small to start with but which gradually increased and gave rise to crucial shortages which had to be met in a hurry—and, secondly, the dislocations in the economic system which each measure of control created as it was imposed. The effect of these measures might be compared to the ripples which are produced when a stone is thrown into a pond. As the Government interfered at this, that or the other point with the normal operations of supply and demand, unforeseen reactions occurred throughout the economic system and these, in turn, produced fresh crises, and fresh interferences, until by the end of 1916 control was almost complete before it was adopted as a deliberate policy.

The deliberate policy that had been proved necessary in 1917 was an object lesson for the generation that had to plan for war in the nineteen-thirties, and it was a policy, inevitably, with international as well as national implications. In the First World War, it has been said, the French had appealed to the British for ships, and it was clear that they would do so again in a future war. There would thus have to be some sharing out of resources. But the First World War had taught—and the lesson was to be learned over again in the next—that no alliance between nations will work satisfactorily in shipping matters except by means of controls introduced on a national basis to start with. For if the economies of the suppliant nations are inadequately controlled, the suppliants will be unable to make a convincing case for their needs; they will either get too much or too little according to the degree of political pressure they can exert; but in either case the result will be injustice, and one or more of the Allies, in consequence, will suffer from grievances or misfortunes that may disrupt the alliance.

If, therefore, it was necessary in the nineteen-thirties that the British should prepare to introduce the necessary controls, it was equally or more necessary that the French should do the same, and indeed the argument could have been pushed further than this; for if the British and the French were to be short of ships the shortage would not be confined to them; it would affect—to a greater or less extent according to their dependence on seaborne trade—all the

¹ See C. E. Fayle, *Seaborne Trade*, Vol. II, Chapter 5.

countries of the Commonwealth and all those other countries, for example in the Middle East, whose destinies in war would be linked with theirs.

(ii)

The United Kingdom Ports

It is possible, it was said, to have too few ships to carry the cargoes that are needed, and yet too many for the ports to handle; it is possible that the ports may be able to handle as many as can be sent to them and yet that they will handle them so slowly¹ that a great deal of ships' time is wasted, with the result that more ships are needed to carry a given volume of supplies than would have been needed otherwise.

Throughout the First World War this country was apparently always afflicted by one or other of these misfortunes. During the first three months of 1917, when the submarine campaign had nearly reached its peak, and when ships were being sunk at a rate of over 3 million gross tons a year, it seems (if one takes the pre-war rate of discharge as a standard) that nearly as much imports were lost because of delays in port as could have been carried, in that period, by the ships that were sunk.²

Though many people were aware of these facts they were not publicised at the time, for their causes were so complicated, and they were so much less dramatic and horrifying than the loss of ships at sea, the reason for which everyone could understand, that they neither attracted public attention nor were capable of being easily

¹ If it is asked what is the criterion of 'slow', the answer is that there is no criterion that is generally valid, for (see Chapter VI below) the commodities to be handled (and cargoes vary very greatly in the time they take to load and discharge) may be different at different times and, equally, other circumstances, for which the port and transit authorities are not responsible, may change. Nevertheless it may happen, as, for example, in 1941 (see Chapter VI below) that the rate of turn-round improves greatly though other things remain the same. In such a case the rate of turn-round before the improvement may legitimately be described as too slow.

² This conclusion has been arrived at as follows:

(i) Assuming that losses were spread out evenly over the year, 3 million gross tons of shipping sunk meant, in the conditions of 1917, over 5 million tons less imports in that year. (See Sir William Elderton, *Shipping Problems 1916-1921*, p. 27.)

(ii) In the spring of 1917 the Shipping Controller estimated that 'the loss of carrying power through port delays [in the United Kingdom] was . . . equivalent to the shutting out of four to five million tons of imports in a year'. (See Payle, *Seaborne Trade*, Vol. III, p. 70). This statement was evidently based on the weekly statements which were kept from 1915 onwards, showing the 'average rate of discharge as compared with normal conditions'. It needs, however, to be stressed that the 4-5 million tons referred to can only represent a rough approximation—apart from any other reason because there can be no exact comparison between times spent in port by vessels, particularly liner vessels, in peace and war. Lord Maclay, however, had a very high reputation for accuracy and for never exaggerating a case. The estimate was no doubt as good a one as it was possible to make.

explained.¹ Indeed, it seems at first sight repugnant to common sense to suppose that an island that has a large number of ports and harbours, and that is not subject to enemy attack, can be short of port capacity at a time when its Merchant Navy is rapidly diminishing.

The advantages, however, which the British derive from living on an island are in this respect fewer than is often supposed. In spite of their numerous small ports and harbours the bulk of their imports comes through the ports in a relatively small number of estuaries. As the tables in Appendix VI to this chapter show, between 1927 and 1929, the only years for which figures in this form exist,² of the total average annual imports of 56.25 million tons, including petroleum products, approximately 15.4 million came through the Thames, 12 million through the Mersey, 10 million through the Humber, Tees and Tyne, and 8 million through the Bristol Channel. Apart from the Clyde (3.3 million) and the Firth of Forth (3 million), no other group of ports reached even the 3 million mark.

Except at a fantastic cost of money, labour and materials and the replanning of the whole system of inland transport, it would be impossible to distribute the bulk of the imports through any other areas. As will be shown later, except on a very limited scale ships can only be loaded and discharged in a port; the small ports cannot be used as substitutes for the larger ones because in the main they have not the depth of water nor the length of quays necessary to accommodate a large ship, nor the facilities for loading, discharging and sorting cargo, nor, supposing these difficulties could be overcome, the road and rail communications that would be necessary to convey the cargo to its destination.

The port and transit system of this country, in fact, that has developed to meet the needs of peace cannot easily be adjusted to those of war. During the First World War when there were heavy delays in port this was not because there were fewer berths, in relation to the number of ships, than was normal. It was because it was difficult to use berths for purposes for which they were not designed, and to prevent hitches and confusion when all the normal habits of the shipping and trading communities were disrupted.

It is not possible to describe here in any detail where the various types of cargo are normally handled in this country; the table in Appendix VI to this chapter, however, shows the main ports which received the principal imports of raw materials and foodstuffs at the end of the nineteen-thirties. It will be seen that some of these imports,

¹ Further, their effects were not cumulative. Nevertheless, of course, port congestion, if sufficiently prolonged, has the same effect as the loss of ships. That is, if ships cannot get into or out of port this must mean defeat.

² Comparable figures could, of course, be compiled for any year from those provided annually in the Trade and Navigation Returns.

notably wheat and, though to a less extent, timber, were fairly evenly distributed among the major ports. Others, however, were not. The bulk of imported meat and sugar, for example, went to London and Liverpool; a high proportion of imported iron ore to the Tees and Tyne; practically half the imported oilseeds to Hull.

These facts set certain inescapable limits to the extent to which cargoes normally received in certain places could be sent to others, and rendered any diversion difficult. They did this for three sets of reasons which correspond to the three processes which must be performed in port; the discharge of the ship, the handling of the commodities on the quays, and the removal of the commodities from the quays into store or to the consuming areas.

Cargoes are unloaded from ships by dockers operating mechanical appliances. In the case of certain commodities imported in bulk, of which minerals and grain are among the chief examples,¹ the appliances required serve one purpose only and the cargoes can only be discharged without them at an extravagant cost of time and labour. Bulk grain, for example, is sucked out of the ship's hold by elevators; ore is scooped out by grabs. Except in such cases, however, the ship herself can in normal circumstances provide the machinery necessary for discharge. She can unload her cargo with her own derricks quickly enough to prevent serious inconvenience, though not as quickly as if she had the help of shore cranes. She can, however, only do this if her cargo is of a type she was built to carry, and in war it frequently is not. In war there is the perennial problem of what is known as the 'heavy lifts', for war increases the number of heavy cargoes to be moved, and even in the United Kingdom, where the ports are probably as well equipped in general as any in the world, the number of heavy lift cranes may be insufficient to deal with them. Thus discharge in war is potentially a problem because the labour may be inadequate in numbers or skill—as will inevitably happen, for example, if dockers are drafted into or volunteer for the Services or work in factories—and because the mechanical appliances may be inadequate.

These difficulties, however, even if they occur, and they may well not do so at the beginning of a war, are relatively easy to cure. There is a maxim that runs: 'the ship can always beat the quay'—the cargo, that is, can always be got out of the ship more quickly than it can be dealt with afterwards. It is in the second of the operations described—that of handling cargo on the quay—that serious trouble is likely to start. This is an exceedingly complicated operation, which proceeds in peace in accordance with established routines, and if these routines are interfered with many difficulties

¹ Petroleum products constitute another important one, but, as already explained, will not be discussed in this volume.

result. There are certain kinds of commodities—for example, steel, flour, cotton, wool—which consist of different qualities and types. These qualities and types are distinguished one from another by means of marks placed on the cargo before it is loaded. When the cargo is discharged it has, as it is said, to be 'sorted to marks', which in the case, for example, of flour may be as many as twenty-four. General cargo presents similar but more complicated problems. General cargo is mixed or assorted cargo, consisting of miscellaneous items and packages of all sorts. It, too, needs to be sorted, as well as checked and passed through the Customs item by item. At the beginning of 1941 it accounted for 33 per cent., and as time went on for an increasingly larger proportion of the United Kingdom's total imports.

These various processes of checking and sorting, which in peace take place in sheds on the quays, can in war be greatly simplified and to some extent performed elsewhere. To simplify them, however, is not easy and will not be tolerated except in a crisis; to perform them elsewhere is not possible unless special facilities¹ are constructed for the purpose. As long as they have to be performed on the quays they require a great deal of covered space, but in war the available space may be inadequate. It will in fact be so if general cargo is sent to places unaccustomed to receive it and if the time needed to deal with it is increased because trading practices are thrown into confusion.

Here then are possibilities of a serious bottleneck. If the process of handling cargo on the quays is unduly protracted ships are delayed, for an incoming ship cannot discharge if the sheds and quays are filled with the cargo of the ship that has just sailed. In this country during the First World War, and again in the winter of 1940-41, ships lay idle for hours, days and even on occasions weeks, because of congestion on the quays.

The quays, however, are most likely to become congested because it is difficult to clear them. This may happen in the first place for lack of enough storage space in which to put the cargoes that are not needed immediately. It may also happen because the roads and railway lines are blocked, and this is a not unlikely state of affairs at the beginning of a war, particularly if there is heavy bombing; for large numbers of troops will have to be moved about and perhaps large numbers of civilian evacuees, and more commodities will need transport and may have to move over longer distances. The ports in this country normally serve in the main their own hinterlands;²

¹ These are inland sorting depots. See p. 14 and Chapter VI, pp. 139 and 148-150.

² Before the last war, for example, nearly 80 per cent. of Liverpool's imports left the docks by road because they did not have to travel long distances; of this 80 per cent. only just over 2 per cent. were delivered to dock railway stations; under 12 per cent. of Liverpool's total imports were distributed by rail.

if, therefore, London and the other east coast ports are closed, wholly or partially, as in the nineteen-thirties was supposed might happen after the outbreak of war, the eastern districts will have to be supplied, wholly or partially, from the west, and principally by means of a railway system never designed for such a contingency. For all these reasons, even if there are enough men and appliances to load and discharge the ships, and even if there are enough sheds in which to sort the cargo, and enough storage-space in the port areas to keep the quays clear when the rate of movement in and out is normal, if the rate of movement is greatly reduced the work in the port must slow down and may finally be brought to a standstill.

It is easy to state these propositions but extraordinarily hard before the outbreak of a war to see what action should follow from them. In the nineteen-thirties, it would have been natural to assume that if the east coast ports were closed the railways from the west would find themselves in difficulties, and that sooner or later more facilities would be needed for loading and discharging cargoes and for handling them on the quays, for many of the west coast ports were under-equipped.¹ But assumptions of this sort are not particularly illuminating. When the amount that can be spent on preparing for war is limited; when civilian claims, on complicated and insecure hypotheses, come into conflict with the claims of the Services based on hypotheses that are simpler and more convincing, the only relevant problem is which particular facilities, in which particular places, are demonstrably lacking and indispensable. Few questions, however, can be harder to answer.

In the nineteen-thirties there was a clear case for more storage accommodation inland; if all the ports, and not merely those in the east, were in danger of being bombed, there was a strong case for inland sorting depots² in the neighbourhood of the west coast ports, for the experience of the French ports during the 1914-18 war had shown that it is impossible to sort cargoes under heavy attack, and even if there is no attack, the process, which is a slow one, is better performed outside the port if congestion is likely. Apart, however, from certain air-raid precautions—the protection of key points and the duplication of vital machinery—these were the only physical needs that could have been foreseen; for all the operations that must take place in port, and between the time when the cargoes leave the port and when they reach their ultimate destinations, are parts of a continuous process of which no part can profitably be considered out of relation to the others. There can, for example, be

¹ See Chapter II.

² An inland sorting depot, as its name implies, is a collection of transit sheds situated not, as is customary, on the quays but at some safe distance away from them.

TRANSIT SHEDS



Inward cargo laid out for delivery in transit shed



Cargo being discharged from ship and moved into transit shed



Ship discharging overside into barges in the Port of London

no sense in providing more shore cranes, or more heavy lift floating cranes, without provisions to ensure that the work of handling cargoes on the quays will keep pace with the work of discharge; there can be no sense in providing means to speed-up work on the quays unless it can be assumed that adequate facilities will exist to clear them; yet no one can predict how the immensely complicated process of distribution is going to proceed in a future where even the commodities to be distributed and their relative proportions are largely unknown.

Nevertheless here, as in the wider problems of shipping, of which the port problem is only a part, though the physical needs may largely defy analysis the needs in the sphere of administration do not, even though for political reasons the necessary action may be hard or impossible to take. The confusion that must arise on the outbreak of war and that heavy bombing, if it occurs, must make worse, may clearly degenerate into chaos if the Government does not intervene. In the nineteen-thirties it was to be expected that if, for example, the Port of London were closed, the ships based on London would have to go somewhere else where their owners might well have no organisation to deal with them. When they turned up in, say, Liverpool or Glasgow, they might not be able to find a berth. Were they to be left there in idleness, making another target for the bombers, when perhaps their cargoes could more profitably be discharged than the cargoes of the ships that were preferred to them, or when, though their owners might not know it, there was room for them—or for some of the other ships—elsewhere? Clearly some machinery would be needed at the centre to survey the position in all the ports simultaneously, together with the transport position behind the ports, so that ships and cargoes could be sent to the most appropriate places; and if this much were needed then it would also be necessary that the Government should as soon as possible control the movement of all cargoes after they were discharged from the ships.

But if the Government were to assume these responsibilities, they would have to be carried out by a variety of Government departments with representatives in the various ports, and someone would be needed to resolve their differences. When it had been decided at the centre how the ships of an incoming convoy could most conveniently be distributed, someone on the spot would have to ordain, in the doubtful and disputed cases that must be bound to arise, which commodities should have first claim on the various facilities and by which form of transport—road, rail or coasting shipping—they should move. Someone indeed would have to take command in each of the port areas—in which, for all that anyone could tell to the contrary, the bombs might create havoc—in order to settle the

multiplicity of problems that even in the best of circumstances could not be settled from the centre.

Someone—or some body—too, would have to be put in control of the dockers. In contradistinction to the shipping industry, where industrial relations had always been unusually good, industrial relations in the port industry before the war had, in the main, been unusually difficult. In the nineteen-thirties it was to be expected that war would create many labour troubles in the ports—that it would, even at the outset, give rise to a smaller demand in some ports and to a larger one in others; that it might require shift-working as well as overtime; that some means would be needed to prevent the dockers, always hitherto employed on a casual basis, from drifting out of the ports that were heavily bombed; that there would be a danger of tension between employers and labour and of a collapse of morale. Here were dangers that it was urgently necessary to forestall.

If all the various possible dangers were considered together there emerged the need to prepare for total war—for war waged on civilians as well as on the Fighting Services, requiring that the ordinary processes of civilian life, many of which would still have to continue, should be allotted their proper place in the ordered pattern of the nation's war-effort. Since the advent of the bomber the ports in this country have become the particular, predestined victims of this sort of warfare. In the kind of war that was expected in the nineteen-thirties, to leave things to proceed haphazard was to court disaster—to run the risk of blockages in the movement of vital supplies that might gradually spread until, like a creeping paralysis in the human body, they squeezed out the nation's life.

It is nevertheless always much easier to plan for a war of aggression than for a war of defence and countries ruled by governments dependent on majorities in elected assemblies find drastic action difficult in peace. Moreover in the nineteen-thirties besides these inevitable obstacles to effective planning there were other obstacles peculiar to the times.

APPENDIX I

*Changes in world steam and motor tonnage of 100 gross tons and over
(excluding U.S. lake tonnage), tankers and dry-cargo ships*

Country	1914		1937		Percentage increase or decrease between 1914 and 1937
	'000 gross tons	Percentage of world's fleet	'000 gross tons	Percentage of world's fleet	
United Kingdom	18,892	43·8	17,436	27·8	- 7·7
Dominions	1,632	3·8	2,962	4·7	+ 81·5
British Empire	20,524	47·6	20,398	32·5	- 0·6
United States (sea)	2,027	4·7	9,347	14·9	+ 361·1
Belgium	341	0·8	420	0·7	+ 23·2
Denmark	770	1·8	1,118	1·8	+ 45·2
France	1,922	4·4	2,844	4·5	+ 48·0
Germany	5,135	11·9	3,928	6·2	- 23·5
Greece	821	1·9	1,855	2·9	+ 125·9
Holland	1,472	3·4	2,631	4·2	+ 78·7
Italy	1,430	3·3	3,174	5·0	+ 121·9
Austria/Hungary	1,052	2·4			
Japan	1,708	4·0	4,475	7·1	+ 162·0
Norway	1,957	4·5	4,347	6·9	+ 122·1
Russia	852	2·0	1,254	2·0	+ 47·2
Spain	884	2·0	1,044	1·7	+ 18·1
Sweden	1,015	2·4	1,494	2·4	+ 47·2
Other countries	1,234	2·9	4,501	7·2	+ 264·7
Total	43,144		62,830		+ 45·6

Source: Lloyd's Register

APPENDIX II

Note on the use of the term carrying-capacity and on the factors by which carrying-capacity was determined in different periods of the war

Carrying-capacity is a term that was constantly used throughout the war by the people concerned with the operation of merchant ships. It was not always used in exactly the same sense but the intention was always to convey some such idea as Mr Churchill must have had in mind when he spoke of the 'operative fertility of our shipping'.¹

The writer understands that to American ship-owners, who normally operate their ships on shuttle services—and no doubt to some other classes of persons concerned with transport problems—the term means the amount of weight-carrying and cubic capacity that can be used to transport commodities between any two fixed points in a given period of time.

If, however, the term can be given no other meaning than this, then it is clearly inapplicable to a fleet of ships engaged, as was the British fleet during the war, and as are the ships of many liner companies in peace, on voyages that take them all round the world and that are designed to meet the needs of a number of different services in the course of a single voyage.

The term, however, was nevertheless applied to the British fleet in the war by intelligent people experienced in shipping matters who wished to convey a meaning by it. What they meant, it would seem, was that the carrying-capacity of the dry-cargo fleet was the amount of commodities, measured in whatever was the most appropriate way,² which the existing³ fleet could carry, in a given period of time, in response to the needs in the various areas which it had to serve.

Thus, for example, if armies and their supplies have to be transported to the Middle East instead of across the Channel, as happened after France fell; and if the other areas to be supplied remain the same and cannot be supplied from nearer sources, it may be said that the carrying-capacity of the whole fleet has declined. This is, indeed, what was frequently said at the time.

In this sense of the term, therefore, it is perfectly reasonable to speak of the carrying-capacity of a fleet, even though it operates after the fashion of the British fleet. If, however, the term is thus defined, then it is clear

¹ W. S. Churchill, *The Second World War*, Vol. III, p. 100.

² It should be noted that no returns were regularly drawn up of the amounts actually carried, except in the case of the United Kingdom import programme, but forward estimates of import requirements at the end of the war were made in relation to all the importing areas. (See Appendix LXX, p. 452.)

³ The word existing is used advisedly; that is, the term carrying-capacity, as it is used here, and as it was generally though not invariably used during the war, takes no account of net gains or losses.

that among the factors that determine carrying-capacity at any time, two very important ones, that the first definition given above leaves out, are the disposition of the ships between the different routes, and the way in which different services can be dovetailed in together.

To get the best use out of a fleet of cargo-liners in peace is a very complicated undertaking; to get the best use out of all British ships combined, and amidst the confusions and hazards of war, is a great deal more complicated still. The list that is given below represents an attempt, based on the relevant evidence in official papers, to show the principal factors that determined the carrying-capacity of such British and British-controlled dry-cargo tonnage as existed in any given period of the war.

1. *The amount of tonnage available for carrying cargo determined principally by:*
 - (a) the amount of tonnage immobilised under repair;
 - (b) the amount of tonnage allocated to the Services and not available for carrying cargo.
2. *The number and types of ships allocated to the various routes (e.g. more ships of a given speed on the longer routes and fewer on the shorter, or more fast ships on the shorter routes and fewer on the longer, meant a decline in carrying-capacity).*
3. *The extent to which the various services in which British ships were engaged—that is, United Kingdom services, military services and civil services of the Commonwealth, friendly and allied territories overseas—could be dovetailed in together (e.g. to take the classic instance, carrying-capacity was greater if the ships carrying military cargoes to the Middle East were routed afterwards to India or Australasia to fetch imports for this country, than if they were operated on a shuttle service, catering exclusively for military needs, between the United Kingdom and the Middle East, while another block of tonnage brought the necessary imports by operating on a shuttle service on the North Atlantic).*
4. *The amount that could be carried on any given route by the ships employed on that route. This, it would seem, was determined principally by:*

Round- voyage time	{	(i) <i>Time spent in port (i.e. time spent in loading, discharging and performing other ordinary port operations, and in undergoing minor repairs).</i>
		(ii) <i>Time spent at sea and in waiting for convoy determined by—</i>
		(a) <i>the speed of the ship if sailing independently and of the convoy if sailing in convoy;</i>
		(b) <i>the convoy cycle which determined the amount of time spent in waiting at convoy assembly points;</i>
		(c) <i>the distances to be traversed (including the extra distances caused by the need for evasive routing).</i>

- (iii) *The use that was made of the ships' space determined by:*
- (a) methods of packing and stowing cargo;
 - (b) the nature of the cargo to be carried (i.e. whether or not it was of a type to permit full use of the ships' weight-carrying and cubic capacity).

APPENDIX III

World laid-up tonnage on 1st July, 1929-38

(All classes of tonnage)

Thousand gross tons

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Great Britain and Ireland	618	1,622	3,282	3,556	3,207	1,719	981	758	97	438
Australia	71	120	141	112	87	66	37	—	62*	26
Belgium	—	—	146	283	158	114	—	—	—	5
Canada	—	—	—	138	60	—	—	—	—	—
Denmark	—	78	136	230	127	41	18	34	5	47
France	75	161	546	922	972	717	454	394	151	178
Germany	—	214	682	1,270	703	266	150	42	42*	22
Greece	59	272	303	510	309	105	136	201	64†	N.S.
Holland	7	194	529	809	560	303	297	118	1	20
Italy	245	472	783	863	526	304	198	56	106	132
Japan	40	42	218	247	159	59	27	28	15	7
Norway	12	174	816	801	743	390	264	75	8	269
Spain	19	75	85	254	392	341	—	—	—	N.S.
Sweden	—	15	118	152	143	77	107	47	17	132
United States	2,253	1,973	2,601	3,425	3,243	2,904	2,320	1,872	1,130	1,230
Total for above countries.	3,399	5,412	10,386	13,572	11,389	7,406	4,989	3,625	1,698	2,505

Source: Chamber of Shipping, Report of the Deep Sea Tramp Fact Finding Committee, 7th December 1938

* On 1st January 1937.

† On 1st October 1937.

APPENDIX IV

British new building 1910 to 1913 and 1918 to 1938

Gross tons

	A.	B.		A.	B.
1910	1,287		1926	656,594	
1911	1,997,822		1927	1,220,155	
1912	2,042,048		1928	1,455,794	
1913	2,186,607		1929	1,534,247	1,522,600
1918	1,800,261		1930	1,504,286	1,478,600
1919	1,741,884		1931	508,867	502,500
1920	2,031,211		1932	190,476	187,800
1921	1,525,683		1933	137,062	133,100
1922	999,284		1934	467,174	459,900
1923	641,647		1935	485,354	499,000
1924	1,437,265		1936	821,182	856,300
1925	1,043,071		1937	875,936	920,800
			1938	971,834	1,030,400

Source: The figures at A. have been taken from *Fairplay*, 12th January 1939
The figures at B. are those of the Ministry of War Transport

APPENDIX V

British steam and motor tankers of 1,000 gross tons and over, July 1914 and July 1938

	1914		1938	
	No.	'000 G.T.	No.	'000 G.T.
Great Britain and Ireland Dominions and Colonies .	178	833	410 60	2,672 341
United Kingdom and Empire .	178	833	470	3,013
World	343	1,482	1,653	10,715

Source: Admiralty

APPENDIX VI

The ports of the United Kingdom

The commodity-work of the various coastal sectors in the receipt of the annual (average for 1927-29) imports

(Note: All figures shown THOUSANDS OF TONS, except those for animals, which denote THOUSANDS IN NUMBERS)

Coastal sector (and leading ports by weights)	FOOD, DRINK AND TOBACCO													OTHER COMMODITIES													Grand total of imports				
	GRAIN			MEAT					Total of food, drink and tobacco	TIMBER		IRON AND STEEL		PETROLEUM		Paper and raw materials for chemicals and non-chemicals (other than petroleum)	TEXTILES (raw materials and manufactures)					Miscellaneous	Total of other commodities (other than food)								
	Wheat, etc. used and sown	Other cereals and their produce	Sugar (raw and refined, including etc.)	Dead or live animals (including pig produce)	Animals, living (as food)	Fish (fresh and dried, etc.)	Poultry and game	Vegetables, raw (concentrated and pickled, etc.)		Bacon and hams	Birds, skins, bones and prepared meats	Fish (oil) (including animal)	Eggs (in shell and set in sugar)	Other food items (including tobacco)	Softwood		Hardwood	Other (iron, steel, etc., prepared, etc.)	Crude	Manufactured (petroleum, etc.)	Cotton			Wool	Silk	Other (flax, hemp, jute, artificial silk, etc.)		Non-chemicals and manufactures	Chemicals (raw and semi-raw, etc.)		
V. Thames Estuary (London)	1,575	781	801	214	—	394	227	182	248	147	37	97	469	6,111	136	4,322	(A) (B) 10	468	266	4,418	1,271	688	17	187.0	1.73	156	589	209	646	3,715	15,257
IX. Chester to Mull of Galloway (Liverpool)	1,872	644	755	324	274	519	436	154	81	193	42	19	810	3,000	167	1,281	(A) (B) 470 84	633	22	1,311	454	450	795	77.0	0.58	51	235	443	493	5,768	16,000
III. St. Alb's Head to Humber (Hull)	1,087	475	81	145	—	177	194	115	96	1	84	23	75	3,055	1,081	1,311	(A) (B) 1,411 38	610	1	368	365	721	4	80.0	0.26	14	486	158	181	2,753	16,138
VII. Land's End to St. David's Head (Bristol)	794	531	65	14	74	220	59	65	14	14	5	—	49	1,877	1,322	590	(A) (B) 1,468 85	880	1,993	611	128	93	—	0.6	—	1	36	118	51	8,250	8,072
X. Mull of Galloway to Cape Wrath (Glasgow)	421	543	190	24	55	100	50	80	2	5	0	14	14	1,451	8	199	(A) (B) 651 42	190	—	450	81	44	—	1.0	—	36	47	54	97	1,812	3,258
II. Perth to St. Alb's Head (Grazingmouth)	136	156	72	11	—	9	34	14	14	—	3	17	19	503	307	300	(A) (B) 315 1	561	576	65	250	58	1	0.5	0.01	10	73	48	54	4,545	3,418
VI. North Foreland to Scilly (Southampton)	26	131	9	47	—	111	8	893	14	75	3	10	17	848	31	350	(A) (B) 0	15	240	513	9	8	7	25.0	3.29	3	150	10	87	1,219	6,113
IV. Humber to Colchester (Harwich)	40	67	6	96	—	36	15	31	16	1	46	14	20	387	49	331	(A) (B) 13	65	—	18	12	—	3	2.4	1.20	3	140	4	89	746	1,793
I. Cape Wrath to Perth (Dundee)	33	18	38	—	—	—	8	—	—	—	49	—	83	165	26	132	(A) (B) 5	12	—	15	104	48	—	—	—	214	13	—	20	300	269
VIII. St. David's Head to Chester (Holyhead)	—	—	—	28	329	1	—	19	16	12	6	13	3	193	—	3	(A) (B) —	—	—	—	—	—	—	1.2	—	—	3	—	17	20	415
XI. By land boundary from the Irish Free State	3	8	—	28	255	—	—	14	3	86	4	11	3	181	—	—	(A) (B) —	—	—	—	—	—	—	0.1	—	1	—	—	13	14	176
Total Imports	5,918	3,268	1,057	1,531	1,661	1,741	1,066	856	453	395	261	226	943	18,076	3,111	6,661	(A) (B) 3,098 966	3,441	8,706	5,806	4,686	1,000	731	410	9	479	1,274	1,444	1,618	32,777	95,253
	3,818													16,074		8,745		8,000		1,609											

Source: Ministry of War Transport

APPENDIX VII

Statement of world tonnage 1939 by flag steam and motor vessels of 1,600 tons and over

(excluding lake and river tonnage and miscellaneous craft, e.g. tugs, trawlers, etc.)

Tonnage figures in thousands

Flag (or register)	Non-tankers			Tankers			Total		
	No.	G.T.	D.W.	No.	G.T.	D.W.	No.	G.T.	D.W.
Registered in:									
United Kingdom	2,192	13,079	17,211	420	2,977	4,389	2,612	16,056	21,600
Colonies	111	373	480	4	30	40	115	403	520
Canada (excl. Gt. Lakes)	47	233	173	12	96	134	59	329	307
Other Dominions	170	667	846	9	69	91	179	736	937
British	2,520	14,352	18,710	445	3,172	4,654	2,965	17,524	23,364
U.S. (excl. Gt. Lakes)	1,020	5,670	7,682	389	2,836	4,449	1,409	8,506	12,131
Other flags:									
<i>(a) Non-enemy—</i>									
Belgian	61	295	384	9	67	94	70	362	478
Danish	226	760	1,130	13	106	163	239	966	1,293
Dutch	370	2,111	2,616	107	540	758	477	2,651	3,374
Egyptian	19	93	125	—	—	—	19	93	125
Estonian	44	103	160	—	—	—	44	103	160
French	454	2,313	2,455	48	326	482	502	2,639	2,937
Greek	383	1,638	2,712	6	25	39	389	1,663	2,751
Icelandic	1	2	2	—	—	—	1	2	2
Italian	489	2,680	3,203	82	427	613	571	3,107	3,816
Latvian	57	169	277	—	—	—	57	169	277
Lithuanian	1	2	2	—	—	—	1	2	2
Norwegian	548	2,100	3,308	268	2,109	3,194	816	4,209	6,502
Palestinian	—	—	—	—	—	—	—	—	—
Polish	22	102	87	—	—	—	22	102	87
Portuguese	38	175	236	2	3	3	40	178	241
Russian	277	927	1,317	22	121	176	299	1,048	1,493
Spanish	198	752	1,047	16	86	119	214	838	1,166
Swedish	240	882	1,332	19	158	253	259	1,040	1,585
Swiss	—	—	—	—	—	—	—	—	—
Turkish	47	147	186	1	4	6	48	151	192
Jugoslav	86	365	589	1	3	4	87	368	593
Argentine	18	57	78	23	136	187	41	193	265
Brazilian	107	398	524	2	7	12	109	405	536
Columbian	—	—	—	—	—	—	—	—	—
Chilean	47	156	188	—	—	—	47	156	188
Cuban	3	5	6	1	2	3	4	7	9
Costa Rican	—	—	—	—	—	—	—	—	—
Dominican	1	2	3	—	—	—	1	2	3
Ecuadorian	—	—	—	—	—	—	—	—	—
Honduran	25	73	80	1	8	11	26	81	91
Mexican	4	9	12	2	9	15	6	18	27
Nicaraguan	—	—	—	—	—	—	—	—	—
Panamanian	60	228	326	53	471	727	113	699	1,053
Paraguayan	—	—	—	—	—	—	—	—	—
Peruvian	7	24	31	1	3	4	8	27	35
Uruguayan	4	14	16	—	—	—	4	14	16
Venezuelan	1	2	2	23	64	88	24	66	90
Chinese	58	145	203	—	—	—	58	145	203
<i>(b) Ex-enemy—</i>									
Bulgarian	7	21	34	—	—	—	7	21	34
Finnish	158	428	670	1	6	10	159	434	680
German	676	3,506	5,259	37	256	384	713	3,762	5,643
Japanese	1,007	4,600	6,900	47	430	645	1,054	5,030	7,547
Rumanian	20	84	109	3	15	22	23	99	131
Hungarian	6	23	39	—	—	—	6	23	39
GRAND TOTAL	9,310	45,413	62,040	1,622	11,390	17,117	10,932	56,803	79,157

Source: Ministry of War Transport

It will be noticed that whereas total British tonnage in 1939 is given above as 17.5 million gross tons, it appears in Appendix I, p. 17, as 20.4 millions in 1937. This is because the figures in Appendix I which are taken from Lloyd's Register refer to ships of 100 gross tons and over, whereas the Ministry of War Transport's figures refer only to ships of 1,600 gross tons and over, and because the Ministry's figures exclude lake and river tonnage, fishing vessels, tugs, ferry-boats, pilot-boats, etc., whether under or over 1,600 gross tons.

CHAPTER II

THE PRE-WAR ASSUMPTIONS AND PREPARATIONS

(i)

The United Kingdom Ports

THE SEARCH FOR A BASIS FOR PLANNING

IN THE EARLY nineteen-thirties, and indeed until war broke out, it seemed that port-capacity and not shipping would set the limit to the amount that the United Kingdom would be able to import in time of war. The possibilities of air attack had vastly increased since 1918 and the principal risk, it was supposed, which this country would have to face, particularly in the early stages of a war, would be from the air. The submarines did not seem a serious danger. The very small number which Germany was known to possess, could, it was supposed, be dealt with by convoys and by the improved methods of detecting them when submerged—for this is how it was thought they would attack.¹ Even the powerful German surface raiders seemed less menacing than the threat of air attack on the ports, and on the ships approaching port.

Attacks on the ports seemed for some time the more likely of these last two dangers. This opinion was largely based on the experience of the Spanish civil war, which was the only experience with any relevance. In this war both the ports, and the ships approaching port, had been bombed, but the successes in the first case had been much greater than in the second. Attacks on the ports, it was pointed out, damaged both ships and port facilities at the same time, and the ships were a sitting target. It seemed in these circumstances that at the beginning of the war the principal danger was not that a smaller volume of supplies than normal would reach the United Kingdom, but that cargoes would be destroyed on arrival and ships' time lost because of attacks on the ports.

But which ports would be principally subject to attack? Here it was at first supposed that those on the west coast would be largely immune because they lay behind the air-defence system, designed to protect this country against aircraft operating from North

¹ See *History of the Second World War, United Kingdom Military Series*, Capt. S. W. Roskill, *The War at Sea*, Vol. I, p. 34.

Germany and, at the worst, the Low Countries. In these circumstances the problem appeared to be one of diverting to the west some 75 per cent. of the shipping which normally entered the ports from the Tyne to Southampton inclusive. In that event, it was supposed, the west coast ports would have to handle a volume of tonnage nearly 80 per cent. larger than the normal.¹

This hypothesis, however, which had been accepted with only slight alterations from the start of the investigations, was abandoned in the summer of 1936. Basing its views on the increased range of German aircraft, the Air Ministry, from that date onwards, held with increasing conviction that there was no sense in thinking exclusively in terms of 'safe' and 'danger' areas. In June 1938 it described the distinction as 'meaningless'. The west coast ports might be less vulnerable than the others but they could not, the Air Ministry asserted, be considered out of range. In consequence it was to be assumed that if ships were diverted from the east and south to the west the result would merely be to provide the enemy with a temptation to attack the west.

As, however, the Air Ministry became increasingly sceptical of the immunity of the west coast ports, it became increasingly convinced that shipping would be bombed in the approaches to the south and east, and that for this reason diversion would be desirable. The views of the Committee of Imperial Defence on the port problem were finally crystallised by Sir Kingsley Wood, three months before the outbreak of war, in the assertion that

it should not be overlooked that the North Sea and the English Channel would in all probability constitute the main battle zone in so far as the Air Forces were concerned in the next war. On the other hand, the west coast of England would correspond to a 'base area'. No matter to what extent aircraft ranges and speeds might increase, in order to reach shipping in the west enemy aircraft would have to pass either over, round or through our main line of defence; and, in consequence, the degree of protection which we should be able to afford to ports in the west of England would always be greater than in the east.

While, therefore, in the years before the war started the Service departments changed a number of times their views about the type of attack the United Kingdom would have to face, and the targets against which it would be directed, whatever the type of attack and whichever the targets the result on the port and transit system

¹ This conclusion was based on the 1927-29 import figures, given in Appendix VI. The figures include imports of oil, whose handling presented a problem wholly distinct from the problem of dry-cargo imports. Nevertheless the United Kingdom's oil imports were in fact divided more or less equally, as were the imports of dry cargo, between the safer and the more dangerous areas as these were defined before the outbreak of war.

seemed likely to be much the same; assuming that the volume of shipping entering the ports was the same as the peace-time average, some 75 per cent. of the amount that normally went to London and the other east coast ports would have to be diverted to the west.

In 1933 the Committee of Imperial Defence set up a sub-committee, usually known from the name of its chairman as the Headlam Committee, to consider what problems might be expected to arise in these circumstances and what action would have to be taken. Problems of this sort had never before had to be considered in time of peace. The difficulties that had occurred between 1914 and 1918 had been the result of causes so obscure and complicated that the books on the war had not attempted to analyse them.¹ Admittedly the committee which had been set up in 1915 to regulate port and transit matters had recorded its experiences, and the lessons it deduced from them, in a report, of eighteen pages, issued in 1921: The Headlam Committee, however, was apparently unaware of the existence of this information, which in any event was somewhat meagre. In the port and transport industries, and in the shipping and trading communities, there were people in responsible positions, many of whom were indeed consulted, who were aware from their different angles of the issues involved, but this knowledge was diffused among a number of minds; there was no single repository of it, no national tradition, such as exists, for example, in naval matters, of the nature of the dangers and the appropriate kinds of remedies; there was no sense of urgency strong enough to suggest means for overcoming these inevitable lacks. It was, in consequence, by asking the obvious but nevertheless in the circumstances unanswerable question²—‘How much can the west coast ports handle?’—that the Headlam Committee embarked on its task.

It began by collecting from the port managements in the United Kingdom information relating to existing facilities of all kinds and answers to a series of specific questions, particularly ‘what is the maximum capacity of the port, not only to deal with shipping tonnage but to pass imports through its area?’³ The information that the enquiries yielded was incorporated, in 1936, in a volume of some 600 pages, each containing some ten columns of figures.

This body of knowledge, however, was not much help, for no

¹ Mr Winston Churchill's *World Crisis* said nothing at all about them. Sir Arthur Salter, in his *Allied Shipping Control*, merely referred to them cursorily. Only in Mr Lloyd George's *Memoirs* (see p. 1246) was the magnitude of the danger stressed although the reasons were not made clear.

² For the circumstances in which the question could be answered see Chapter VI, p. 138, below.

³ These questions, twenty-five in number, were circulated to the ports in 1934.

port authority could assess the volume of tonnage it could handle in a set of wholly undefined conditions. Some authorities pointed this fact out and returned no answer to the questions. Most, however, dutifully hazarded a guess.

The Headlam Committee assembled the various guesses relating to the west coast ports—and they all went to show that the potential capacity of these ports was greatly in excess of the amount normally handled—and added them up; to make assurance trebly sure it instigated two additional enquiries. First it caused a calculation to be made of the length of the quays on the east and the west coasts respectively and an estimate of whether there would be enough quay space in the west if 75 per cent. of the tonnage which normally went to the east had to be diverted to the west. The answer, arrived at by a simple process of addition and subtraction, was that there might be a shortage in the west, but that it could be remedied if the ships were discharged more quickly by means of three-shift working.

Secondly, it procured from the railway companies estimates of the maximum tonnage they could carry from each of the west coast ports, as compared with the 1927 to 1929 averages. The railways, which had been working much below capacity, provided answers which in each case showed that they could move a volume of tonnage vastly larger than the normal. The Headlam Committee added up the answers which related to the 170 or so ports on the west coast. The conclusion was that whereas the railways had carried from these ports some 16·8 million tons of traffic a year between 1927 and 1929, they had capacity for some 75·5 million.

Each of these investigations, however, had been conducted independently of the others, whereas all the three sets of facts investigated were closely connected. Whether the supply of berths would be sufficient depended admittedly on how long ships took to discharge and load; but how long ships took to discharge and load depended among other things on the rate at which goods could move in and out of the port area; this in turn depended largely on the capacity of the railways; it did not help to estimate how much the railways could carry out of each of the various ports considered separately, since the lines serving these ports converged at junctions inland; this fact was, however, overlooked.

When all the problems were considered separately each led naturally, but misleadingly, to the same conclusion. The Headlam Committee submitted this conclusion to the Committee of Imperial Defence in 1937. It ran as follows:—'even if a considerable deduction were made from the estimated maximum capacity of the ports, that capacity would, in total, be adequate to accommodate the increased traffic with which the ports might have to deal in the event of the large-scale diversion contemplated in our reference having to be

carried out'.¹ But should the problems have been considered separately? Was it in fact possible to consider them in any other way? The Headlam Committee was evidently disturbed by doubts on these matters and so hedged its conclusions round with a large number of qualifications. 'The requirements of the distribution from ports', it stated, 'may be different from that of peace . . . special facilities with regard to storing, sorting and distribution of particular important commodities will arise . . . Many docks and wharves are specially equipped for dealing with specific commodities and could not without extensive alteration . . . deal efficiently with other traffic . . . There may be insufficient storage . . .' On all these matters the committee confessed that it had no information. In any case its investigations had not attempted to take into account the likely effects of bombing. Its answer, in fact, was no answer at all.

The final report of the Headlam Committee was accepted by the Committee of Imperial Defence at a meeting held in April 1937; nevertheless the Committee of Imperial Defence, too, evidently had misgivings. It decided at this meeting that henceforth the Ministry of Transport should provide the headquarters organisation necessary to operate the ports in war—a responsibility that remained with it until its amalgamation with the Ministry of Shipping in May 1941—and that it should take over the task of formulating the pre-war plans. Under its ægis the Port and Transit Standing Committee—consisting of officials from the various Government departments and other bodies who in war would need or supply port facilities—was set up, with terms of reference similar to those of the Headlam Committee, to start the investigation over again.

The ports, however, which had mainly submitted without protest to the Headlam Committee's questionnaire, experienced, it seems, a sense of outrage when faced by a second set of authorities with a further and equally unprofitable list of questions. 'To try', the Liverpool Port Emergency Committee asserted, 'to prepare a scheme on the assumption that imports are to be doubled is obviously to start on a false basis as the types of commodities to be imported will differ considerably from those imported in normal times with a consequent alteration in the normal method of handling adopted.' The Manchester Committee complained that it was required to answer questions relating to 'increased traffics of a nature and quantity at present unindicated and proceeding to a destination unspecified. . . . The absence of such information makes the preparation of certain of the estimates and particulars desired most unsatisfactory for all concerned and robs them of much of their value'.

¹ i.e. a diversion of 75 per cent. of the tonnage entering the ports from the Tyne to Southampton.

By the summer of 1938—by which time the Port and Transit Standing Committee had met three times—the task of collecting data on which to base a policy had thus made little progress. The Headlam Committee had wrestled with the problem for four years, and the Port and Transit Committee for one, with no appreciable results, but under the imminent threat of war its nature for the first time became thoroughly apparent. As the Food (Defence Plans) Department put it in July 1938, the port problem 'can only be solved if someone considers together the facts and figures of all the essential imports and the more important exports at the same time . . . but at present the subject is being brought before the Port and Transit Standing Committee from each department's point of view and no one is attempting to look at the thing as a whole'. This defect was felt in many other quarters. What was needed, the Minister for the Co-ordination of Defence wrote in May 1938, was some 'definite plan, framed in consultation with the Supply Departments, rather as a military department draws up a programme of its requirements to meet a defined objective'. The Munich crisis, however, came and went and still the objective—the volume and types of commodities that would need to be imported and exported—remained unknown.

In the autumn of 1938, however, there appeared upon the scene in the Ministry of Transport people who, though equally ignorant to start with of the intractable problems that confronted them, were nevertheless possessed of a robust common sense. They sought more and fresh advice; they got out the 1921 report and studied it; they then sat down to do a different kind of sum from any that had hitherto been attempted. In conjunction with the Food (Defence Plans) Department they worked out, in concrete terms, the implications of a 75 per cent. diversion of foodstuffs, assuming imports at the peace-time rate and in the peace-time proportions, from the south and east coast ports to the ports in the west. The result that emerged was that the task was beyond the bounds of possibility. The carriage of foodstuffs alone would increase the burden on the railways by one-sixth; the sudden disruption of normal trading on so large a scale could not be coped with except by a process of gradual adjustment; it would be impossible to feed London or to procure transport for the raw materials required in the midlands and the east.

These facts only came to light in the spring of 1939, but they confirmed the suspicion which the new officials in the Ministry of Transport had formed before they started their investigation: that if the Headlam Committee's judgment was to be interpreted to mean that the capacity of the west coast ports would be sufficient to meet the needs of war, then this judgment—as they said, for they did not

mince words—was 'complete nonsense'. Here was an intimidating conclusion to have reached at a time when war in the near future seemed virtually inevitable.

THE PRE-WAR PREPARATIONS

The belief, which prevailed until Munich, that somehow or other it must be possible to discover how much the west coast ports could handle, combined with the belief, that followed from it, that nothing could profitably be done until this question had been answered, had continuously, as one fruitless investigation succeeded another, put off the time for action. In the spring of 1939, however, when it had emerged that the question was unanswerable in advance and yet that the answer the future would give might be a disastrous one, the need for action appeared imperative. In April 1939 the Committee of Imperial Defence instructed the Minister of Transport to 'press forward with all speed the preparations for dealing with shipping diverted in time of war from the east coast ports . . . including the provision of additional facilities at those ports for handling the increased traffic'.

When it came, however, to considering what additional facilities were needed, the port and transit authorities at headquarters were in no better a position after Munich than their predecessors had been before. They could not frame questions which the Port Emergency Committees could profitably answer; they had no criteria by which to judge the reasonableness of the answers given, and insufficient time to examine them. After Munich when the port problem was for the first time seriously tackled its ramifications seemed without limit. Whether from lack of time or because it seemed profitless, an attempt does not appear to have been made to consider the demands for additional equipment which the Port Emergency Committees had put forward between 1936 and 1938. Instead, in April 1939, they were sent a final questionnaire. They were asked to estimate what additional equipment they would need, first in order to ensure 'due functioning'¹ in the event of air attack, and secondly in order to increase throughput. Under the Civil Defence Act, which was passed in July 1939, and authorised expenditure up to £1½ million on port equipment, the Government undertook to pay 50 per cent. of the cost of the facilities held necessary for 'due functioning' and 75 per cent.—and in exceptional cases 85 per cent.—of the cost of the others. But two months later,

¹ This, it was explained, was to cover 'the protection or in exceptional cases the duplication of vital machinery (damage to which might put a large part of the port out of operation), measures to ensure the immediate repair of vital parts, and proposals for the removal of any bottlenecks which might cause congestion, or, if damaged, stoppages of operations'.

when war broke out, there had only been time to secure authorisation for some of the demands under the first heading. The problem of what additional facilities would be required was still unsolved; the task of equipping the west coast ports for war had not yet begun.

In the matter of storage accommodation, more urgently needed than dock facilities, it was much the same story. From 1937 onwards it was realised that in war storage must give rise to three problems. First of all it would be necessary to disperse stocks, particularly from the ports, which were expected to be among the most vulnerable areas, and in which, in peace, the bulk of this country's stocks of imported foodstuffs and raw materials are housed. Notably, London, it was held, was likely to be one of the main targets for German bombers, and in the port of London are stored, in the normal way of things, about a million tons of commodities.¹ Secondly, it would be necessary to provide sufficient space to accommodate the stocks of various kinds which are needed in war, and which must be much larger than the stocks held in peace; thirdly, as the port and transit authorities, who had digested the lessons of the 1914-18 war, urged with increasing emphasis after Munich, the Port Emergency Committees would need space to enable them to keep the quays and sheds clear. If, the port and transit authorities pointed out, the west coast ports were required to handle a much larger volume of commodities than normal there would not be enough storage accommodation in these areas, goods would pile up on the quays, and turn-round would be indefinitely delayed.

Of these three requirements in connection with storage, only the third is strictly relevant to the present discussion, and yet it is so intimately connected with the other two that no distinction between them can legitimately be made. For in so far as such stocks as could be removed from the ports were taken out, space—assuming that all the accommodation was not destroyed—would become available for the purpose of keeping quays and sheds clear. But stocks could not be taken out of the ports unless there were places elsewhere into which they could be put. The greater, however, the general demand for storage the smaller the chances that such places would be found.

All these, stated in general terms, were obvious facts and large numbers of people were aware of them. But it is one thing to state a need in general terms and another to state it in the precise way that is necessary if action is to be taken to meet it. It does not automatically follow that because there will be a larger demand for storage in war than in peace that therefore more storage must be built. Whether or not this is so must depend on how much surplus

¹ No exact estimate of the stocks held in London before the outbreak of war is possible. The above figure has been arrived at on the basis of figures provided by the Port of London Authority in 1937 for stocks held by them and by 'certain public wharfingers'.

capacity exists in peace and how much can be improvised. No one, however, knew the answers to these questions. A survey of existing warehouse accommodation was not started until January 1939, and then it encountered so many difficulties that it had to be abandoned shortly afterwards. In the summer the Ministry of Works asserted it was 'in the doldrums'. 'For the moment', it wrote, 'we are doing nothing . . . pending a definite line of action being settled by the departments principally concerned.' Thus until the outbreak of war the need for extra storage space could not be precisely established (for neither the likely demand nor the likely supply could be ascertained) and in consequence no storage accommodation was built.

The result was, among other things, that the attempt to evacuate stocks from the ports was largely frustrated. The stocks of commodities which need processing, notably wheat, sugar and oilseeds, could not be evacuated in any circumstances, but there were many others—some of them, such as timber and rubber, peculiarly liable to destruction by fire—which it would have been desirable to remove to safer areas. The Port and Transit Standing Committee, however, when it considered what should be done about them, observed in the summer of 1939 that 'the only conclusions which the . . . Organisation is able to reach is that it would be physically impossible to disperse goods from the ports on any appreciable scale. Dispersal to be effective must be a peace-time measure, but it is clearly impossible to advise traders to disperse the goods to places of relative safety unless these places are available and unless there is some financial inducement to [use] them'.

But the places were not available—it was not even known whether they existed; the financial inducements had yet to be devised. In consequence, no commodities were evacuated from port areas before the fall of France, apart from stocks of tea, butter and meat, of which a considerable proportion was removed from London on the outbreak of war, though they were later replaced when the air-raids failed to materialise.

The poor progress achieved in the task of equipping the ports for war made the problem of organisation all the more urgent as the authorities in the Ministry of Transport realised; for in spite of all the difficulties with which they had to contend—the shortage of time and staff and money and the prevailing ignorance among their colleagues, which they could not dispel, of the precise nature of the dangers—they retained their eye for essentials. They produced an original and fruitful idea. It was, it is true, so simple that in retrospect it seems obvious, but this is true of many illuminating ideas whose virtue may lie precisely in their simplicity. This idea had never occurred to anyone before, either during the 1914-18 war or in

the days of the Headlam Committee. The authorities in the Ministry of Transport invented the Diversion Room.

The Diversion Room was the name given to an institution run by the Ministry of Transport from September 1939 to May 1941—when the Ministry was amalgamated with the Ministry of Shipping and the functions of each department transferred to the Ministry of War Transport. In the Diversion Room the chief users and suppliers of port and transit facilities met together, at 10.00 a.m. every morning from the beginning to the end of the war, to determine the ports to which incoming ships should be directed. Here, when the system was in working order, the Admiralty announced which merchant ships were included in the approaching convoys; the Ministry of War Transport provided lists of the ships' cargoes; the departments which owned the cargoes said where they wished them sent, and representatives from each of the various ports, helped by information supplied by the authorities in charge of the railways, roads, and coasting shipping, estimated how many ships they could receive. When all these various pieces of information had been considered in conjunction, the incoming ships were distributed in what appeared the most appropriate way.

Nevertheless, in the jig-saw puzzle of interlocking controls and organisations which the operation of the ports ultimately came to demand, the Diversion Room was only one piece, though the central piece; it could only ensure that ships were sent to what seemed at any given moment the most suitable ports; it could not ensure that the ports, and the transport facilities that served them, were operated in the most efficient way. Thus if all the major ports were to become congested simultaneously the Diversion Room would be impotent.

On the existing hypotheses this was not an improbable state of affairs. To guard against it there was needed, amongst other things, some 'strong man' (as Mr Bevin said later when he was Minister of Labour) to take command in each of the main port areas. This country, however, does not like dictators and further, as will appear presently, it proved exceptionally hard even to know where to look for suitable candidates for the part.

In consequence, on the outbreak of war—and indeed until January 1941—the responsibility for the day-to-day operation of the ports was vested, subject to instructions from headquarters, in Port Emergency Committees, representing the port authority concerned and the various users and suppliers of transport in the area. These committees, however, representing as they did a variety of local and often competing interests, were not of a type to exercise the necessary authority in the state of affairs that was expected, and that in fact arose after France fell; nor had they the necessary powers.

When the war started they had no powers over the Government departments who owned, even at this time, a substantial proportion of the nation's imports—they could not, for example, order commodities to be shipped coastwise if the railways could not carry them and if the departments concerned objected to the use of coasters on grounds of convenience or expense. Any disputes which might arise between the committees and the various commodity controls had to be submitted to headquarters for settlement. To prevent congestion on the quays the committees were empowered to levy penalty rents on the owners of cargo who did not remove it from the transit sheds within a stipulated period. Powers of this sort, however, cannot overcome physical obstacles, such as shortages of transport and storage space, and in any case they could at first only be applied to private individuals.

The plans thus presupposed something not unlike 'business as usual' in port organisation after the outbreak of war, and this was also true of dock labour. If port operations—and other classes of civilian labour—were to work much as in peace, so also must the dockers. Their terms of employment, therefore, were left on a casual basis; the authorities who employed them remained, as in peace, a variety of commercial undertakings.

(ii)

Shipping

While the responsibility for preparing the ports for war was vested in the Ministry of Transport, the similar responsibility for merchant ships was vested in the Mercantile Marine Department of the Board of Trade. The tasks of the two departments were closely connected—and when it seemed necessary they consulted together—but, as things turned out, the problems they had in common were not so much the physical problems involved in arranging for the marriage and divorce of ships and cargoes, as the intellectual problems, that must afflict the purveyors of any service whose customers cannot make up their minds about what they want, of finding any rational basis for planning at all.

During the slumps of the inter-war years the ship-owners had repeatedly insisted that their industry was vital to the nation's safety and that drastic steps must be taken to arrest its decay, since otherwise the nation would be short of ships in war. The ship-owners, however, clearly had an axe to grind when they put forward these arguments which it seemed, therefore, need not necessarily be

believed. The likely nature of the shipping situation,¹ fundamental though it would be to the whole war-effort, was not considered by the Committee of Imperial Defence until the time of Munich.

Then, however, and indeed until the outbreak of war, it seemed, as has been shown, that the greatest danger to the United Kingdom's sea-borne supplies might well lie in the ports. If ships at sea were not heavily attacked and if, as had happened in the nineteen-thirties, even in the intervals between slumps, much tonnage was, if not unemployed, at least under-employed, could the British be short of ships? The uninitiated might naturally suppose not, and in the nineteen-thirties there were not many initiated.

Admittedly a great deal had been written about shipping problems in the 1914-18 war, whereas virtually nothing had been written about ports; but in so complicated a matter the written word, if not reinforced by a living tradition, may easily fail to convey a meaning; and of the two best-known books, one,² which was immensely long, contained a somewhat intractable mass of facts from which the general principles were hard to deduce; the other set out the general principles clearly, but in such a way that it was often difficult to see them in relation to the sequence of events, so that their significance was apt to escape the layman.³

Admittedly there were people still living and in full possession of their powers who had played a prominent part in the control of ships during the First World War. If they had been consulted they could have explained the kind of problems that would have to be faced. But they were not consulted. The prevailing ignorance of the likely dangers was so great that the need to consult them was not realised.

When in the anxious days of the Munich crisis all the resources the British would need in war came to be hurriedly reviewed, and it was asked if there would be enough shipping to meet the needs, this question was referred to the Mercantile Marine Department of the Board of Trade. It was a question that had to be asked continually at the end of the First World War and again throughout the Second. On both occasions many eminent people had to take a part

¹ This term was constantly used throughout the war and must be constantly used throughout this narrative. It therefore seems desirable to make plain, even at the risk of stating the obvious, that by the 'shipping situation' is meant the relationship between the demands for ships and the effective available supply (determined by net gains or losses and, as explained in Appendix II, p. 18, by the amount that a given block of tonnage can carry in a given period of time to the destination it is required to serve).

² C. E. Fayle, *Seaborne Trade*, three volumes, 1920-24.

³ The writer heard a variety of officials complain that they had read *Allied Shipping Control*, by Sir Arthur Salter (now Lord Salter) without deriving much guidance from it. Various historians, including the writer when a beginner, had a somewhat similar experience. This, however, was not the fault of Sir Arthur, who cannot be held responsible for the ignorance of his audience. To anyone familiar with the nature of the problem, his book would have provided most of the guidance required.

in answering it; the various claimants had to formulate their demands which then had to be considered in conjunction by inter-departmental committees; the best statisticians the country could provide were needed to work out the importing capacity of the ships. In the summer of 1938, on the other hand, the question was left to one section of a single department, and had to be answered there by a small number of officials unfamiliar with the problems, lacking much of the information required, without proper statistical advice, and in the intervals of their ordinary duties.

Like the port authorities between 1933 and 1938 they applied themselves to a large number of excessively complicated sums, and just as the port authorities had started by asking, in ignorance of all the determining circumstances, how much the west coast ports could handle, the Mercantile Marine Department asked how many million tons of dry-cargo imports British ships could carry to the United Kingdom in the first year of war given a large number of different—and widely differing—hypotheses provided by the Services, the civil purchasing departments and the ship-owners—that, for example, the Mediterranean might be open or that it might not, although if it were not the distance to Alexandria would be nearly four times, and to Bombay nearly double the normal; that time spent in port might be less than normal because the number of ports of call could be reduced and port operations speeded up in an emergency, or that it might be much longer than normal because of the hazards and confusion of war.

The conclusion reached, by processes it would be profitless to consider,¹ was that whichever hypotheses turned out right (for it was assumed that the pluses and minuses would cancel out) British tonnage would be able to import about 48 million tons of dry cargo in the first year of war—an answer that in the event, and in spite of the absence of all the serious misfortunes that had been contemplated, turned out to be about 11 million tons too high.²

At the time of Munich, however, the problem appeared to be whether 48 million tons would be enough. During the previous two years the Mercantile Marine Department had been intermittently bombarded by questions from the authorities that in war would be responsible for supplies of foodstuffs and raw materials. These

¹ It may, however, be pointed out, first, that the people responsible for this estimate were only amateur statisticians and, having embarked on an exercise involving the most complicated of all the war-time statistics, made a number of mistakes which the professional statisticians imported into the Ministry of Shipping on the outbreak of war immediately exposed; secondly that they presupposed a number of measures, for example the requisitioning of ships, which, having convinced themselves that there would be plenty of shipping, they then held it unnecessary to take.

² See Chapter III below. Imports until France fell were at an average annual rate of 47 million tons, of which, as far as can be estimated, about 10 millions came in foreign ships.

questions usually took the form of: 'how much timber, or grain—or this, that or the other commodity—shall we be able to import?' As the Mercantile Marine Department pointed out, they were unanswerable questions; for the amount of shipping space available for any one commodity must turn on the amount allotted to the others. With the qualified exception of timber—the supplies of which in war would, in any circumstances, be much less than normal because most of the peace-time imports came from the Baltic which would be closed¹—none of the demands could be considered in isolation. For shipping purposes all had to be considered together or not at all.

But at the time of Munich the machinery for considering them together did not exist. Since the authorities responsible for food and raw materials could not formulate their requirements, it seemed sufficient to take the provisional figures that had been provided in 1936 and afterwards discarded. At that time, as a result of a number of arbitrary assumptions, it had been supposed that the United Kingdom would need 32 million tons of raw materials in the first year of war; the requirements for imported foodstuffs were put, as a result of a misunderstanding over terms,² at 15 million tons instead of at 20 millions as the Food (Defence Plans) Department had intended. $15 + 32$ is 47. British needs were therefore for 47 million tons; the importing capacity of British ships was apparently sufficient for 48 millions. It was Mr Micawber's idea of happiness.

Indeed, it seemed something more secure than this for the Mercantile Marine Department's estimate related only to British ships. 'It has been assumed for the purposes of the estimate', it was stated in one of the introductory paragraphs, 'that no neutral shipping would be available. It is, however, inconceivable that we should not, in fact, have substantial help from neutral shipping', and this was putting the expectations lower than the Mercantile Marine Department held privately to be reasonable. It apparently assumed that it would be possible to charter even more neutral shipping than in peace because it argued that once the British blockade cut off the sea-borne trade of the Axis the neutral owners would be forced into British service for lack of other markets.

The amount of imports that might be expected in the first year of war appeared thus to be not 48 million tons but some much higher though unspecified figure. Since the peace-time average was only

¹ Admittedly they might have been replaced by imports from the west coast of Canada, but this would have involved an enormously longer haul, and, in any case, 80 per cent. of the softwoods (and nearly all the timber imports were softwoods) normally came in Russian and Scandinavian ships not capable, even if the governments concerned would have permitted it, of the Atlantic voyage.

² See *History of the Second World War, United Kingdom Civil Series*; R. J. Hammond, *Food*, Chapter V, i, and W. K. Hancock and M. M. Gowing, *British War Economy*, p. 125.

between 50 and 60 million tons¹ and since in 1918, though admittedly after three years of war, it had fallen to 29·8 millions,² there could on this analysis be no doubt that there would be enough shipping.

This judgment was accepted by the Committee of Imperial Defence³ and was not questioned until the Mercantile Marine Department's memorandum was re-examined just after the outbreak of war by a group of economists under Lord Stamp, who were appointed in the summer of 1939 to survey the economic and financial plans for war. The economists proved no better than anyone else at penetrating the shipping mysteries. They seem not to have been entirely happy about the estimate of importing capacity, but they did not feel themselves able to discuss it, let alone criticise it. They succeeded, however, in exposing the various absurdities in the estimate of requirements, and at the beginning of the war, when professional statisticians familiar with shipping problems made their first appearance on the scene, the estimate of importing capacity, too, came under fire. It was demolished and—since the shape of things to come was by now discernible—another, and very different, estimate was substituted for it.

Admittedly the Mercantile Marine Department foresaw accurately a number of the needs that emerged after war had broken out. In many respects the shipping plans for the Second World War began where the experience of the First World War had stopped. Notably, plans were made to set up a Ministry of Shipping should it be required;⁴ schemes were worked out for insuring ships and cargoes against war risks, and for providing pension schemes for Merchant Navy officers and ratings on the same terms as those applying to officers and ratings in the Royal Navy; these schemes were ready to go into operation by the time the survivors from the first merchant ship to be sunk, the *Athenia*, arrived home. It was arranged that some 7,000 Merchant Navy officers and men who were members of the Royal Naval Reserve should be available for service in the Royal Navy on the outbreak of war. The Sea Transport Department⁵ prepared elaborate plans, which in the event worked very successfully, for transporting the British Expeditionary Forces to France.

This list could be very considerably extended. A great deal of

¹ The writer was informed by Statistics and Intelligence Division that estimates of dry-cargo imports by weight were only made in relation to 1937, when they totalled 59·8 million tons, and to 1938 when they totalled 52·1 millions.

² See Sir William Elderton, *Shipping Problems, 1916-1921*, pp. 42-43. Total British imports are given here as 35 million tons, of which 5·2 millions were accounted for by oil.

³ The Committee of Imperial Defence pronounced the Mercantile Marine Department's memorandum to be 'a fair exposition of the situation'.

⁴ There was some doubt whether it would be required. See Chapter III below.

⁵ On the origins and functions of Sea Transport Department see Chapter IX below.

useful work had been done. Indeed, only one of the immediate consequences of war had not been foreseen; a shortage of shipping. The failure to foresee it was, however, of fundamental importance, and in consequence in many departments, where harassed and exasperated officials found all their expectations belied, the Mercantile Marine Department's sins of omission bulked larger than its achievements. Because it had assumed that shipping would be plentiful it had concluded that ships need not be requisitioned except to meet the needs of the Fighting Services, and it quickly emerged that, as in the First World War, there was no satisfactory alternative to requisition;¹ for the same reason, presumably, it had allowed without protest the Admiralty to take over as armed merchant cruisers, not only a number of passenger ships for which, until France fell, there was no other employment, but a considerable number of passenger-cargo liners with a large amount of cargo space; its belief that there would be no difficulty in chartering foreign ships bedevilled the plans for sharing out tonnage between the British and the French;² in general, or so it seemed, its unwarranted optimism had encouraged the British purchasing departments in their extravagant notions about what they must have and in their haphazard practices in drawing up their requirements, and had led to the failure to build up stocks and to make adequate plans to increase home production.³

Nevertheless, many of the difficulties that appeared to result from the Mercantile Marine Department's unfortunate estimate might equally well be attributed to other causes. The needs, for example, to build up stocks and to plan for more home production can just as easily arise from a shortage of port capacity as from a shortage of ships, and the dangers in the ports, even at the time when they were least understood, had never been so confidently denied as the danger of a shipping shortage. It can be argued that had the likely nature of the shipping situation and the possible remedies been properly understood, the need for stocks, and for storage space in which to accommodate them, and for the other necessary precautions, would have seemed so imperative that they would have had to be met. This may or may not be true. There are none so blind as those who do not wish to see. The French, who were faced with similar problems and who apparently never believed that shipping would be plentiful, were worse prepared than the British; and in the United Kingdom there appeared to be insuperable obstacles—some already described here, the others described in other histories in this series—

¹ See Chapter III below.

² See Chapter IV below.

³ See W. K. Hancock and M. M. Gowing, *op. cit.*, p. 126.

in the way of even those precautions that were recognised as necessary at the time. Yet it is possible that the obstacles might have been overcome if there had been more resolution, and that the misconceptions about the shipping situation were the effect rather than the cause of the uneasy optimism, suspect and frustrating even to those who professed it, that prevailed in shipping matters up to and beyond the outbreak of war.

PART II

From the Outbreak of War
to the Fall of France

CHAPTER III

FROM THE OUTBREAK OF WAR TO THE INVASION OF THE WEST: THE TASK OF SUPPLYING THE UNITED KINGDOM

FROM THE OUTBREAK of war till the fall of France the Germans did not bomb the ports in this country, but as soon as they realised that the British and French were not, as they had hoped, going to make peace after the defeat of Poland, they used every means they could to sink British ships. They attacked them from the air; they laid mines round the coasts of the United Kingdom which, to start with, blew up a considerable number; before the war began their submarines were out on the trade routes under orders to 'attack without warning all ships identified as hostile'.¹

Nevertheless, none of these weapons achieved an alarming degree of success. The air attacks were largely ineffective;² techniques were discovered for dealing with the mines; Admiral Doenitz had said before the war that he would need 300 operational U-boats to blockade the British into submission, but he started with only 39 in the Atlantic and North Sea.³

The damage done by all these means of attack was, it is true, considerable. In the first nine months of war some 800,000 gross tons of British dry-cargo shipping, or 150 ships, were sunk, but virtually all the losses were made good—for the greater part by new building, but partly by captures from the enemy. By the time of the French armistice there was almost as much tonnage on the British register as there had been when the war started⁴ and (though this is for some purposes not a good measure of the amount of shipping at the disposal of the British Government) there was more flying

¹ Capt. S. W. Roskill, *op. cit.*, Vol. I, p. 104.

² *Ibid.*

³ In all 57 were in commission. The writer owes this information to Captain Roskill who derived it from p. 12 of the 1939 volume of the Führer Conferences.

⁴ See Appendix I, p. 17. The figures are 18.71 million deadweight tons at 3rd September 1939 and 18.54 million deadweight tons at 30th June 1940. If only the ships on the United Kingdom register are considered the figures are 17.69 million deadweight tons at 3rd September 1939 and 17.26 million deadweight tons at 30th June 1940.

the British flag.¹ Admittedly the fighting at sea began at once and intensively. Nevertheless, it could hardly be imagined that in any war there would be a smaller degree of interference with the Commonwealth's seaborne trade.

All the same the trade of the United Kingdom declined significantly, though it was a little while before it was realised that the decline was something more than a temporary misfortune. The war was six weeks old when the Ministry of Shipping was set up—it was put in charge of a Director-General brought in from outside, though the Mercantile Marine Department of the Board of Trade was incorporated within it. One of its first acts was to take stock of the situation. On the 15th November it estimated that during the two previous months British imports were only about half² what they would have been in the same period in peace; for the number of foreign ships coming to the United Kingdom with cargo had greatly diminished, and shipping services had been disorganised by the introduction of convoys, and, particularly, by the temporary closing of the Mediterranean and of the east coast ports in the United Kingdom, which had been ordered as a precaution. It was to be expected, the Ministry said in its memorandum of the 15th November, that imports would henceforward increase but not, it supposed, so fast or so far as to allow the importation of more than 47 million tons (or about 85 per cent. of the pre-war average³) during the first twelve months of war; and even the arrival of 47 million tons, the Ministry pointed out, must be conditional on there being no substantial changes in the strategic situation, and particularly none of the misfortunes—the closing of the Mediterranean, heavy bombing of the United Kingdom ports or of ships at sea—which had been expected before the war and which were still likely.

The possibility of these misfortunes, and that there would be an intensification of the submarine campaign, was always present in the minds of the officials in the Ministry of Shipping. The Minister, it is true, had no experience of shipping problems in either peace or war, but the Parliamentary Secretary was Sir Arthur Salter, and he, the Director-General, and the Statistical Adviser had all been in the Ministry of Shipping in 1917 and 1918.

¹ See Appendix VIII, p. 69. The figures are 18.7 million deadweight tons at 3rd September 1939 and 18.91 million deadweight tons at 30th June 1940. By this date, however, some foreign ships (notably Danish ships) had been transferred to the British flag, and had thus come under British control, though the British had been having their services, under their own flags, before. (See Chapter V below.)

² The figure used for the peace-time imports was the figure for 1937—i.e. 59 million tons.

³ Assuming the average to be that given in the White Paper on *Statistics Relating to the War Effort of the United Kingdom*, Cmd. 6564, i.e. the average for 1934 to 1938, which was 55 million tons.

They found themselves in familiar circumstances. In the First World War they had seen the attacks on ships grow from small beginnings to proportions that threatened a national calamity; the grim realities of explosion, fire and wreck at sea in the autumn of 1939 were not concealed from them, as they were from the officials in other civil departments, by the reassuring figures of gains and losses; they never supposed that the disasters at sea would continue to be experienced by only a small proportion of British ships and crews. Now, while the greater part of most voyages could still be performed in safety, seemed to them the moment to insure against the perils that, they knew, surely lay ahead.

Principally the insurance, it was clear, must take the form of stocks of imported commodities which could be used to tide over an emergency—a sudden but temporary¹ congestion in the ports, for example, or a sudden fall in imports to which consumption could only be gradually adjusted. In so far as stocks were needed for these purposes² it was their total quantity, with certain qualifications and within certain limits³ that mattered most. What was most urgently needed for a start, and hardest to achieve, was a reserve of the essential commodities consumed in large quantities—particularly timber, wheat and iron ore which had together accounted in peace for about 38 per cent. by weight of the nation's total imports.⁴ Stocks of this sort to act as a cushion against misfortune—the 'contingency' reserves as they came to be called later to distinguish them (although the distinction was never in practice altogether possible) from the stocks required by the trades concerned for working purposes—were a vital necessity, the prerequisite of effective planning and, indeed, of any kind of orderly or tolerable existence.

¹ If congestion had been permanent the British would have lost the war.

² See p. 46. The other purposes for which stocks may be accumulated are to insure against a rise in prices and against the sources of supply being captured by the enemy. The commodities, however, of which stocks were accumulated on these grounds before the war were only imported in small quantities.

³ Broadly speaking stocks of one commodity are a substitute for stocks of others (i) as long as all the commodities in question can be carried in most ships and do not (like, for example, meat, or the whale oil referred to below) require specialised ships for their transport and (ii) as long as there is a proper correspondence between the ratios of consumption rates to stock-levels among the various imported commodities, i.e. large stocks of commodities required only in small quantities will not greatly improve the shipping situation, since the maximum help which stocks can afford is represented by the quantity of those imports which can be forgone because stocks of them are held.

Even, however, when the above conditions are fulfilled there are two major qualifications to the statement that stocks of one commodity are a substitute for stocks of others. In the first place they will not be so if shipping services are completely suspended for a period. In such a case stocks, for example, of iron ore are no substitute for stocks of wheat (unless the harvest is coming in) though they will be so if merely fewer ships arrive than are needed as distinct from none at all. In the second place, as long as statistics of stocks and consumption rates are incomplete and the machinery for determining priorities inadequate, it will be difficult or impossible to induce a department with large stocks to forgo imports for the benefit of a department whose stocks are too small.

⁴ See *Statistics Relating to the War Effort of the United Kingdom*, Cmd. 6564.

This had been known before the war. Sir Arthur Salter, particularly, had constantly preached the need to build up a large reserve of imported commodities. The project, however, had encountered so many difficulties that it had not made much headway until a few months before war broke out, when there had not been enough time to ship the commodities that had been bought. On the outbreak of war the Ministry of Food's reserve stocks (that is, stocks other than those that were taken over from the trades concerned and that were sufficient only for working purposes) amounted to 890,000 tons,¹ of which 240,000 tons, or roughly thirteen weeks' consumption at the rate which prevailed at the beginning of the war, were accounted for by whale oil. Of the remaining 650,000 tons, 500,000 were accounted for by wheat, and were sufficient only for three weeks' consumption; 150,000 were accounted for by sugar, and were sufficient, it would seem, for an even shorter period.²

The stocks of raw materials were harder to assess for on the outbreak of war, and indeed for long afterwards, the statistics were incomplete and unreliable. Apart from certain materials consumed in quantities too small to affect the shipping situation, and bought before the war in order to insure against a rise in prices, or because it was feared that the sources of supply would be cut off, there were no Government reserves. Some trades, on the other hand, had been asked and had been willing to build up reserves on their own account.³ In the crucial cases, however, of iron ore and timber the reserves were small or virtually non-existent. Stocks of iron ore were larger than in peace but nevertheless only enough, it would seem, for a few weeks;⁴ stocks of timber were below the usual peace-time level in the autumn. In general, judged by the standards of later years, when the need for large contingency reserves became a dogma which it was heresy to question, the volume of stocks of food and raw materials on the outbreak of war was such as to cause a high degree of alarm and despondency, and did indeed do so to the shipping authorities although to few others.

To lack stocks is to tempt providence, but to build them up means to deny present for the benefit of future needs. Before the process of

¹ See R. J. Hammond, *op. cit.*, p. 30.

² It appears that during the first four months of war the consumption of sugar was on an average 48,000 tons a week. But the stocks were of raw sugar, the consumption of refined sugar.

³ See *History of the Second World War, United Kingdom Civil Series*, J. Hurstfield, *The Control of Raw Materials*, pp. 50-55.

⁴ At the beginning of the war stocks of imported iron ore were 1.2 million tons. At the existing consumption rate this figure was equivalent to approximately ten weeks' supply, but a certain proportion of it—over, it would seem, one-half—was necessary for ordinary distribution purposes. Thus less than five weeks' supply was available as an emergency reserve.

stockpiling could start the country had to consume less imported commodities than the ships brought in. In the first few months of war, however, such plans as existed and such projects as were in progress demanded a great deal more.

To want more than one can afford is a common experience of the human race, but to consume more is only possible as long as it is possible to live on capital or to borrow. At the beginning of the war there were two shortages that limited the nation's ability to import—a shortage of hard currency and a shortage of ships. These limitations operated in conjunction when the Government wished to import commodities only available in countries with hard currencies; they pulled against each other in the cases, for example, of wheat and sugar, which were to be had both within the Commonwealth and in the dollar area. In cases such as these, to save dollars was to lose shipping space (for the Commonwealth sources were farther off) and *vice versa*. Where hard currency was concerned it was possible to live on capital, though not as yet to borrow.¹ As will appear presently, the Government did to some extent squander its resources through failing to reduce the consumption of inessentials and in order to economise in the use of ships. Ships, however, could not be squandered in the same way for all that were available were in employment. As long as the demand for imports was larger than the quantities the existing ships could bring in, and as long as it could not be reduced, the result could only be shortages falling in a haphazard and arbitrary way, and subjecting the nation to the fate of the spendthrift who finds his various projects suddenly and unpredictably interrupted not by his own choice but by the force of circumstances outside his control. The shipping authorities, occupying the centre of the stage, and seeing the whole drama of the nation's foreign trade, while the individual actors saw only this, that or the other part, from the start set their faces against this way of proceeding.

To prevent it, however, required a considerable revolution not only in the nation's economy but in its machinery of administration. In peace, proverbially, this country is a large importer of raw materials and foodstuffs and a producer of manufactured goods, and in war it had to remain so although the imports diminished and were to some extent replaced by commodities of the same type produced at home, and although the commodities that were imported came in proportions different from those of peace. On the outbreak of war two Government departments were principally responsible for estimating the country's needs for imported supplies

¹ In January 1940 it was estimated that during the first year of war the British would have an adverse balance of payments on current account of some £400 million as compared with £40/£50 million in the three preceding years.

—the Ministry of Food in respect of foodstuffs; the Ministry of Supply in respect of raw materials. The commodities which fell within the purview of these two departments after the outbreak of war accounted for about 90 per cent. by weight of the total imports in peace;¹ yet on the outbreak of war—when imports were only about half the normal and were not expected to exceed 85 per cent. of normal in the first year of war—the Ministry of Food was hoping that foodstuffs would be imported in the same quantities as in peace² and the requirements for raw materials were, it seems, higher than the peace-time average.³ Even, therefore, if there were left out of the account the miscellaneous items, for example, tobacco, cutlery, boots and shoes and other manufactured or semi-manufactured articles, for which neither of the principal purchasing departments was responsible but which could nevertheless not be wholly eliminated, it was plain that the needs of both the Ministry of Supply and the Ministry of Food could not be met. The problem was to discover where the cuts should fall.

Before the war, however, no one had been prepared for this task, on the outbreak of war no body existed to discharge it, and there were insufficient statistical data on which to form a judgment. For though before the war many authorities had considered, from their own particular points of view, the difficulties that would arise if supplies were short, the general implications of a shortage had not been considered.

In these circumstances the task of carving up the cake fell to the Ministry of Shipping; for reinforced as it already was by a considerable number of ship-owners, and a considerable variety of commercial experience, it combined in the highest degree attainable at the time the qualities of general knowledge and impartiality. It was it is true nowhere supposed, least of all in the Ministry of Shipping itself, that the task was one which properly belonged to the shipping authorities. Since, however, as in 1917, no one else was in a position to undertake it, they rose to the occasion. While disclaiming any right to determine priorities, except provisionally, they proceeded, in November, to suggest allocations for the first year of war. After having examined such figures as the purchasing departments could produce, they proposed that the Ministry of Food should have 19·8 million tons and the Ministry of Supply 23·9 millions. The remainder of the 47 million tons was to go to the miscellaneous items for which the Board of Trade was later made responsible.

No one questioned this judgment, but no one, either, was in a position to abide by it. The departments concerned, that is, were

¹ See *Statistics Relating to the War Effort of the United Kingdom*, Cmd. 6564.

² See R. J. Hammond, *op. cit.*, p. 72.

³ See p. 56.

not in a position to base their plans on their allocations even if they had wished to, and not all did. The plans for food control had started earlier and proceeded further than the plans for the control of the other commodities. The Food (Defence Plans) Department had devised elaborate rationing schemes before the war; on the outbreak of war the Ministry of Food, among other things, immediately took possession of all stocks and assumed responsibility for the purchase of a considerable proportion of imported foodstuffs;¹ but it did not purchase them all, for its controls had only been devised to cover the commodities that were held to be essential.² The problem of how far the other, less essential commodities could be dispensed with remained to be solved, and, meanwhile, precisely because these commodities were not controlled, there was nothing, except certain rudimentary arrangements in the Ministry of Shipping³ and an import licensing system, that to start with worked very imperfectly, to prevent them from arriving in quantities even larger than the normal. Similar difficulties, but on a much larger scale and in a much more intractable manner, beset the Ministry of Supply. While the Ministry of Food was only required to estimate the relatively stable needs of human beings for food, the Ministry of Supply was required to estimate the need for raw materials in three separate categories the relative needs for which were constantly changing—war production, civilian use and the export trade—and for the purpose of producing a vast range of finished and semi-finished commodities and weapons of war, sometimes requiring for their manufacture an amount of raw materials that, even until the end of the war, defied prediction.⁴ Faced with more difficult problems than the Ministry of Food, and with plans that were less advanced when the war broke out, in November 1939 the Ministry of Supply could not, it seems, so much as make a guess at the total quantity of imports it would need during the first year of war.⁵

At the beginning of the war it was indeed a formidable task

¹ See R. J. Hammond, *op. cit.*, pp. 62 and 67.

² *Ibid.*, pp. 71 and 72.

³ The Ministry of Shipping issued instructions to the liner companies enumerating the cargoes of highest priority, but there were too many of these cargoes and the liner companies had to decide between them as best they could. As one of the partners of the Blue Funnel Line protested to the Ministry on 7th February 1940, 'We really must have a lead from someone giving us some indication of *graded* priorities . . . Every day, insofar as I merely answer the questions thrown at me by the East, ship by ship, I am, in fact, making "graded priority" decisions for all the world as though I were the Minister of Economic Co-ordination, who doesn't exist. These decisions affect about 120,000 tons of shipping a month, so that I am not being unduly modest in asking for some guidance'.

⁴ See J. Hurstfield, *op. cit.*, pp. 83-84, 94 and 128.

⁵ The Ministry of Shipping in making the allocation referred to on page 48 noted that 'Provisional figures have been received from the Ministry of Food for a year's programme and, though no programme for a year has yet been received from the Ministry of Supply, we have had figures for three months to which due regard has been paid'. Subsequently, in the following February, the Ministry of Supply claimed to be unaware of how, precisely, the figure of 23.9 million tons had been arrived at.

to attempt to estimate, for twelve months ahead, all the nation's needs for imported commodities. A vast array of statistical data, most of them never collected in peace, had to be assembled; a vast miscellany of requirements had to be surveyed and weighed up against each other; partly because knowledge was inadequate, partly because danger still seemed remote, partly because the United Kingdom was not the great power she once had been, and felt obliged to conciliate many other countries, there seemed a bewildering number of possible policies: should the British, for example, have more iron ore, and therefore more steel and therefore—or so it appeared—¹ ultimately more weapons, but at the price of less animal feedingstuffs and with the result that they would later on have to kill pigs and poultry which, once dead, could not be replaced? Should they spend dollars to save ships and so have more iron ore or timber now, at the price in the future of less American steel or weapons of war, which they might urgently need? How far in their endeavour to cut imports could they afford to turn a deaf ear to the lamentations of their former customers, particularly in the Dominions and Colonies, who maintained that they would be ruined if they could not sell their goods, and to the requests of the Ministry of Economic Warfare which was endeavouring to deny supplies to the enemy by buying them for the United Kingdom and wanted shipping space for their transport? And whatever answers were given had to be in a precise form: so many thousand tons of wheat, for example, from Canada in such and such a month, so many thousand tons of butter from Australia, or jute and tea from India, or steel from the United States, or palm kernels from West Africa; for without information of this sort, arranged in lists, or programmes,² provided three months in advance, and giving the exact quantities required, and the areas of the world from which they must come, the shipping authorities could not make the necessary dispositions nor calculate accurately, at least in the short run, the importing-capacity of the fleet.

It was small wonder that this herculean undertaking, that had first been attempted, and then only with qualified success, in 1917; of which the techniques had largely been forgotten and to which

¹ See p. 67.

² Programmes of requirements were one of the essential foundations of shipping control. Though in accordance with the ordinary usage of the word they were projected plans of action, nevertheless the word came to have a technical meaning; for a list of requirements was not a programme unless it observed certain rules. Notably the requirements had to be listed in detail (large omnibus categories labelled 'miscellaneous' would not do); they had to be presented with due notice; they had to be in tons of 2,240 lb. (except for certain items of military cargo); they had to specify the areas of supply (or the destination if the programme related to exports). In these circumstances the writer cannot avoid using the word 'programme', although its war-time meaning violates the English language. Indeed the writer has been unable to avoid violating the English language still further by using the word as a verb.

nothing comparable had ever been seen in any other country, should have led at the start to confusion. With the best will in the world the beginnings were bound to be difficult.

Nevertheless, there is no denying that the will was not of the best. The Government believed that the nation's morale would not stand either physical shortages or the interference with individual liberty that enforcing the necessary controls would have involved. Many of the Ministry of Food's rationing schemes were laid aside on the outbreak of war;¹ virtually no attempt appears to have been made to cut down supplies of raw materials to the home market;² though the Ministry of Shipping had said that it did not suppose that it could import more than 47 million tons in the first year of war and, in that case, that the Ministry of Supply could not have more than 23.9 million, neither the Government nor the Ministry of Supply took these admonitions seriously.³

Instead, opinions were often expressed in the War Cabinet that suggested either that the Ministry of Shipping had done its sums wrong or, if it had not, that shipping was being grossly mismanaged. The United Kingdom, the argument ran in effect, was much the largest ship-owning country in the world; in peace much of its fleet was unemployed or under-employed; since the war started there had been virtually no net losses; even allowing for the tonnage allocated to the Services (which was considerable⁴) and for the delays due to convoys and other precautionary measures affecting navigation (later estimated to reduce importing capacity by 20 to 25 per cent.) it was—or so it was thought—contrary to common sense to assume that the nation need be as short of ships as the shipping forecasts presupposed.

Mainly these beliefs were the result of ignorance and had no substance. Before the fall of France the rate of importation in British ships was on an average higher than in peace,⁵ notwithstanding the

¹ See R. J. Hammond, *op. cit.*, p. 113.

² See J. Hurstfield, *op. cit.*, pp. 116-120.

³ See p. 65 below.

⁴ The amount of tonnage allocated to the Fighting Services gradually increased after the beginning of the war; it had reached the figure of 1.9 million gross tons or 1.6 million deadweight tons by the time the Germans attacked Norway and Denmark. About 773,000 gross tons of this was accounted for by the fifty-one armed merchant cruisers which the Admiralty had acquired by October 1939. According to an estimate made by the Statistics and Intelligence Division of the Ministry of War Transport for the writer these ships could have brought in from 1½ to 2 million tons of imports between the outbreak of war and the fall of France.

⁵ The writer bases this assertion on the following facts:

(i) Average imports in peace were 55 million tons, of which (see Chapter 1 above, footnote 2 to p. 5) about 24 millions came in foreign ships leaving 31 millions to be carried in British ships.

(ii) On an average until France fell the rate of importation was 47 million tons (see Appendix X, p. 71), of which (see p. 64 below) about 10 millions came in foreign ships, and, therefore, about 37 millions in British ships.

heavy fall in carrying-capacity caused by the war-time delays. The British Merchant Navy, in fact, was doing very creditably. The statistics, however, that could have demonstrated this fact were hard to collect and had not yet been collected, so that meanwhile the complaints looked plausible. To the uninitiated the Ministry's proceedings always seemed haphazard, ill-co-ordinated and suspiciously incomprehensible. They seemed so particularly in the early days of the war before they had been justified by obvious successes and when, in the Ministry as everywhere else, the machinery of control was in process of construction.

The Ministry of Shipping had inherited an unfortunate legacy and had entered somewhat late into its inheritance. Its predecessors, it was shown, had assumed that ships need not immediately be requisitioned—and in fact had not prepared any plans for the formidable task of requisitioning them—because they had not supposed that shipping would be short. In any other circumstances than those of acute shortage, they had held, the more the ship-owners could be left to their own devices the more likely they would be to bring in what was needed in the most efficient way. It had been decided in consequence that ships should be operated under a licensing system whereby the Government would merely have the right to refuse owners permission to engage in the less essential trades and to fix the freights they might charge so as to prevent their making excessive profits.

For just as the prevailing unwillingness to contemplate the possibility of total war, with its restrictions on individual liberty, had made it seem unnecessary, and therefore unwise, to requisition, so another dominant belief of the nineteen-thirties—that there must be equality of sacrifice and that no one should be allowed to benefit from a national emergency—had led to the determination to control freights. But the two assumptions led to contradictory results, for the control of freights removed one of the principal incentives that might otherwise have operated (although it could not have operated to a sufficient extent) to get the tramp ships into the dangerous but necessary trades, notably the Narvik ore and the Atlantic grain trades, where they were particularly needed because the foreign ships which engaged in them in peace were only available in greatly diminished numbers.

In general, in fact, in the conditions in which it was required to operate, the licensing system increasingly exhibited every conceivable defect, although the enormous administrative problems involved in requisitioning the whole dry-cargo fleet, as well as the objections, which still remained, to applying compulsion, made it impossible completely to abandon it for some time. Though it prevented any ship-owner from making profits on the scale that had

sometimes been possible during the 1914-18 war, it ensured equality of sacrifice (or reward) between one ship-owner and another far less than requisition would have done, for it proved impossible to fix freight-rates in an equitable way;¹ it placed on the ship-owners, and particularly on the tramp-owners, a burden of moral responsibility larger than they should have been required to shoulder, forcing individual firms to decide whether, or how far, the national interest required them to sacrifice their ships in trades for which they had not been designed, or to expose their crews' lives in dangerous voyages, when there were plenty of safe and attractive alternatives; so far from the ship-owners being able, by virtue of their experience, to exercise a useful discretion about the routes on which they sailed, the cargoes they carried and, in general, about the way they managed their ships, the bulk of the cargoes were increasingly purchased by the Government and the ship-owners, for this and other reasons, increasingly found their freedom of action limited by conditions over which they had no control—by the need, for example, to sail in convoy under Admiralty orders; by the impossibility of knowing, when sudden shortages of urgently needed commodities were daily occurrences, whether or not they would be allowed licences for the voyages they had planned; by constantly finding their plans upset at the last moment.

From the start enough tonnage could not be found for the unattractive trades except by requisitioning ships to meet the needs which the negative control exercised by the licensing system was incapable of meeting. The ships were, however, requisitioned when it was necessary. It seems unlikely, considering the other impediments at this time to harmonious marriages between ships and cargoes, that these hand-to-mouth methods, which prevailed until January 1940, when it was decided to requisition all deep-sea dry-

¹ Even in the case of tramps there were great inequalities. As the Ministry of War Transport observed: 'The owner of a modern and expensive ship may find unremunerative a rate which would be over-generous to the owner of an old and inferior ship. [For] full advantage cannot be taken of higher efficiency under war conditions. . . .' In any case the expenses incurred because of war conditions were unpredictable and unanalysable. Convoy delays, for example, varied from route to route and from voyage to voyage and to make allowances for them proved impracticable. The tramp-owner was allowed 3d. per gross registered ton per day for every day spent in waiting for convoy after the first twenty-four hours. During the first twenty-four hours he was presumed to take in stores and bunkers. But what happened in the case of a ship kept waiting in the course of one voyage at five different convoy stations but at only one of them for as long as twenty-four hours? To control liner freights was so much more difficult than to control tramp freights—for a liner tariff is an affair of such complexity, the overhead expense per ton of shipping or cargo varying so greatly from case to case—that the task could not even be attempted. Instead the Liner Conferences were asked for and gave a guarantee that they would not raise their rates above the pre-war level by amounts greater than the increase in operating costs due to war conditions. The various increases in rates which the Conferences proposed were apparently accepted by the Ministry without question; there were evidently not so many grievances among liner- as among tramp-owners; but all the same there were problems of a similar kind, and hard cases and inequalities. See for example footnote 2 to page 54.

cargo ships,¹ significantly² diminished either the total volume of British imports or even the importation of essential commodities. On the other hand they added to the difficulties, which admittedly continued long after the licensing system had been abandoned, of making reliable estimates about how much of this, that or the other commodity would come in during any given month or quarter.

The purchasing departments, in consequence, who saw their monthly quotas fluctuating in an exasperating and unpredictable way, naturally tended to suppose that all the Ministry of Shipping's predictions were wrong, and to the Ministry's admonitions that what was required was that they should set their house in order they could always find a *tu quoque* reply.

In fact, however, though in shipping as in other matters there was scope for better management than could immediately be supplied, it was the shipping authorities and not those who abused them who turned out right. The Ministry of Shipping's long-term estimates were almost exactly fulfilled;³ its warnings were justified by events; amidst all the false optimism it showed, in most respects, a remarkable prescience.

Before the fall of France, however, and indeed for some time afterwards, it found it excessively hard to convince its critics. In the early days of the war the Minister of Shipping attempted from time to time to explain to his colleagues the reasons for his department's conviction that importing-capacity could not be increased, but after an elaborate beginning the explanations were always apt to tail off into assertions that the problems involved were 'highly complicated and technical';⁴ and the audience was no more con-

¹ The decision to requisition was publicly announced on the 4th January 1940. The task took a considerable time to complete and was indeed not fully accomplished by the time France fell when about 1.7 million deadweight tons of shipping, or roughly 10 per cent. of the ships on the United Kingdom and Colonial registers at that date (see Appendix VIII, p. 67) were still trading free. (This figure excludes ships of 1,600 gross tons and over employed in coasting work in this country—coastal shipping was never requisitioned—and the ships on the Dominion registers over which the Government in the United Kingdom had no control.)

² The only evidence the writer has ever seen which suggests that the failure to requisition earlier may have diminished importing-capacity is provided by an assertion made by Mr Churchill, then First Lord of the Admiralty, who said at a meeting of the War Cabinet on the 17th November 1939 that half a million gross tons of passenger-cargo liners—a figure which he himself believed might be too large—was lying idle because the freights were such that these ships, which normally carried substantial numbers of passengers no longer available, could only be run at a loss. The amount of cargo that these ships could have brought to this country, however, during the four months before requisitioning was introduced must have been so small as to be more or less negligible.

³ The Ministry had estimated at the beginning of the war that the British would import 47 million tons during the first year of war provided that the factors that determined importing-capacity remained as they were when the estimate was made. For the reasons given in Appendix III, p. 21, it appears that had the Germans not attacked in the West they would have imported roughly this amount in the twelve months September 1939 to August 1940.

⁴ The words quoted are those of the Lord Privy Seal in his review of the shipping situation referred to on p. 65 below.

vinced than before. There was indeed no means of making all the facts of the shipping situation intelligible to people who could not give them prolonged study, and the Ministry of Shipping could never acquire the necessary authority until its spokesman was a Minister whose knowledge and experience inspired sufficient trust to make detailed explanations unnecessary. This did not happen until Lord Leathers was appointed in May 1941. In the meanwhile the Ministry's warnings were often neglected, and during the first eight months of war, in consequence, the difficulties that inevitably occurred at the beginning, because demand could not be immediately adjusted to supply and because stocks were too small to fill the gap, for the greater part persisted until the necessity for reform was demonstrated beyond dispute by the actions of the enemy.

After a few weeks of war the country began to run short of wheat. Imports in September and October were only about half consumption; until the harvest began to come in there were, it was shown, stocks (over and above the distributional minimum) sufficient only for three weeks. As ill-luck would have it the harvest was unusually late. In the beginning of November it was reported to the War Cabinet that 'we have reached a condition of dangerous scarcity'.¹ By the middle of the month there were mills that could not be kept fully employed for lack of grain.²

The answer to this problem as long as it was considered in isolation was relatively simple, for wheat was a commodity of such vital importance that it seemed that the licensing system, which made it impossible to get enough ships into the North Atlantic grain trade in the autumn storms, could not be allowed to obstruct the importation of the necessary amount. The ships were requisitioned and the wheat transported to this country.

But the wheat shortage was not the only shortage whose victims claimed that it must lead to disaster. It was on the contrary only one of many, and all could not be met even if dollars were sacrificed to save ships as far as, and indeed beyond, what seemed legitimate. The Ministry of Food, which had started the war with a better administrative machine than the Ministry of Supply, whose claims in the nature of the case were more easily justified and evoked more sympathy, whose statistics were more comprehensive and whose advocates in consequence more cogent, managed, it is true, to survive until France fell without another major crisis. But during the eight months that passed between the outbreak of war and the German attack on the West, and indeed during the whole of the first year of war, its imports were at a rate only about 10 per cent. less than in

¹ See R. J. Hammond, *op. cit.*, p. 69.

² *Ibid.*, p. 69.

peace,¹ and though it put enough to reserve to provide what seemed adequate stocks of the major commodities, nevertheless its total stocks by the time France fell were much smaller than afterwards seemed safe.² Its demands could only be met at the expense of the other claimants and, principally, of the Ministry of Supply.

At the same time that the Ministry of Food had started to threaten disaster because the country was running out of wheat the Ministry of Supply had started to make similar threats on the subject of iron ore and timber. In spite of the warnings before the war, the need for imported timber in the first six months of war was put when the war started at, apparently, about the peace-time average.³ The demand for imported iron ore was even larger than in peace.⁴ Manifestly it was impossible to meet these two demands at the same time as the demand for wheat.

From the start the Ministry of Shipping requisitioned ships for the dangerous iron ore trade from Narvik, in which British ship-owners would not willingly engage; as the grain crisis diminished more ships were allocated to carry iron ore; but still there were not enough, and there were relatively many fewer to carry timber, which had to be fetched from North America, since the Baltic supplies were cut off, and which was a much more expensive proposition from the shipping point of view, not only because it came from much farther off, but because it is a cargo which takes much longer to load and discharge.

Acting as best it could in the light of common sense, the Ministry of Shipping had given first priority to the demands for grain and second priority to the demands for iron ore, leaving the devil to take the hindmost—timber. While, therefore, the demands for wheat were met in and after December 1939, and while the shipments of iron ore rose steadily, though not sufficiently, month by month, the timber shipments consistently declined until February and even after that were always much lower than at the beginning of the war.⁵

¹ The Ministry of Food's imports during the first year of war were 20.7 million tons, of which 1 million were a windfall in the summer of 1940—cargoes destined for France and diverted to this country. The 1934-38 average was 22 millions.

² According to Table X on p. 397 of Vol. I of R. J. Hammond, *Food, stocks of food and feedingstuffs in the United Kingdom under the control of the Ministry of Food* were 3.7 million tons at the end of June 1940 as compared with 5.5 million tons at the end of June 1942.

³ In 1938 imports of softwoods, other than mining timber, had amounted to 2½ million standards. In September 1939 requirements for the first six months of war were just over 1 million standards.

⁴ The 1935-38 average was 5.7 million tons. The requirements at the end of September 1939 were 7 millions.

⁵ Imports of timber between September 1939 and May 1940 were as follows:

	<i>Thousand tons</i>		<i>Thousand tons</i>
September 1939 . . .	368.4	January 1940 . . .	98.1
October	233.3	February	105.8
November	197.5	March	159.8
December	183.3	April	180.1
		May	175.1

The victims of these various misfortunes, outraged by the arbitrary nature (as it seemed to them) of the decisions from which they suffered, bombarded the Ministry of Shipping with complaints, threatening that factories were on the point of closing down with disastrous results to the war-effort, and, when their grievances were not remedied, appealed to the War Cabinet. The Ministry of Shipping, knowing it to be improper that it should thus be required to decide the destinies of the nation, but that nevertheless it must shoulder the burden until some more appropriate body could be set up to carry it, complained, for its part, that its position 'would become impossible if every importing department pleaded that the safety of the country was at stake unless its demands were satisfied'. The War Cabinet believing, but unable to prove, that shipping was being mismanaged, knowing that inessentials were being imported but lacking the criteria by which to judge what an inessential was (except in a few glaring cases, too small to affect the shipping situation significantly, that the import licensing system was gradually bringing under control) was not in a position to arbitrate between the shipping authorities and their exasperated clients.

It was indeed an impossible state of affairs and, by February, it was plain that it could not be allowed to continue, for by then, although the confusion of the early days had been overcome, and essential food supplies seemed assured for the time being, disastrous shortages of raw materials were apparently drawing nearer instead of receding: stocks of iron ore were below the distributional minimum and works were beginning to close down; timber imports were less than a third of what they had been in the first month of war and no more, it was said, than at the height of the submarine campaign in 1917; because, among other reasons, of the need to save ships by employing them on the shorter haul to the Western Hemisphere instead of on the longer one to the Antipodes, the reserves of dollars were running out at an alarming rate. In these circumstances the need for a grand inquest became inescapable. Either, it was clear, more importing-capacity must somehow be provided or all the demands must be surveyed, the unnecessary ones eliminated, and planning begun again on a realistic basis.

More importing-capacity, however, could not be provided except by one of three means or some combination of them—by increasing the rate of new building, by buying or chartering more foreign ships, or by transferring to the United Kingdom trades some of the British ships employed abroad in the service of the Dominions, Colonies and friendly foreign countries. Because, however, of the competing claims of the Royal Navy, and of the demand for repairs, no spectacular increase in the rate of new building was ever possible—even at the peak, in 1942, the British built roughly 33 per cent. fewer

merchant ships than in 1913, and only about 55 per cent. more than in the first year of war. During the first year of war the new merchant ships that were completed were mainly those laid down or ordered before the war started. The attempts to add to them significantly were frustrated, largely by the difficulty of finding the skilled labour. In any case nothing that could have been done in February 1940 to increase new construction could materially have added to importing-capacity during the course of the next seven months.

In these circumstances it seemed especially necessary to acquire more foreign ships. If foreign ships had carried the same share of the burden of supplying this country as in peace there would have been no problems; in that case the annual rate of importation, instead of being 47 million tons, as it was until France fell, would have been of the order of 65 million.¹ Some such state of affairs as this had indeed been expected before the war, though what actually happened was very different.

Since the beginning of the war the Germans had been endeavouring not only to sink British ships but to prevent the neutral countries from chartering to Britain. It is true that the only area where they could hope to control completely the operations of neutral shipping was the Baltic, and even here, in the event, their power was not complete—they could largely prevent the timber ships of the small Baltic countries, Finland, Latvia and Estonia, from trading with the United Kingdom, but not the Swedish ships; for Swedish ore resources, which Germany needed, put Sweden in a position to bargain.

Outside the Baltic it was open to the Germans, under the rules of international law, to deprive Britain of the services of neutral ships by blockading her as she was attempting to blockade them. But for this purpose they would have had to escort neutral ships suspected of trading with her to German contraband-control ports for examination, and they had not enough naval surface craft for the task nor any foreign bases. They adopted instead a course that was simpler and more effective though proscribed by international law. By the 15th October 1939 neutral ships in British convoys were being sunk without warning while single neutral ships carrying contraband were being sunk after investigation in cases where it proved impossible to bring them into a German port. The areas and circumstances in which U-boat commanders and aircraft were ordered to attack without warning were quickly extended until by the end of 1939 virtually all the restrictions had been removed.

In general, in fact, the Germans made it plain to the neutrals that if they continued to trade with the British, besides risking their ships

¹ In these circumstances (see footnote 5 to p. 51) foreign ships would have carried 28 million tons instead of 10 millions—i.e. a gain of 18 millions.

in circumstances when it was difficult to replace them, they also risked losing Germany's good will. Yet all of them in varying degrees were dependent on Germany for supplies, and all were menaced by invasion, which in the end only Sweden escaped.

Clearly in these circumstances if the British were to succeed in chartering neutral ships they would need to offer powerful inducements to neutral owners and governments. The most obvious inducement was high rates of hire combined with charter-party terms, particularly the payment of war-risk insurance premiums by the charterer, that would protect the owners against the more unpredictable and onerous of the hazards of war. From the beginning of the war the Ministry of Shipping aimed at taking up blocks of neutral shipping on time-charter. This was a more convenient arrangement than chartering or booking space for a single voyage as is the normal practice; for, in the first place, it protected the charterers against a rising market, and secondly, which was more important, it ensured complete and continuous control. Inevitably, however, it was difficult to negotiate on this basis; for why should foreign owners agree to charter in a dangerous trade for a period of time and at the risk of offending a powerful neighbour when they could charter on a voyage basis in a rising market and safe trades without offending anyone who could harm them?

In the first few weeks of war, however, before the Ministry of Shipping was set up, the Government did not see the matter in this light. Even the Ministry of Shipping itself to start with evidently underrated the difficulties in the way of procuring neutral ships.¹ As a result, ships laid up in the United States that the British might have bought were bought by other nations;² ships that they might have acquired on time-charter before the shortage and the dangers of the United Kingdom trades were fully apparent, found other and more profitable employment. Ignorant at the start of the gap between supply and demand, and afterwards ignoring the difficulty of bridging it, disliking to be blackmailed and short in any case of foreign exchange, the War Cabinet decided, on the 3rd October, to take 'a stiff line'³ and proceeded to follow it for some time, not only

¹ It should be noted, however, that the Ministry's estimate of 15th November 1939 of the amount of imports that would be carried in foreign ships during the first year of war was not very seriously out. It assumed that 11 million tons would be imported in the last ten months of the year, and about 12.5 million tons over the twelve months. In the event foreign ships appear to have carried about 10 million tons in the twelve months.

² Large quantities of tonnage were laid up in the United States at the beginning of the war. Some of it belonged to private owners, whose ships were temporarily driven out of employment by the Neutrality Act; some, consisting of ships out of commission since the 1914-18 war, belonged to the United States Government. Nearly 400,000 gross tons (say 640,000 deadweight tons) of United States tonnage had been bought by foreigners by the end of February 1940 (see *United States Foreign Policy Report*, 1st April 1940) of which only 178,000 deadweight tons had been bought by the British and 50,000 by the French.

³ It was said that 'owing to the success in meeting the submarine menace, we could . . . afford to contemplate some delay'.

in relation to the rates of hire but also in relation to the neutrals' rights to trade with the enemy. While the Ministry of Shipping was offering neutral owners terms that were no better than those it gave to British owners, the Ministry of Economic Warfare was exasperating them by holding up their ships, often for long periods, at contraband-control points, and vexing their governments by requiring them to enter into agreements to curtail their exports to Germany.¹

Many of the neutral countries were, in different degrees, economically dependent on the United Kingdom and had trade connections with it which they were unwilling to break; all of them no doubt hoped that Germany would lose the war; nevertheless these reasons were not strong enough to induce them to charter their ships in the circumstances described. Argument therefore having failed the Government was forced to try coercion.

At first sight it might be supposed that the largest empire in the world, possessed of the world's largest Merchant Navy, would have many means of coercion. A ship cannot sail without being insured, and without stores, charts, bunkers and very large quantities of water; she may need repair facilities and loans from the banks for disbursements. Large numbers of neutral ships were insured on the London market; in all the ports of the British Commonwealth—in Canada, South Africa and the areas east of Suez as well as in the United Kingdom—the control of the other facilities was in the hands of British authorities who, by withholding them, could have created great difficulties for recalcitrant foreign owners and could have used this power as a means of bargaining. It is true that the control could not have been made complete; with the United States neutral it could not operate in most of the Western Hemisphere; before the German conquests in the West it could not operate in Europe; nevertheless, so many of the neutral countries had ships trading to the Middle East and in areas east of Suez that it must have been a formidable weapon if it had been possible to use it.

Before the war the Mercantile Marine Department had considered the various means of pressure that could be applied to neutral ships. It had considered them one by one, and it had emerged that none of them, if used in isolation, was likely to have much effect. Even bunker control, which was held to be the most promising, clearly suffered from serious limitations: the British could not control the supplies of coal in America, or in Central Europe whence Germany in the event provided to some extent for the needs of the neutral countries. Moreover, a higher proportion of the world's shipping was oil-fired in 1939 than in 1914, and Britain had much less control over oil than over coal supplies.

¹ See *History of the Second World War, United Kingdom Civil Series*, W. N. Medlicott, *Economic Blockade*, Vol. I, pp. 53-58.

Yet in fact it does not help a ship to have fuel if she cannot get, say, water or stores, and if no one will insure her. After the fall of France the idea was conceived of denying all such facilities to recalcitrant neutrals in all the areas of the world where the ports were British. The essential feature of the control that was then established was that it worked by combining various means of pressure any one of which by itself might have been inadequate.

At the beginning of the war, however, when the Government attempted to coerce the neutrals it did so in a piecemeal fashion that was almost invariably unsuccessful. At one moment, for example, it considered threatening the Greek ship-owners with the refusal to insure their ships unless they chartered them to the Ministry of Shipping; but it was pointed out that they would turn to the American market, and the threat was never made. On another occasion a Yugoslav ship-owner who applied for a licence to export bunker coal from the United Kingdom was told that he was unlikely to get his licence unless he would charter four of his ships to the Ministry. He replied that if the licence were refused him he would be obliged to fetch the coal from America, and, moreover, would no longer be able to carry for the Allies on voyage-charter. He received his licence unconditionally. Many similar examples could be given of attempts to apply pressure that failed and of suggestions for applying it that proved abortive.

Until the fall of France, in fact, the mood of the British Government was so unsuited to the kind of drastic action that was later applied, and the circumstances were in general so unpropitious to it, that it seemed impracticable. No one wished to offend the neutral European countries by behaviour that might seem more appropriate to totalitarian states; it seemed essential, as it was often said, not to 'upset' them; it seemed even more essential not to offend the United States, many of whose imports came in ships which, if British pressure were successfully applied, would be forced into British services, and with whom attempts to apply the pressure might in consequence have embroiled the British Government. In any event, to apply the pressure would have required the co-operation of the Dominion Governments, to the detriment of Dominion interests, for the more foreign ships in the employment of the United Kingdom the fewer available to them; and while civilian consumption in the United Kingdom was barely lower than in peace, it would have been difficult to ask the Dominions to suffer inconveniences greater than those they were already experiencing because Britain's need to employ ships on the shorter hauls had caused her to refuse substantial quantities of their exports.

For the same and also for other reasons, it seemed undesirable to bring back to this country the United Kingdom registered ships

employed in inter-Dominion trades and in trades between the Dominions and Colonies and friendly foreign countries. These ships, it was shown earlier, were earning dollars and other hard currencies; the goodwill their owners had built up was a valuable national asset; moreover, they were meeting a vast miscellany of needs in the Indian, Pacific and Atlantic Oceans which no one in London could begin to analyse. It was hard enough to estimate the needs of the United Kingdom. To estimate, in addition, the needs of half the world was—or so it must have seemed before France fell—a project so far outside the bounds of possibility that only a lunatic could have contemplated it. No one even in the worst moments of 1917 had ever attempted so ambitious a task;¹ and as long as it could not be attempted it was impossible to say what would happen if British tonnage in the cross trades (as these trades were called) were reduced, except that there would be physical shortages which might affect the United Kingdom besides the immediate sufferers, and that there would be outcries from an inestimable number of victims in and outside the British Commonwealth, followed by the protests of governments.

The Ministry of Shipping was well aware of these difficulties. Nevertheless, for lack of precise information, they were not of a type that could easily be explained to a suspicious audience or in the language of official memoranda. In any case, the Ministry looked on the ships in the cross trades as a reserve to be drawn on only in a dire emergency. In these circumstances it evidently thought it unwise—since it held a different view from the prevailing one about the causes and extent of the emergency—to embark on arguments over the fundamental issues and, as it turned out, there were simpler means of preventing the United Kingdom registered ships in the cross trades from being withdrawn; for it was always possible to point out that it would take them many months to traverse the seas and oceans that separated them from home. In Westminster, where the preoccupations before France fell were always with the immediate difficulties, this evidently seemed a sufficient answer. The greater part of the United Kingdom registered ships that were in the cross trades remained there.²

There was, therefore, nothing for it except to negotiate with the

¹ See Sir William Elderton, *Shipping Problems 1916-1921*, p. 55. This shows how at the end of the 1914-18 war it became necessary to draw up a balance sheet of the needs and the available supply of ships. The needs considered, however, were only those of France, Italy and the United Kingdom.

² The total amount of tonnage in the cross trades at 31st December 1939 (the first months for which figures exist) was 2.97 million deadweight tons; at 30th April 1940 it was 2.77 million deadweight tons. For reasons that will appear later, however (see Chapter IX below, p. 236, footnote 2) these figures are probably somewhat unreliable. It should, perhaps, be pointed out here that to speak of ships remaining in the cross trades is an over-simplification. Much of the tonnage recorded in the returns as being in the cross trades was only there on one leg of a voyage.

neutral ship-owners on ordinary commercial terms. The 'stiff line' policy had had to be abandoned some months before the crisis in February. After forty days of war Mr Churchill, then First Lord of the Admiralty, had pointed out that the Government had so far not obtained any neutral tonnage worth mentioning and that 'the situation is such that we should hardly be wise to delay much longer in making the best bargain we can'. At that time the British were offering Greek owners 7s. a deadweight ton a month for an average tramp on time-charter, with war-risk insurance for owners' account. Mr Churchill observed that the Greeks had just chartered fifteen ships to the Swiss at 15s. a ton. He thought the British should pay an equivalent price or slightly more. The extra cost would, as he put it, be a 'vexing charge', but worth it.

Accordingly the British began to bargain on the assumption that they would have to make concessions. Inevitably, the negotiations took some time; the circumstances, with demand, rates and risks rising, were less propitious than at the start of the war; money, moreover, was not the only consideration with the neutrals. Within varying limits they did not want to offend the Germans or to risk losing their ships, and in so far as these were their objects it was impossible to move them.

The countries nearest to Germany tended to be the most afraid of her. Before the invasion of the Netherlands the British had no ships from the Dutch, either on time or voyage-charter. As the Ministry of Economic Warfare put it: 'We held no whip with which to beat the Dutch, and we could think of no lever to compel them to put their shipping at our disposal'. The British had virtually no ships on time-charter from the Danes and none at all from the Swedes, though they had some on voyage-charter from each, and some service from their liners.¹ Only the Norwegians and the Greeks, further removed from Germany and more closely connected with Britain in peace, were willing to time-charter large blocks of tonnage, and even they found reasons for delay.²

¹ An agreement was concluded with the Swedes in November 1939 by which they undertook that as far as possible trade between Sweden and the United Kingdom and France should be carried in Swedish ships, that Swedish tramps returning empty from overseas ports on the Mediterranean and the Black Sea and from Iberian ports should carry British imports, and that residual space in Swedish cargo-liners should be used on British account. Apart from trade between the Allies and Sweden it was estimated that Britain would gain carrying-capacity capable of bringing in from 400,000-500,000 tons of cargo per annum. The agreement with the Danes concluded in March 1940 provided that they should make available at market rates as much tramp tonnage as was needed to maintain 150,000 deadweight tons carrying cargo to ports in the United Kingdom and France.

² The Greeks agreed in January 1940 to provide 500,000 deadweight tons. The Norwegians in the previous November had made substantial promises—150 tankers of 1½ million deadweight tons, and a minimum of 200,000 deadweight tons of tramp tonnage, besides the maintenance in Allied trades of nearly half a million tons of liner tonnage. They delayed, however, fulfilling these promises until—in February 1940—the British had satisfied their requirements over trading with the enemy.

All told, therefore, the tonnage the British acquired on time-charter before the German attack on the West did not add up to a great deal. The official records of the deep-sea dry-cargo foreign ships that had actually been brought under British control by the 31st March 1940 show a total of only about 400,000 deadweight tons.¹ At the same time, about 200,000 deadweight tons of shipping in the same category were on charter to the French.

The Ministry, as was said, always wanted to take up foreign ships on time-charter since otherwise it could not fully control them nor reckon on their being available in the future. Nevertheless the negotiations over the time-chartering took so long and produced such meagre results that it was impossible not to charter on a voyage basis. Here, too, however, and inevitably in the circumstances, there were difficulties. Obviously it was not desirable that the purchasing departments and private firms should charter for single voyages at market rates while the Ministry of Shipping was attempting to bargain with neutral ship-owners to hire their ships on time-charter; yet to set a limit to the price that could be paid for voyage-charters was to restrict drastically the number of ships that would trade on these terms.

In the event there had to be some compromise but, even so, until the German attack on the West the amount of foreign tonnage the British acquired on any terms was only small by comparison with the peace-time average. In February the imports in foreign ships since the beginning of the war had been, very roughly, at an annual rate of 10 million tons² (or considerably less than 25 per cent. of total British imports, as compared with 40 per cent. to 50 per cent. in peace) and they seemed unlikely to rise in the foreseeable future; indeed it was thought that they might decline, for hitherto, under the arrangements that prevailed between the British and the French, which will be described presently, the British had received the lion's share of such deep-sea dry-cargo ships as the neutral countries had been willing to supply. In February, however, it seemed that the the French might have to be given a larger proportion and their gain would be Britain's loss.

In these circumstances it would have been foolish to suppose that more ships could be provided to carry imports to the United Kingdom during the first year of war. The neutral countries were unlikely to provide more, either on time- or on voyage-charter, and in general owners who would not charter were even less willing to sell; there was no hope from British new building; it seemed inadvisable to bring back the British ships trading abroad. These were the facts

¹ See Appendix VIII, p. 69.

² Very roughly 4 million tons came in neutral ships during the first five and 6 millions during the last seven months of the first year of war.

that had to be faced in February. The Lord Privy Seal, who was then deputed to survey the shipping situation, was clear that it would be disastrous not to face them immediately.

Any attempt [he said] to deal with this problem in a piece-meal fashion would not only be foredoomed to failure but would also aggravate the difficulties in which we find ourselves; the problem is, however, exceedingly urgent since with the passage of every day the likelihood grows that some of the imports which are arriving are imports which in the last resort we could do without, with the result that at the end of the first year of war we may find that we have failed to obtain imports which are absolutely vital to our war effort.

The urgent needs, the Lord Privy Seal concluded, were to review 'the whole of the import programme of 47 million tons for the first year of war', to ensure that it was reviewed at regular intervals thereafter, and, meanwhile, to remove the inessential items.

This was, however, a great deal easier said than done, for when the review started it emerged that, as far as could be estimated, the demand for imports was running at a rate not of 47 but at 53·7 million tons, because the Ministry of Supply, unable to make do on its quota of 23·9 millions, was assuming that it must—and would—receive 30·6 millions.¹ If, therefore, these spendthrift practices were to be brought to an end, and it were to be admitted that a total of 47 million tons was all that would come in, then, somehow or other, there would have to be economies to the tune of some 7 million tons.

Indeed the Ministry of Shipping, supported by the Lord Privy Seal, thought that the economies should be even larger, for the Ministry had always emphasised that the correctness of its original estimate depended on there being no changes for the worse, before the first year of war was out, in the conditions that determined the carrying-capacity of the fleet and the amount of that carrying-capacity that could be allocated to supplying the United Kingdom. Was it, for example, sensible to suppose that twelve months would pass without British troops having to fight, and having to be transported, together with their equipment, in larger numbers than hitherto, and perhaps to more distant theatres of war? Neither the Minister of Shipping nor the Lord Privy Seal thought so. Prudence, they held, required that the Government should count on no more than 42·3 million tons of imports, or 10 per cent. less than the original forecast. If more imports than this in fact came in they could profitably be put to reserve.

Yet if the departments were to budget to 42·3 millions then the economies would have to amount not to 7 but to nearly 12 million tons. How were the assumptions about the amount of food the nation

¹ See footnote 1 to p. 67.

needed, and about the amount of raw materials required for war production, exports and civilian use, to be altered so as to permit such huge reductions without retarding the urgent task of building up stocks—a task with which the Ministry of Food had only made a modest headway and the Ministry of Supply less than no headway at all since it was even eating into the meagre supplies with which it had started the war?¹

The Ministry of Food, it seems, unlike the Ministry of Supply, had from the start set itself to cut its coat according to the cloth allocated to it, prudently confining its efforts to getting its allocations increased instead of assuming, after the fashion of the Ministry of Supply, that they could be evaded with impunity. It gradually brought under control the commodities for which it was responsible but which had been uncontrolled on the outbreak of war, and, although the amount of tonnage thereby saved was only small, thus put an end to the state of affairs in which the more obviously inessential items, precisely because they were known to be inessential, arrived in quantities larger than in peace, while essentials were being excluded; it was setting aside a proportion of its current imports to build up stocks, although the proportion was not large and the stock level that was reached, judged by its own standards of later years and the present standards of the Ministry of Shipping, was wholly inadequate in view of the hazards ahead; and meanwhile its imports were only some 10 per cent. less than the peace-time average when total imports, with a 47 million ton programme, must be nearly 15 per cent. less than in peace. When he had surveyed the shipping situation the Lord Privy Seal had not supposed that it would be possible, if imports had to be reduced by 10 per cent., to avoid a more than proportionate cut in the amount of imported food.

This was not, however, the way in which the Ministry of Food saw the matter. 'It is essential to recognise', it observed, 'that there is a minimum requirement of food necessary to maintain the population, and that it is impossible to reduce total food supplies below this minimum.' The minimum it had in mind was evidently the level to which it had been asked to work since the outbreak of war. Ideas on this matter were indeed to change, but in April 1940, when the review of the departmental programmes was completed, the Ministry of Food won its case. The War Cabinet accepted its thesis that the nation could not survive on much less—in quantity or quality—than it ate in peace.²

The result, therefore, was that the Ministry of Supply, whose difficulties had been the occasion for the review in the first place, had to bear the brunt of the cuts. It was not in a good position to

¹ For stock levels see Appendix LIV, p. 325.

² See Appendix X, p. 71.

defend itself. Its statistics were demonstrably unreliable; many of the commodities for which it was responsible were still subject to inadequate control and the need for them could not be estimated; many were being used for civilian consumption in unnecessary quantities, or, apparently, to build factories with a projected output that it would be impossible to maintain. 'Nobody believed', the President of the Board of Trade said in April, 'that there would be the manpower or the raw materials to work the factories that were being erected.'

In these circumstances the decision about how much raw materials should be imported was made after the fashion in which decisions were always made in moments of crisis when a claimant could not prove a case suspected of being exaggerated. The War Cabinet evidently made it plain to the Ministry of Supply that its demand for 30.6 million tons during the first year of war was an impossible one; the Ministry was evidently ordered to cut its programme down without anyone's having any clear idea about how this was to be done;¹ the programme was in fact cut by 7 million tons, and thus reduced to roughly the level prescribed at the beginning of the war.²

This sort of drastic action sometimes had happy and sometimes unfortunate results depending on how far the victim had in fact exaggerated his needs (either deliberately, in order to suffer less from the expected cuts, or inadvertently through ignorance or inefficiency) and on how far, if he had, he could make the necessary economies in time. In the spring of 1940 raw materials were being used in an extravagant way, but the problems of allocation and control were so formidable, and the machinery of control was so ill-equipped for its task, that though consumption was reduced to some extent, and evidently without any of the disasters that had been predicted, nevertheless the necessary degree of economy could not be achieved. In the 30.6 million ton programme the Ministry of

¹ The writer is unable to agree with the statements in the volumes in this series entitled *British War Production* (see p. 157) and *The Control of Raw Materials* (see pp. 191-193) to the effect that the Ministry of Supply programmed to 23.9 million tons before France fell. The assertions given above are based on the following facts:

(i) The Ministry of Supply asserted in February 1940 that it required 30.6 million tons of imports in the first year of war.

(ii) The Minister of Supply, when asked to account for this figure at a meeting of the War Cabinet on 1st March 1940, asserted that it did not represent the requirements for a full year, but the annual rate of importation that would be necessary for the remainder of the year, if the total of 23.9 million tons were to be reached. This assertion was allowed to stand (thus committing the Ministry of Supply to 23.9 million tons until the revision of programmes should have been completed) although it is perfectly clear that the February memorandum will not bear this interpretation, but on the contrary states categorically that the original allocation of 23.9 million tons 'does not represent the total requirements of raw materials as now estimated by the Ministry of Supply', so that if total imports were to be cut by 10 per cent., and the Ministry of Supply were to suffer a proportionate reduction 'this will involve a reduction not of 10 per cent. but of 30 per cent., i.e. from 30.6 to 21.5 million tons'.

² See Appendix X, p. 71.

Supply had made some provision for building up its stocks;¹ as a result of the cuts it abandoned this project; in fact it continued, until France fell, to eat into such stocks as remained to it.

Moreover, when the review was completed and the departmental allocations finally agreed on, the total demand for imports in the first year of war emerged, not at 42·3 million tons as the Ministry of Shipping had suggested but, on paper, at nearly 45 millions;² and in effect, since the Ministry of Supply proposed to eat into stocks to the extent of 3½ million tons,³ at over 48 millions. The result of the review, in fact, was that the discipline which seven months earlier it had been agreed should be imposed on the purchasing departments, and which in February had seemed too lenient, was enforced to a smaller extent than had originally seemed necessary. The import programme, which the Lord Privy Seal had described in February as 'unbalanced', remained in consequence unbalanced, though admittedly to a smaller extent than before; the extravagances and the unwillingness to face facts continued, though on a smaller scale; and meanwhile as the stocks were running out the hour of doom was approaching.

¹ See J. Hurstfield, *op. cit.*, p. 195.

² See Appendix X, p. 71.

³ See J. Hurstfield, *op. cit.*, p. 193.

APPENDIX VIII

Dry-cargo merchant shipping under British control, 1,600 gross tons and over, 3rd September 1939 to 30th September 1945

Thousand deadweight tons

	Total	British flag					Foreign ¹ flag vessels time- chartered to United Kingdom
		Total	United Kingdom and Colonies	Do- minions	Foreign vessels		
					Bareboat charter	Requi- sitioned	
1939							
Sept. 3	18,710	18,710	17,691	1,019	—	—	—
Dec. 31	18,579	18,418	17,314	1,096	8	—	161
1940							
Mar. 31	18,764	18,403	17,258	1,102	43	—	361
June 30	21,096	18,911	17,264	1,276	68	303	2,185
Sept. 30	22,459	18,831	17,718	1,343	45	725	3,628
Dec. 31	21,963	18,453	16,362	1,330	46	715	3,510
1941							
Mar. 31	21,622	18,050	15,858	1,305	81	806	3,572
June 30	20,858	17,037	14,828	1,282	131	796	3,821
Sept. 30	21,115	17,085	14,807	1,302	153	823	4,030
Dec. 31	21,324	17,221	14,851	1,316	206	848	4,103
1942							
Mar. 31	20,994	16,809	14,452	1,272	245	840	4,185
June 30	20,505	16,336	13,921	1,250	346	819	4,169
Sept. 30	19,722	15,826	13,333	1,219	488	786	3,896
Dec. 31	18,758	15,135	12,411	1,225	826	673	3,623
1943							
Mar. 31	18,449	14,937	12,059	1,168	1,066	644	3,512
June 30	18,528	15,067	11,514	1,480	1,456	617	3,461
Sept. 30	19,163	15,725	11,810	1,746	1,548	621	3,438
Dec. 31	20,082	16,738	11,801	2,232	2,093	612	3,344
1944							
Mar. 31	20,765	17,426	11,892	2,364	2,546	624	3,339
June 30	21,967	18,245	11,996	2,650	2,997	602	3,722
Sept. 30	21,962	18,282	11,841	2,901	2,971	569	3,680
Dec. 31	22,225	18,597	12,000	3,104	2,945	548	3,628
1945							
Mar. 31	22,228	18,638	11,996	3,202	2,910	530	3,590
June 30	22,143	18,844	12,234	3,246	2,918	446	3,299
Sept. 30	21,210	19,043	12,426	3,345	2,977	295	2,167

¹ For the earlier months of the war the information about foreign flag vessels on time-charter is incomplete.

Source: Statistical Digest of the War, Table 153

APPENDIX IX

Estimated dry-cargo imports in the first year of war assuming that Germany had not attacked in the West

The total of 46·3 million tons given below has been arrived at by taking actual imports from September 1939 to April 1940 and by assuming that imports in May and June would have been the same as in April, and imports in July and August 10 per cent. higher (the allowance made during the war for the increase in the third quarter of the year). This figure of 46·3 million tons makes no allowance for the fact that the controls both of ships and cargoes were becoming progressively more efficient.

	<i>Ministry of Food</i>	<i>Ministry of Supply</i>	<i>Board of Trade</i>	Thousand tons
				<i>Total</i>
1939				
September .	1,063	1,678	90	2,831
October .	1,368	1,634	89	3,091
November .	1,576	1,867	86	3,529
December .	1,845	1,757	88	3,690
1940				
January .	2,010	1,703	98	3,811
February .	1,817	1,680	100	3,597
March .	1,894	1,832	131	3,857
April .	1,949	2,132	127	4,208
	13,522	14,283	809	28,614
Total for first eight months		Ministry of Food .		13,522
		Ministry of Supply .		14,283
		Board of Trade .		809
				28,614
Total for last four months, say 17·7 millions				17,700
Total for twelve months September 1939 to August 1940				46,314

APPENDIX X

Review of import programme, April 1940

The final figure of nearly 45 million tons, referred to on page 65 above, was no larger than it was only because the Miscellaneous and Unallocated items, for which an allowance of 3·3 million tons had been made in the allocation of the 15th November (see page 48 above) never came in to the expected extent, having been reduced by the operations of the import licensing system designed, to start with, to restrict purchases requiring hard currency. Some of the commodities included under the heading Miscellaneous and Unallocated were redistributed between the two principal purchasing departments when the import programmes were reviewed. The results of the review were expressed as appear below in a memorandum prepared by the Lord Privy Seal for the War Cabinet on the 8th April 1940. Since, however, the miscellaneous and unallocated items had never come in at an annual rate of 3·3 million tons, but only, as nearly as could be estimated, at a rate of about 1·1 million the extent to which the programmes of the Ministries of Food and Supply appear to have been reduced below the level agreed on in November is illusory. These cuts were cuts on paper only. The only substantial cut was that which reduced the programme of the Ministry of Supply from 30·6 million tons to 23·64 million tons.

(1. <i>Allocation of November 1939</i>	<i>Million tons</i>
Ministry of Food	19·8
Ministry of Supply	23·4*
Miscellaneous and Unallocated	3·3
	46·5
(*apart from whale oil and molasses)	
2. <i>Original allocation after the redistribution of the Miscellaneous and Unallocated items</i>	
Ministry of Food	20·0
Ministry of Supply	24·3
Other goods	2·2
	46·5
3. <i>Allocation at 8th April 1940</i>	
Ministry of Food (say)	19·80 to 19·95
Ministry of Supply	23·64
Other goods	1·15
	44·59 to 44·74)

CHAPTER IV

FROM THE GERMAN ATTACK ON THE WEST TO THE FALL OF FRANCE

(i)

The French Demands

THE VERY NEXT day after the review of the United Kingdom import programme had been completed the Germans invaded Norway and Denmark. Roughly one month later they invaded Holland, Belgium and France. The Ministry of Shipping's warnings about the need for economy were thus dramatically justified, immediately after it had been decided to ignore them, by the rising demands first of the Services¹ and then of the French for ships.

From the start of the war the French had been unable to meet their needs for sea-borne supplies with their own tonnage. Though self-sufficing to a much greater extent than the British, they were heavily dependent on imports of two commodities, coal and oil (which since it was carried in tankers, incapable of being used for other purposes, constituted a separate problem with which this history is not concerned). Even apart from coal it finally emerged that the French needed about 17 million tons a year of dry-cargo sea-borne imports.

It had been recognised before the war that the French merchant navy, which was only small,² would need supplementing. But when the plans for war were being considered the British had assumed that there would be plenty of neutral shipping available for use by the Allies. Here, the British thought (except in the case of colliers required in such large numbers that it was clear that they would have to provide a substantial proportion of them) was the means by

¹ The amount of tonnage allocated to the Services, which had been 1.9 million gross tons or 1.6 million deadweight tons on 31st March 1940, had risen to 2.2 million gross tons or nearly 2 million deadweight tons by 30th June 1940.

² See Appendix VII, p. 23. Because, however, the French drew their imports from near sources of supply (in the case of dry-cargo imports other than coal largely from North Africa) the importing-capacity per ton of shipping employed was much larger in the French case than in the British.

which the French could meet their deficiencies. There would, the British maintained, be enough neutral ships for the needs of both countries.

The principal task before war broke out had therefore seemed to be to establish the principles on which the neutral tonnage should be shared out. The British thought that they should acquire the tonnage on time-charter, and that, as had been done in the 1914-18 war, an inter-Allied organisation should be set up to decide, voyage by voyage, which ships should be allocated to the various Allied services. The French, who saw themselves under such an arrangement subjected to the uncertainties as well as the indignities of dependence, at first opposed the idea, but the British, overwhelmingly the larger ship-owning nation, won their point. They contented themselves, however, with a paper victory, for when war came no Allied organisation was in being—and it took three months to devise one—no negotiations had been started with foreign owners or governments, and during the first few months of war it proved impossible, as has been shown, to acquire any foreign ships on time-charter at all. The French delegation in this country, 'heavily pressed by Paris to show some results of their policy, of leaving to us the negotiations for neutral tonnage', had to make do with such ships as they could acquire on voyage-charter without prejudicing the British long-term negotiations. Their efforts in this direction were evidently less successful, relatively as well as absolutely, than were the British.¹

When, in December 1939, the machinery for Anglo-French co-operation in shipping matters was at last set up, it formed part of an ambitious plan for integrating the economies of the two countries. Permanent executive committees were created to estimate the needs of each nation in the matters of food, munitions, textiles, aircraft production and supply, coal and oil. The French and British programmes, having been compiled separately, were then to be put together, with the assistance of an Anglo-French Co-ordinating Committee, and the requirements from overseas forwarded to the Shipping Executive to be implemented. In the idea of M. Monnet, the inspiring genius of the arrangements and the Chairman of the Co-ordinating Committee, the problem of allocating ships (and other scarce resources) was thus not one of determining the just claims of the two nations, but of determining the needs for the various commodities which either nation, or both, ought to import in the interests of the Allied war-effort.²

¹ See p. 77.

² As it was put on one occasion, in a quotation from the report of the Allied Maritime Transport Council, written in 1918: 'The real and proper line of competition for the available tonnage was between the various Allied Supply Services, and not between the Allied countries'.

Unfortunately, however, this conception, which presupposed that each side would be willing to give the same weight to the other's claims as to its own, had to be translated into practice in circumstances where, for a long time, the needs of neither could be precisely defined and where, in consequence, to think in terms of combined needs was impossible. The British difficulties have already been described; the French difficulties were worse to start with and proved harder to overcome.

Their most urgent and intractable need was the need for coal. In peace the French imported between 20 and 30 million tons, of which between 8 and 13 million came from Germany and Poland and would be unavailable in the event of war. In July 1938 the French estimated that if war came they would need 20 million tons from the United Kingdom, of which they thought that they themselves would be able to transport only about 8 million. Could the British, they asked, guarantee them 20 million tons, and sufficient ships to carry about 12 million?

For some time they were given to understand that the answer to the first of these questions was a qualified 'yes',¹ but to the second 'no'. The number of British ships suitable for carrying coal round the coasts of the United Kingdom and in the short-sea trades had, the British pointed out, greatly declined in the inter-war years because of the decline in the French demand. French imports from the United Kingdom had been just under 14½ million tons in 1930; they were only just over 7 millions in 1938. In these circumstances, the British said, if the French wished to assure themselves of adequate supplies in war, they must build more colliers and buy more coal from the United Kingdom in peace.

These admonitions, however, which were made in April 1939, were not particularly helpful, since it was admitted that any plans that might be based on them could not bear fruit in less than two years. If war came earlier, the French were told, it was unlikely that British colliers, even when supplemented by neutral colliers, would be able to carry the very large quantities of coal—equal in weight to more than a quarter of all the commodities imported by this country in the first year of war—that France needed and could not carry in her own ships.

The French, however, pointed out that there was no reason why their coal should not be carried in deep-sea neutral ships designed for the carriage of other bulk cargoes such as iron ore, and this argument, it would seem, in the end overcame the British scruples; for though the number of neutral colliers was known to be

¹ See *History of the Second World War, United Kingdom Civil Series*, W. H. B. Court, *Coal*, p. 72. The qualifications were that there should be no serious interference with the shipping or coal production because of air attack.

inadequate, other kinds of neutral tonnage were expected to be plentiful, and it was true that deep-sea tramps could be used to carry coal. Before the outbreak of war the Mercantile Marine Department of the Board of Trade had satisfied itself that there would be enough shipping to meet the needs of the French coal trade.¹

After the war began, however, there were few neutral ships to be had, British owners showed a dislike for voyages from the east coast of this country except at rates the French claimed to be unable to pay, and the system of licensed voyages at controlled freights, which the French had been told would be introduced in the coasting and short-sea trades on the outbreak of war, was not in fact introduced until the beginning of December. Until then the total amount of coal delivered to France from this country in ships, including French, of all nationalities, was at an annual rate not of 20 million tons but of between 7 and 8 million,² and the French, in consequence, found themselves faced with a major crisis. Even by the end of the following March there had been no single month since the beginning of the war when imports had been as high as 1 million tons, and at the end of the first six months of war only just over 5 million tons had been delivered.³

As a result, almost immediately after war started the French burst into impassioned protests and the British began to question the French need for 20 million tons a year, which had been accepted before the war. Though this may have seemed to the French to be adding insult to injury, the question was natural and indeed necessary. The French returned to it a bewildering number of different answers in quick succession. In November they said that they would be 'well satisfied if it should prove possible to ship 17 million tons in a full year'; at the beginning of December, they thought they could manage on 15 millions; by the middle of December this no longer seemed enough. The plain fact was that the French could produce consistent statements to only one effect: that they were not getting nearly enough. Harassed by the difficulties of moving into a war economy and, they claimed, of endeavouring to adjust their demands to a shipping situation they could neither control nor assess, they found that they had constantly to change their ideas of what they needed.

Meanwhile, the carriage of even the amounts of coal supplied

¹ The French minutes of meetings held on 28th August 1939 stated that: 'Le Board of Trade estime que grâce au grand nombre de bateaux dont disposera la mission (français, neutres et Anglais) elle aura toujours la souplesse suffisante pour remplir le programme de charbon'.

² See Appendix XI, p. 85.

³ *Ibid.*

caused great and increasing difficulties to the transport system in this country. Ships that in the ordinary way of things would have been carrying coal round the coasts of the United Kingdom were carrying it to France; the British railways, whose managements had given the planners before the war a greatly exaggerated idea of their capacity, were, when the bitter winter of 1939-40 interfered with their working, unable to shoulder the burden and a coal crisis occurred in this country.

The British informed the French that neither side would be able to avoid this kind of misfortune until France could produce incontrovertible evidence of her minimum needs. In reply, the French asked how they were to assess their minimum needs, affecting and affected by policy in a large number of other spheres, as long as they did not know on how much shipping they could count.¹ When, by March, it appeared that this question was in sight of an answer, and when, as a result of herculean efforts, the tonnage in the French coal trade was nearly 70 per cent. larger than at the beginning of the war,² it emerged that there was not enough coal to fill the ships that had been provided.³

There were similar misunderstandings about France's other dry-cargo imports, for here, too, the French could not provide the necessary evidence of need. As in the case of coal, they had no figures of stocks or consumption rates; even in May 1940 it emerged that they did not know what proportion of their imports other than coal had reached them in peace overland and what proportion came by sea. During the first seven months of war all that they could say from time to time was that this, that or the other of their industries would find itself in grave or disastrous difficulties if more ships were not immediately provided.

The British shipping authorities, it was shown, often had to face this kind of threat from the British purchasing departments, and for lack of adequate statistics, and adequate machinery for determining priorities, had largely had to decide themselves what should be imported and what should not. Behind the imposing façade of the inter-Allied executives and the Co-ordinating Committee a similar state of affairs prevailed when it came to saying how many of the neutral ships coming on time-charter should be allocated to the

¹ It was stated that 'The French repeatedly emphasised that they regarded it as impracticable to submit programmes which they know in advance cannot be implemented for want of shipping'. This problem of the chicken and the egg, which caused the French to say that they could not estimate their needs without some idea of what they could get, and the shipping authorities to say that they could not estimate the amount of shipping that could be supplied until all the needs could be surveyed, was a perpetual source of exasperation.

² See Appendix XI, p. 85.

³ See W. H. B. Court, *op. cit.*, p. 74.

French¹ and how much shipping-space in the British fleet should be devoted to their needs. Whereas, however, the Ministry of Shipping had its own unorthodox, but nevertheless efficient, methods of discovering when the British purchasing departments were stating their case fairly and when they were exaggerating, it lacked these aids to judgment where the French were concerned, and in consequence it responded to its natural instincts which led it to suppose that people who could not substantiate their claims with comprehensive and intelligible figures were not to be believed. Apart, therefore, from the ships in the coal trade, the French did not receive much neutral tonnage² or much help from British ships.³

When, in consequence, at the beginning of May 1940 the French at last assembled enough statistical data to make a general review possible, it emerged that whereas British dry-cargo imports in foreign ships during the first six months of war had been at an annual rate of about 10 million tons, or between 40 per cent. and 50 per cent. of the peace-time average, French dry-cargo imports (other than coal) in foreign ships in the same period had been only 2 million tons, or about 26 per cent. of the pre-war average. Whereas total British imports for the first year of war seemed likely to fall short of requirements, as formulated at the beginning of the war, by about 10 per cent., French imports (other than coal), for which the demand had been scaled down below the peace-time level, as far as could be ascertained by about the same amount as the British, were likely to be short by 50 per cent.

Since the British, however exasperating in other respects, were not deliberately unjust, these facts were duly set out and the obvious conclusions drawn from them: the French must have more ships to carry their imports other than coal. They must, it was established

¹ In the event the British in general conducted the negotiations over the chartering of foreign ships, the French being merely kept informed. After the Shipping Executive had been set up it was decided that representatives of the Ministry of Shipping and the French Mission should decide the allocation of ships in the short-sea trades, and that the allocation of deep-sea ships should be a matter for the Executive. Contrary, however, to the pre-war plans, the French were allowed to have on time-charter such ships as it proved possible to acquire on these terms and as it was decided to allocate to them.

² The position as regards deep-sea ships was as follows:

Allocation of neutral tonnage at 19th March 1940

	3,500 d.w.t. and over		
	No.	Tons	Percentage of tons
United Kingdom .	59	435,900	67.9
France	25	206,400	32.1

Source: Ministry of War Transport

³ See Appendix XII, p. 86.

at the same time, be allowed 1.5 million tons of coal a month—the maximum amount that the British mines could supply—together with enough shipping to carry it.¹

The data, however, on which these conclusions were based were not available until the beginning of May (and even then were incomplete); the conclusions themselves were reached on the 6th May; four days later the Germans invaded Holland and Belgium, and all the new programmes went into the melting-pot together with the future of the French nation.

Even before these disasters the shipping situation had not seemed happy. The British import programme, and the French import programme for commodities other than coal, were larger than the existing supply of shipping could meet; the statistics were too imprecise, and in the French case also contained too many gaps, to make it possible to see where to retrench; the French coal programme of 1.5 million tons a month was barely enough to meet current consumption, and left nothing over to build up the stocks which had been eaten into at the beginning of the war. As the Germans advanced through France, cutting off important sources of raw materials and manufacturing capacity, these gaps between supply and demand were seen to be widening at an alarming rate. The spectre loomed up of huge demands on British merchant ships and on such ships of the newly conquered countries—Belgium, Denmark, Holland and Norway—as might escape the clutches of the enemy and enter Allied service.

Even on the most favourable possible assumption, [it was estimated on the 29th May] a large area of important agricultural, mining and industrial production will be laid waste, plants destroyed, stocks dissipated and personnel scattered. On a less favourable assumption, the complete loss of the production of a number of French Departments must be reckoned with, especially in the case of Nord, Pas de Calais, Somme, Aisne and Ardennes. It is considered advisable to assume the total loss of the agricultural output of Nord, Ardennes, Somme and Pas de Calais; the loss of at least half the production of Aisne, Meuse, Moselle, Oise and Marne; and the loss of about one-quarter that of Bas-Rhin and of Meurthe-et-Moselle. Five of these Departments are among the seven principal wheat-growing Departments of France, and their invasion involves a possible loss of about 17 per cent. of the annual French production of wheat. About 53 per cent. of French production of sugar, about 22 per cent. of oats, and a large proportion of potatoes, and certain other crops are affected. The greater part of French coal mining is also involved, and the French estimate that withdrawal to the line of the Somme and the Aisne would allow the raising of not more than some 18 million tons

¹ See W. H. B. Court, *op. cit.*, p. 81.

of coal in France with repercussions not only on the coal required from Great Britain, but on industrial production generally, since such a level would certainly necessitate the closing of large numbers of factories which could no longer be supplied with fuel. . . . By far the most serious repercussions on general imports are in iron and steel, imports of which would, from the middle of June, need to reach 240,000 tons of finished and semi-finished steel monthly from U.S.A. in order to make up the loss of Belgium, Luxemburg and Longwy, and probably a further 350,000 tons to make up for other plants which are unlikely to be able to continue, giving a total imports requirement in the iron and steel group of 7 to 8 million tons against 3.6 millions allowed in The Allied Import Position and 2.1 millions in the revised armaments programme. . . .

There was, however, no time, and, as it turned out, no reason for detailed speculations about France's future needs. All that could be done in the present was to give first priority to her immediate demands of which the most urgent were for coal. In May she asked for imports of coal at a rate of 2 million tons a month; on the 3rd June for imports at a rate of 2½ million tons. Nearly 2 million tons were in fact delivered in May,¹ and arrangements were evidently made to deliver an even larger quantity in June. Since, after allowing for the minimum needs of this country, the task was far beyond the capacity of the colliers and other suitable ships hitherto employed in the coasting and short-sea trades, they had to be supplemented by British deep-sea ships diverted from carrying imports to this country.

Until May, the French demands cannot be said to have contributed much to the shipping shortage except where coasting ships were concerned. It is true that the British would have had more deep-sea neutral ships to carry their imports if the French had had fewer or none, but with this exception—and in any case the British had the lion's share—the French appear to have made virtually no inroads into British importing-capacity.² In May, however, things began to change, and by the time of the French armistice there was, besides the coasting ships, the equivalent of nearly half a million deadweight tons of British deep-sea shipping continuously employed in the French coal trade³ (with a loss of imports to the United Kingdom at a rate of over a million tons of commodities a year⁴), besides a considerable number of foreign ships, over and above those previously in French service, from the fleets of the countries that had already surrendered; and all this, had France herself not

¹ See Appendix XI, p. 85.

² See Appendix XII, p. 86.

³ The actual figure was 400,000 deadweight tons.

⁴ See Appendix XII.

surrendered, would only have been the beginning. In the dark days of May and early June it was the consequences of France's survival, not those of her collapse, that seemed likely to burden the British Merchant Navy with an unmanageable task.

(ii)

The Threat to the United Kingdom Ports

In May 1940 it seemed that France's needs for overseas supplies must raise formidable problems and cause formidable reductions in the amount of imports that the British themselves would receive. Yet it also seemed that even if France were to survive the summer these problems might never arise because they would be superseded by other and worse ones. The Germans were on the coasts opposite the British Isles. The air attack on the ports, and on the ships approaching port, which had been dreaded for seven years, would presumably now begin. When it began the British would be unable to supply France with the huge quantities of coal she required, and would themselves risk a loss of imports far heavier than the French demands would have caused if all the ports had remained open.

In the summer of 1940, and indeed for some time afterwards, apart from the possible defeat of the Royal Air Force, no threat was so menacing as the threat to the ports. Already, while France was *in extremis*, the British were looking to America for help. They abandoned the policy of rationing their dollar expenditure so as to make their supply of dollars last out a long war, for clearly it was pointless to plan for the future at the risk of annihilation in the present.¹ The Americans were willing immediately to replace as much as they could of the equipment lost at Dunkirk, provided that Britain could find the dollars to pay for what they sent and could carry it in her own ships. It seemed likely that in time even American ships and dollars might be forthcoming. Nevertheless, whatever help the Americans supplied, immediately or in the future, could only reach the United Kingdom through its ports.

Hitherto the auguries about how the port and transit system would acquit itself if a number of major ports were closed had been in the highest degree unfavourable. At the beginning of the war, when heavy air attacks had been expected, ships had been diverted from the east coast ports to the west.² This had happened twice: during the first fortnight of September 1939, and during the last fortnight

¹ See W. K. Hancock and M. M. Gowing, *op. cit.*, p. 118.

² See p. 44, Chapter III above.

of October. But even on the second occasion, when many more ships were diverted than on the first, the diversion had only been on a small scale. Before the war there had been talk of diverting ships in huge numbers. 75 per cent. of the tonnage that normally came to London and the other east coast ports, it had been supposed, would have to go to the west; in October, only about 25 per cent. of the tonnage billed for the east coast was diverted, out of a total that was only about half what it would have been in peace.¹ Yet, even so, there were the greatest difficulties.

How, it was asked, would it be possible to supply Middlesbrough with iron ore if shipments to the east coast were drastically reduced? The railways could never stand the strain of carrying across England the 2 million tons a year which Middlesbrough normally imported by sea and which, it was said, were much less than would now be needed. What would happen to the refrigerated cargoes, and particularly meat, which must be put into cold storage on arrival, and later transported across the country in insulated railway wagons? There was not enough cold storage on the west coast. There were not, it appeared, enough insulated wagons to convey the meat from the west coast to London, where the bulk of the cold stores existed. What would happen to the cargoes of oilseeds of which, out of a total of some 1½ million tons imported annually in peace, some 20 per cent. went to London and some 47 per cent. to Hull?

As for general cargo—the miscellaneous packages of all sorts that are carried in liners—the problems to which it gave rise seemed, if possible, even worse. It was said in the winter of 1940-41 that 90 per cent. of the country's imports were owned by the Government, but even at that time the port and transit authorities neither believed this statement nor knew exactly what it meant.² The only kind of ownership that was any use to them was one which permitted the departments concerned to say where the cargoes for which they were responsible were to go. In October 1939 the departments did not know the answer to this question in the case of vastly more than 10 per cent. of the general cargo imported, and in consequence the many and various intractable objects from the holds of the liners that

¹ See Appendix XIII, p. 87.

² On the 18th January 1941 they said that: 'We have been told many times on the Port and Transit Organisation, and included in our instructions to our Committees, that at least 90 per cent. of the United Kingdom imports are on the programmes of these Departments (Ministry of Food and Ministry of Supply). At the last meeting of the sub-committee it was stated that the amount of cargo in which the Ministry of Supply was interested, but did not control, could not be assessed. . . . Assuming the imports of the Ministry of Food and the Ministry of Supply to be about equal, one could infer that 40 per cent. of the imports of the Ministry of Supply were not controlled to destination, but whether the amount is 20 per cent. or 40 per cent. it is so substantial that the Report [on the organisation of the methods of forwarding cargo] must be considered unsatisfactory unless arrangements are made for dealing with these goods'.

turned up in ports their owners did not ordinarily use, began to clutter up the transit sheds from which it was impossible to remove them quickly enough because the people who would ordinarily have dealt with them were absent, and no one else was in a position to take charge. In these circumstances, the continued diversion of the liners seemed to portend a limitless confusion.

It was the Services, who, on the grounds of safety, had held the diversion to be necessary. The civil authorities, however, felt that the risks were preferable. After a fortnight, saturation-point was in sight in the west coast ports. It would be better, the civil authorities said, to give up the diversion until the air-raids started, even though this might mean losing valuable ships and cargoes.

This point of view was accepted and no more ships were diverted until after the fall of France. Meanwhile, however, the essential problem remained. Sooner or later the Germans must start to bomb London and the other east coast ports, if not the ports on the west, and how could the British maintain their food supplies and their productive capacity, not to mention their export trade, in these conditions?

An idea considered before the war that seemed to suggest a solution—the idea of an emergency port—was brought up again after the disturbing October experiences. If, it was held, some of the major ports in the east were closed, with the result that there was too little accommodation in the west, it might be possible to discharge deep-sea ships in a sheltered anchorage in the west and to distribute the cargoes by barges and coasters to the places which needed them but which, for one reason or another, the deep-sea ships could not enter. When it came, however, to be considered in November, it emerged that this project bristled with difficulties, of which one alone seemed sufficient to damn it; for it was not only that the emergency port, like everything else in port and transit matters, could only serve its purpose as part of a general plan of which none of the other parts could at this time be clearly seen; it would take, it was estimated, twenty small or ten medium-sized coasters to receive the cargo carried by merely one average-sized tramp; and though, with the French coal trade complicating the issue, it was impossible to say how many coasters would be available, it was abundantly clear that there would not be enough to make the scheme possible even on a modest scale.

Since, therefore, this way out of the dilemma seemed to be closed, all the old questions about what should be done, again presented themselves for answer. But it seemed no easier to answer them during the first winter and spring of the war than it had seemed earlier. The officials in the Ministry of Transport who were in charge of port and transit matters knew very well how urgently they needed answering, but, like their opposite numbers in the

Ministry of Shipping, the operation of the undertakings for which they were responsible was affected by an enormous range of causes, many of them outside their control; such action as they could appropriately take could only be taken in co-operation with a large number of other departments whose activities there were inadequate plans to co-ordinate, and who only imperfectly understood the nature and urgency of the danger.

By April 1940 some progress had been made with equipping the west coast ports but it was only small, and it ultimately emerged that some of the most urgent needs had been overlooked—for the problem of deciding which these were was as perplexing as ever. In any case it was estimated that the equipment that was ordered would take at least a year to complete. The storage problem was no nearer to being solved. Except in the case of cold stores, of which the sole user was the Ministry of Food, no progress had been made with estimating how much storage space existed, or how much would be needed, let alone with the construction of new premises. Apparently insuperable obstacles obstructed the formulation of adequate plans for the control of dock labour. A scheme, on a voluntary basis, was devised for transferring dockers from the east to the west coast ports, but labour could not be properly distributed among the ports in need of it without compulsory registration, and though on the outbreak of war there were registration schemes in most ports, they, too, were on a voluntary basis and in Glasgow none at all existed. The casual nature of dock labour, and the innumerable regulations which governed the hours a man might work, the employment in which he might engage, and the special privileges to which he was entitled in certain types of employment, were incompatible with the needs of war. Yet to abandon the peace-time practices would involve attacking hardily-won and strongly cherished privileges. In the inter-war years the various attempts made to decasualise dock labour had all come to grief, and though the existing system was admittedly wasteful, both of labour and facilities, neither the employers nor the unions, for different reasons, were willing to abandon it. The need—increasingly urgent as the attempts at planning were frustrated in one sphere after another—to place a strong man in control of each of the port areas, could not be seriously considered because it, too, would have outraged too many interests, particularly the interests of the purchasing departments who wished to keep control over their own affairs and only imperfectly understood how closely all the processes of transport and distribution are connected one with another.

It was while things were in this state that the Germans launched their attack on Western Europe and the threat to the ports emerged as a 'major national peril'. The War Cabinet considered the matter

on a number of occasions immediately after the invasion of Norway and Denmark. The Fighting Services pointed out that:

hitherto . . . raids had been conducted by relatively small forces directed against ships at sea. This afforded no clue to the consequences which might follow from continuous attacks by the very large bomber forces available to Germany if directed not only against our ships but also against our ports; attacks which, instead of being sporadic as hitherto, might become systematic and sustained for a long period of time.

These attacks, the Royal Air Force emphasised, might be directed against the west coast ports, as well as against those in the east. The Ministry of Transport estimated that 'the arrangements which have been worked out offer a reasonable prospect that the [west coast] ports could stand a heavy diversion for, say, three weeks or so, before the difficulties of the position became acute. If, however, complete diversion were to last for a prolonged period, the result would be grave congestion. . . .' The most favourable interpretation that could be put upon this last assumption, which in any case only took account of the commercial difficulties and not of the probable results if bombing were added to them—was that it did not necessarily mean that 'a state of unmanageable confusion would ensue'.

The British, however, in this kind of situation are naturally predisposed to believe that somehow or other they will find a way out even though they do not see how. This was what they believed now, although with an undue confidence, it was soon to emerge, in the capacity of their existing arrangements to rise to the occasion.¹

¹ The Minister without Portfolio reported to the War Cabinet on the 13th April that 'I do not believe that anyone can forecast what would happen beyond the first two or three weeks . . . our decisions would have to be taken according to a situation which would be in a constant state of flux. . . . I do not myself take an unduly pessimistic view of the situation. . . . It is reassuring to all of us to know that there is in existence not only a carefully thought out plan . . . but also an organisation capable of operating it'. This last remark (see Chapter VI below) was largely unwarranted.

APPENDIX XI

Ships in the French coal trade and tons of coal loaded for France and North Africa from the United Kingdom, September 1939 to May 1940

<i>Month</i>	<i>Flag</i>	<i>No. of ships</i>	<i>Thousand tons of coal</i>	
September .	British	145	242	
	French	88	290	
	Allied and neutral	10	18	
			—	550
October . .	British	162	246	
	French	105	350	
	Allied and neutral	25	48	
			—	644
November .	British	175	320	
	French	86	277	
	Allied and neutral	31	66	
			—	663
December .	British	174	347	
	French	101	333	
	Allied and neutral	39	85	
			—	765
January . .	British	234	414	
	French	100	282	
	Allied and neutral	57	119	
			—	815
February . .	British	221	412	
	French	93	252	
	Allied and neutral	42	102	
			—	766
March . . .	British	240	509	
	French	115	343	
	Allied and neutral	51	133	
			—	985
April . . .	British	278	631·5	
	French	121	357·5	
	Allied and neutral	88	217	
			—	1,206
May	British	336	900	
	French	149	387·6	
	Allied and neutral	259	525·6	
			—	1,813·2

APPENDIX XII

Note on the amount of British tonnage allocated to France and the consequent loss of imports to the United Kingdom

After the fall of France it was estimated that British liners had carried imports on French account at a rate of 1 million tons per annum, but that this 1 million tons should be set off against the same weight of imports brought to the United Kingdom in French ships coming to fetch cargoes of coal. The Employment Returns show an average of about 200,000 deadweight tons of British shipping, of 1,600 gross tons and over, in the French coal trade between December 1939 and March 1940. This figure had risen to 485,000 deadweight tons on the 30th April and to 564,000 deadweight tons on the 31st May (the last full month before the Armistice). Theoretically ships in this class were suitable for carrying cargoes to this country in the short-sea trades, and some—perhaps most—appear to have done so after they had delivered the coal, so that the loss to the United Kingdom import programme in such cases can only have been represented by the extra time taken over the round voyage. In the Ministry of Shipping's first estimate of importing-capacity, of November 1939, and in the Lord Privy Seal's review of the shipping situation in February 1940, the amount of British tonnage, of 1,600 gross tons and over, allocated to France is given as the equivalent of 350,000 *gross tons* in continuous employment. The writer, however, assumes that the space allocated to the French in British liners is included in this figure.

The estimate of importing-capacity and the review referred to state that the amount of British tonnage available (the writer presumes exclusively) for importing work was 13·2 million deadweight tons (evidently without allowance for repairs). The annual rate of importation in British ships before France fell was about 37 million tons.¹ The writer assumes that at this stage of the war, when there were no military cargo ships returning with imports to complicate the statistical categories, the imports not carried in the 13·2 million deadweight tons can only have been those in ships returning from the cross trades on the last leg of a voyage. Presumably the proportion thus carried was only very small. If this is correct, then 400,000 deadweight tons would have brought in something over 1 million tons of imports per annum as stated on page 79.

¹ See footnote 5 to p. 51.

APPENDIX XIII

The extent of the diversion of shipping from the east coast to the west in October 1939

It was said on page 81 above that the amount of tonnage diverted represented about one-quarter of the tonnage destined for the east coast. This statement—which is only a very rough approximation—was arrived at as follows:

(a) Sixty-eight ships, including five tankers, were diverted during the last fortnight of October. Assuming that the average net tonnage of a ship was at this time about 3,400 tons,¹ then the sixty-eight ships had a total net tonnage of approximately 230,000.

(b) December 1939 was the first month of the war in which no ships were diverted and in which the effects of previous diversions cannot have been felt. Total arrivals in December were larger than in October, but over a period of two weeks, and since shipping at this time went in almost equal proportions to the east and to the west, the difference is not large enough to be significant. Arrivals on the east coast in December were 1.9 million net tons, say 950,000 in the last fortnight.

¹ This may be inferred from the figures relating to tramps, cargo liners and mixed passenger and cargo liners in the foreign trade as given by Isserlis for 1936, in his 'Tramp Shipping, Cargoes and Freights', *Journal of the Royal Statistical Society*, Vol. CI, Part I, 1938.

PART III

From the Fall of France
to Pearl Harbour

CHAPTER V

THE CALM BEFORE THE STORM

(i)

The Ships of the Conquered Nations

BY THE END of June 1940 it was generally supposed, except by the British themselves, that disaster was about to overtake the United Kingdom. Every needed resource—apart from the resources of the spirit—seemed inadequate, with one exception. The British, it appeared, were going to have more shipping than they had ever had before—much more, perhaps, than the ports would be able to accommodate; for the French with their demands were out of the war; the owners of all the foreign tonnage that France had had on time- or voyage-charter were willing to transfer their ships to the British Government (and the French themselves in the confusion of defeat agreed to let them go¹), and many other foreign ships besides were hurrying for safety to British ports. How many would come in the end? The answer was not known for a long time, and in the meanwhile, since if the United Kingdom escaped invasion port capacity seemed increasingly likely to set the limit to the war-effort, the question, it might be supposed, was unimportant. No one, however, judged it so; the shipping authorities were not taking any chances; they were out to secure every foreign ship that they could from the nations that before they had been conquered had to a greater or less extent been unwilling to charter to them but now had cause to change their minds.

The Germans naturally wished to prevent the British Government from acquiring the ships of the conquered nations. In some cases they managed immediately to acquire physical possession, for a number of ships were in their home ports at the time their countries were invaded. On an average Belgium, Holland, Norway and Denmark lost about 26 per cent. of their ocean-going dry-cargo fleets in this way,² but what was going to happen to the rest, and to the 2 to 3 million deadweight tons of French shipping afloat at the time of the armistice? When the matter is considered in retrospect it

¹ Under the agreement concluded (admittedly on dubious authority) by the Head of the French Transport Mission in London with the Director-General of the Ministry of War Transport.

² See Appendix XIV, p. 112.

seems that the issue of the war may well have turned, among other things, on the answer to this question.

Most of the ship-owners in the invaded countries could not escape. They remained throughout the war in enemy-occupied territory. So did the families of the masters, officers and crews. All these people were exposed to the threats and reprisals which the Nazi creed had devised for occasions such as these. The Nazis were in a position to put pressure on the masters to refuse their services to the Allies; they could also put pressure on the owners whose ships were in neutral ports, and cause them to ask the governments concerned to detain the ships. Would the Nazis use their power to threaten and coerce? How would the masters and the neutral governments react if they did? What power would the British have over masters who, in response to German threats and propaganda, attempted to sail their ships home or to lay them up in the ports of neutral countries?

The Parliamentary Secretary to the Ministry of Shipping suggested an answer to the last of these questions in a speech made to the Merchant Navy Officers' Federation on the 18th April 1940. 'The German Navy', he said, 'was weak in relation to ours last September; it is now much weaker still'; the Royal Navy had swept the German mercantile marine 'from all the oceans of the world'. The Royal Navy, it might be supposed, could, as it always had done in the past, capture and bring to this country any recalcitrant merchant ships that were sailing the seas or had been caught in the ports of the Commonwealth.

Apart, however, from the fact that in the best of circumstances it is not at all easy to capture a merchant ship if all she wants to do is to make for the nearest port outside enemy control, in the summer of 1940 the main tasks of the Royal Navy were to defend this country from invasion and to provide escorts, which in any event were lamentably insufficient, for the protection of troop and trade convoys. Even after the menace of invasion had receded the Navy had for a long time only meagre resources to spare for distant waters and immediately after the fall of France it had scarcely any at all. Even the merchant ships suspected of hostile intentions, which were being held in Commonwealth ports in April and May 1940, could not be sent to this country under armed guard, for the Government of India and other Governments, when asked to provide these guards, reported one after another that they had none available.

In these circumstances the fate of the foreign merchant ships belonging to the countries invaded by the Germans turned largely on the decisions of the masters who commanded them. These masters thus found themselves burdened with a responsibility which no man can ever expect to shoulder when he enters the merchant service.

Should they sail their ships home to share with their employers and families the fate of the conquered peoples; should they sail them to the ports of neutral countries hostile to the Allied cause; should they sail them to the United Kingdom to take part in the British war-effort; or should they, in pursuance of what might appear to be their employers' best interests, choose a fourth alternative—the alternative of the safe and lucrative trades in the Western Hemisphere and in the areas east of Suez, to which the war had not yet penetrated? Masters, however, like other human beings, are creatures of habit and circumstance. A master's duty in normal times is to the company that employs him; he can only dispose of the lives and property under his command at his employer's orders. In the period of confusion that followed the invasions the political issues were hard to disentangle, and many masters, it is clear, were perplexed by conflicting loyalties.¹ The cause of democracy in the conquered countries, meanwhile, remained for some little time a cause that was dubious and without leaders while the ordinary claims of duty remained.

The chief task which faced the British Government was how to persuade the masters to come to the United Kingdom or at least to avoid placing their ships in the power of the enemy. Since, in April and May 1940, when the Germans were conquering the western seaboard of Europe, there was little that the British could do in the way of coercion, and since in any event they did not wish to coerce, for all these ships belonged to actual or potential Allies, they had to rely on persuasion.

At midnight on the 10th April, one day after the invasion of Scandinavia, the B.B.C. put out its first broadcast, and six more broadcasts followed in the course of the same night, promising Danish and Norwegian seamen welcome, protection and compensation for their services. Meanwhile, however, the Germans had already sent out messages in the names of the owners in the occupied territories ordering the masters not to put into Allied ports. In the Ministry of Shipping no one knew which of these two sets of broadcasts the masters would follow, until one of the leading Norwegian ship-owners, who was luckily in England at the time of the invasion and a trusted friend of the British Government, came forward with practical advice. The German broadcasts, he said, were phrased in so absurd a way that no one could suppose that the owners in whose names they were sent out intended them to be taken seriously. They began: 'My dear Master'. This was an unheard-of form of address.

¹ Rumours went about in May 1940 to the effect that Norwegian masters in this country would scuttle their ships if the British evacuated Norway. These rumours were brought to the notice of the Inter-departmental Co-ordination Committee to deal with Danish and Scandinavian shipping. The committee did not take them seriously and the threats were not carried out. On the attitude of the Danish masters see page 95 and footnote.

The customary form merely gave the master's name and the name of his ship. Here, it appeared, was no cause for alarm. The masters would not be taken in. The British, however, the Norwegian ship-owner pointed out, needed to do something more than issue appeals. They should provide precise assurances and instructions. All insurance policies had been invalidated by the invasion, but no master will willingly put to or remain at sea if his ship and cargo are not insured. The British should promise the masters insurance cover if they sailed to an Allied port; they should instruct them to keep away from neutral ports except from those specified as safe; they should promise them advances of such ready money as they might need when they reached British territory, and arrange for them to be provided with it by the British consuls elsewhere. These promises and instructions were duly broadcast by the B.B.C. and by ships of the Royal Navy. It was made clear that they were the result of agreements reached between the British Government and the Norwegian ship-owner—whose name carried great weight with Norwegian seamen—acting as the representative of his colleagues.

These measures—and similar ones were adopted later in relation to the seamen of other nations when the Germans invaded their countries—served their purpose. No foreign ships that were at sea when the Germans attacked in the West, returned to enemy-occupied territory. This was a great achievement that can be measured against what happened to the Latvian and Estonian ships that were outside the Baltic at the time of the Russian invasion in July 1940. According to what was by now an established formula the British appealed to them to come to this country. Whereas, however, the Germans had apparently made no attempt to put pressure on the masters, the Russians, more far-seeing if not more ruthless, ordered them immediately to hoist the red flag and sail for home, threatening them and their families with the direst penalties if they disobeyed; and though, according to the Ministry of Shipping's information, many of the masters disliked the Russians, the majority evidently did not dare risk disobedience. In the event out of fifty-seven ships, of a total of 134,000 gross tons, that the British had hoped to capture, they only secured five, totalling 14,000 gross tons, of which several had been in this country's ports at the time of the invasion.

Yet though the greater part of the ships of Belgium, Holland, Norway and Denmark escaped the clutches of the enemy, nevertheless the British success in getting hold of them was limited. Among the shipping communities in these countries, and among their agents and representatives abroad, there began to appear what the Prime Minister once described as the 'diseases of defeat'—those diseases that disrupt national solidarity, that blur a man's judgment of what is essential and that disguise self-interest or cowardice in the

appearance of patriotism. The one asset which the invaded countries were still free to contribute to the war-effort was their ships. Their Governments, however, or the owners or agents of their shipping firms abroad, sometimes began to hesitate about contributing it or to refuse to contribute; and those who hesitated or refused were not only to be found in the shipping communities of the States that had surrendered, for in Hitler's Europe in 1940 the line dividing friends and enemies did not follow the official frontiers. Officially Denmark became an enemy State because her Government submitted to the Germans who took over the administration of the country; officially the Vichy Government was a neutral Government, although it was largely unable to resist German pressure; the Governments of Norway, Belgium and Holland escaped to the United Kingdom and became Great Britain's allies; nevertheless among the Allied ship-owners there were some who had their reservations, and in the States that were technically enemy or neutral, besides the hostile and indifferent who would not join them, the British had their friends.

Among the Danish ships it soon emerged that friends and enemies were equally divided. Various Danish ship-owners, pro-German since the beginning of the war, had foreseen the German invasion and arranged beforehand for full powers, if it occurred, to be vested in their American agents. On the morning after the invasion these agents constituted themselves into a committee in New York under the chairmanship of the Danish Minister, and proceeded to broadcast orders to the masters in their companies' employment, telling them to put in to neutral ports, at the same time that the British broadcasts were inviting them to come to this country.

The masters, it appeared later, often did not approve of the proceedings in New York, though opinions amongst them were divided.¹ The Committee, however, made plain to them that they had no say in the matter. What they thought, it pointed out, was 'beside the point'. By and large the masters of the companies concerned accepted this thesis as long as they had no plausible excuse for doing otherwise. Many of those who happened to be in the Eastern Hemisphere when the Committee issued its orders were able to evade them by managing conveniently to get themselves captured; those in the Western Hemisphere, largely lacking these opportunities, sailed their ships into American harbours according to the instructions.

This was the preliminary to a long diplomatic battle. The Danish Committee had reckoned on reaping a rich reward in soaring

¹ There was, for example, one master in command of a Danish ship, later taken over by the Americans, who threatened to scuttle her if she were put into the United Kingdom trades.

freights and safe voyages for the promptness with which it had ordered the Danish masters to refuse their services to the United Kingdom. At the same time it salved its conscience with the reflection that ships flying the Danish flag, 'the sole symbol of a free Denmark', would continue to sail the seas. It had, however, miscalculated. The British, though lamentably weak in weapons of war were fertile in ingenious notions and in a determined mood. Although after the fall of France the Royal Navy was obviously unable over large areas of the globe to intercept enemy merchant ships at sea, or neutral ships engaged in trading with the enemy, nevertheless the British began to talk of 'world-wide control' and to find means of enforcing it to a large extent. In the summer of 1940 the ship warrant scheme was launched, both to further the purposes of economic warfare and in order to force neutral ships into British service or into trades elsewhere that were held to be essential. No ship, it was ordained (apart from those in categories held to be above suspicion¹) was to be allowed any facilities in any port of the British Commonwealth unless the British had furnished her with a warrant.² For the ill-disposed there were to be no bunkers, or stores, or insurance or water or credit, no access to dry-docks, no Admiralty charts, no help or guidance or supplies of any sort. Since the British Commonwealth covered a very large area, and since various neutral countries, and particularly the United States,³ soon began from goodwill or self-interest to co-operate in the arrangements, trade for the ill-disposed though sometimes possible became exceedingly difficult. When, for example, in the late summer of 1940, the s.s. *Durmitor*, belonging to the Yugoslavs, was chartered to the Japanese for a voyage from Spain to Japan and demanded bunkers at Gibraltar, she was not given them. She sailed without them, picked up some in the Atlantic Islands before the British obtained control there and got as far as Lourenço Marques. There, however, she met her doom. In October, it was observed, she was 'being held indefinitely waiting for 1,350 tons of coal'. The example (and there were many others of a similar kind) was telling, and the Danish Committee, being unable to insure

¹ I.e. British, Allied, United States and Swedish ships.

² In order to acquire a warrant a ship-owner had to satisfy the Ministry that he would not trade his ships to enemy countries or insure them with companies in enemy territory; that he would not trade with certain specified countries, nor sell nor charter any of his ships, without the Ministry's permission; that he would inform the Ministry about his proposed voyages and cargoes if required, and of any ships he acquired on time-charter or by other means, and that he would 'cease to employ any master, officer, seamen or other personnel to whose employment objection may be taken by the British authorities'.

³ The insurance sanction operated as the most powerful control in the ship warrant scheme because unless a vessel was covered under the scheme the policy could be judged as void by the underwriters at any time. Arrangements were made, which took effect as from the 9th December 1940, under which British and United States underwriters agreed to attach a joint warranty to all marine policies.

its ships,¹ was forced to keep them in port. It reckoned, however, that the British need for ships would ultimately become so pressing that they would be forced to agree to its terms of which the essentials were that the ships should continue to fly the Danish flag, and that in return for a small proportion in British service the rest should be allowed to remain free.

The British persistently refused these offers. 'As long', they said, 'as a ship is under the Danish flag she can be requisitioned by the Danish Government . . . and this means the Nazis who dominate that government. When we have driven the German fleet from the seas can anyone expect us to look supinely on and watch the place of that fleet taken by ships flying the Danish flag, but under German control, with the proceeds of the earnings going into German pockets?'

For a long time the British refused to negotiate with the Danish agents in New York except on the understanding that all their ships should be transferred to the British flag in return for permission to keep a proportion in the safe trades. The British assumed that lack of earnings must drive the Danes into a more accommodating state of mind, and so indeed it might have done if the Germans had not intervened. As time went on, however, one order after another was cabled from Copenhagen, 'undoubtedly due to German pressure', to the effect that Danish ships must remain in neutral ports for the duration of the war. There could, it ultimately emerged, be no solution to the dispute unless the Americans were to intervene and requisition the ships, despite—as far as could be seen—provisions of international law which forbade a neutral state to take such action. For the time being, meanwhile, honours were divided, though somewhat unequally and in the British favour; for whereas they had half the Danish tonnage that had escaped the Germans, the New York Committee which had the other half could not use it.

The British had fewer friends among the French owners and masters than among the Danish, although while the war in France was still in progress they had appeared, it is true, to have a large number. Nearly half a million deadweight tons of French shipping at that time sought refuge in the ports of the United Kingdom and other Commonwealth territories,² but after the armistice most of the

¹ This obstacle did not exist until the autumn of 1940. Before then, and particularly in the period immediately following the invasion of Denmark (that is, before the British shortage of escorts had become acute and before the attitude of the United States was as favourable to the British cause as it became later) what prevented the Danish Committee from insuring its ships was, it was always said, the height to which the British threat to seize the ships drove up the premiums. The British found this very convenient. As it was observed in April 1940: 'This is fortunate as . . . we do not wish to have to stop ships carrying American-owned cargo *en route* from the United States to South America (and run the risk of touching American opinion on one of its most sensitive spots . . .)'

² The figure is 400,000 gross tons. Since the ratio of gross tons to deadweight tons over the whole of the French dry-cargo fleet was about 1.1 d.w.t. to 1 g.t., say 440,000 deadweight tons.

French seamen demanded to be, and were in fact, repatriated—though needless to say without their ships—and the French authorities in North Africa seized and interned all the British and Allied ships in their ports, whither an unusually large number had been directed in the hope that the arrival of supplies might encourage the spirit of resistance. The amount of tonnage the French thus acquired was roughly as large as the amount the British had gained from them.¹

This story, too, however, had a sequel which can most conveniently be told here. France though only a small ship-owning nation was nevertheless a far from negligible one; even after her losses to the British, and to the Germans who seized over a quarter of a million gross tons, she was still left with a considerable amount of tonnage which the Vichy Government hoped to use to provision unoccupied France and the African colonies; and unlike the Danish Committee in New York, the French possessed ports abroad—both inside the Mediterranean and outside it in Dakar, Casablanca, Madagascar, Indo-China and the West Indies—which made them independent of British facilities. If the British were to seize French ships, as they wished to do both in order to enforce the blockade and to augment their own fleet, they could only achieve their object by capturing the ships at sea.

The struggle with the blockade-runners that in consequence ensued was the most significant instance during the war of Great Britain's pursuing her classic policy of replenishing her fleet by captures of foreign merchant ships at sea; for among the enemies and the hostile neutrals (apart later from the Japanese within the American sphere of operations) Vichy France was the only state whose overseas trade was at one and the same time contrary to British interests, incapable of being controlled by economic measures, and pursued on a sizeable scale.

All the same, and in spite of the fact that there was a concentration of British naval forces in the neighbourhood of Gibraltar, and all French ships bound to or from unoccupied France, apart from those employed within the Mediterranean, had to pass through the Straits, it was not at all easy to effect captures; for the French sailed their ships through the Straits in convoy, and though the escorts were sometimes only of the most meagre kind, consisting of nothing more formidable than an armed trawler, on other occasions, when they were more substantial, the British needed a degree of force to overwhelm them the use of which would have been an act of war. In spite, therefore, of a number of stirring and hazardous enterprises,

¹ The figure was between 250,000 and 300,000 gross tons or, allowing a ratio of 1·4, say from 350,000 to 420,000 deadweight tons.

the haul of captured ships, though gratefully received by the Ministry of Shipping, was not large and came in slowly.¹

All told, in fact, after the fall of France British acquisitions from the enemy and from hostile neutrals, though sizeable, were not spectacular. One benevolent neutral, Sweden, came handsomely to Britain's aid. Sweden promised the British 60 per cent. of her dry-cargo tonnage outside the Baltic, or 480,000 deadweight tons, and in the course of time they received from her something not far short of this amount.² It was, however, principally to the Allies, possessed collectively of more tonnage in peace than Sweden, France and Denmark, to whom the British looked for help.

The Allies were in the war and therefore under a moral obligation to help prosecute it. They had indeed joined the British in order to do so. Precisely what, however, patriotism enjoined on them was another matter and hard to determine. The Belgians, it is true, put the whole of their small fleet immediately at Great Britain's disposal, but the Norwegian Government, which had requisitioned its merchant ships on the 20th April, and the Dutch Government, which did the same after Holland was invaded, except for ships based on the Netherlands East Indies and Curaçao, were in a different position from the Belgians. For both Holland and Norway, and particularly Norway, were small nations, with disproportionately large merchant navies, greatly dependent in peace on their shipping earnings. If they lost their ships, they felt, they would jeopardise their means of making a living when the war was over, and might be unable to send provisions to their countries after they were liberated. It did indeed prove possible—though not until March 1941—largely to meet these points by means of an Allied tonnage replacement scheme, but there were other points that could not be met; for after the summer of 1940 its ships were the Norwegian Government's sole asset; the one means it had of demonstrating the continuance of Norway's national existence and of preserving its self-respect; since without its ships it could not earn the money for its current expenditure, nor the dollars needed to buy weapons and supplies against the day of liberation and to meet the service on its American debt. The Dutch were more fortunate until Pearl Harbour, for they had their overseas empire, but they needed ships to maintain it; moreover, before they were invaded both Holland and Norway had had a large amount of shipping in areas east of Suez. Much of it was employed between Commonwealth countries and the United States in trades that had to continue, even though there was room for

¹ The British acquired about 100,000 deadweight tons by these means (see Appendix XV, p. 113) and the Dominions also gained some.

² In fact, about 83 per cent. See Appendix XV.

argument about the extent to which they were legitimate and, since the voyages were mainly safe voyages, about the relative proportion of their fleets that the British and the Allies could appropriately employ in them.

As things were in the summer of 1940 the case of the Dutch and the Norwegians for not handing over to the British all their ships was thus a reasonable case. But how many should they hand over? Opinion was divided on this matter. Essentially, however, the division was not between the British and the Allied Governments but within the ranks of the Allied ship-owners themselves and particularly, among the Dutch and the Norwegian owners who escaped from the Germans, between those who came to the United Kingdom and chartered their ships to the British, and those who went to the United States or the Netherlands East Indies to manage the tonnage based on these territories. The war seemed very different to those who were in the middle of it from what it seemed to those who were several thousand miles away, and the needs on the one hand to defeat the enemy, and on the other to safeguard the position at the peace, assumed different proportions in different parts of the world. This state of affairs created many difficult problems for the British Government and in some ways even worse ones for the Allied Governments.

The people who were responsible for shipping policy in the United Kingdom were determined from the beginning that the alliance should be a genuine alliance and not the kind of relationship that prevailed in the Axis camp. They started from the principle that there ought to be equality of reward and sacrifice—that the financial arrangements ought as far as possible to be comparable for British and for Allied owners, and that the same proportions of the Allied and of the British fleets should be employed on the more and the less dangerous routes. In the existing circumstances, however, it was one thing to hold these views and another to translate them into practice.

The rates the British had paid at the beginning of the war for the hire of the foreign ships they chartered had been arrived at by ordinary commercial bargaining. The Norwegian owners, for example, had been paid much more than British owners—and their crews were paid more than British crews. This was naturally exasperating to British owners, British crews and the British Treasury. It would not, however, have been reasonable or politic to say to the Norwegians after their country had been conquered that because they were now Great Britain's Allies they must receive less than they had received before. The Ministry of Shipping held this opinion strongly. As it pointed out in the spring of 1940 in protest against the Treasury's contention that Allied and British ship-

owners should be paid the same: the British could not in decency appear to be trying to exploit the Norwegians at this crisis in their history. The Dutch, however, had not given the British any help before the German invasion of Holland. The arguments that applied in the Norwegian case did not apply in theirs. Yet what one ally got the others wanted and on many grounds might rightly claim.

Moreover, between the fall of France and Pearl Harbour all the Allies—not only the Dutch and the Norwegians but the Greeks and the Jugoslavs when their turn came—were in a strong bargaining position, even though among the Allies in this country there were those who would have preferred not to exploit it. For the United States was still neutral and glad of the services of Allied ships; and though she insisted in principle that all the Allies, the British included, should put the whole of their shipping resources into the war-effort, regardless of commercial interests, as the price of her help, where the commercial interests involved were linked with hers there were always plenty of strings in Washington that could be pulled by people attracted to the occupation. The Ministry of Shipping, in consequence, found itself required to control a league of nations in accordance with principles whose application was perpetually being frustrated.

To run this league of nations was indeed not easy. To pay no more than was essential and yet (for the Treasury's preoccupation with economy became increasingly a secondary consideration) enough to prevent the emergence of grievances that, among other things, would put unnecessary obstacles in the way of getting ships out of the safe trades and into British service; to temper justice with expediency; to judge what was expedient in the light of a huge number of considerations in both the present and the future—here was an enormously intricate task demanding that the arts of government and business management should be combined after a fashion becoming familiar in the modern state though the circumstances can rarely have been so complicated.

In the summer of 1940 the British took their stand on the principle (easier to state than to particularise since the Allies were unwilling to disclose all the details about how their tonnage was employed) that the Norwegians and the Dutch should each charter all their ships ordinarily employed in trades which had ceased to exist as a result of the conquest of Europe. In the event besides large numbers of coasting ships and tankers, the British acquired immediately or were promised the delivery as soon as possible of 400,000 deadweight tons of deep-sea dry-cargo ships from the Norwegians, in addition to what they had had before, and of over 1 million deadweight tons from the Dutch. This left the Norwegians with something over and the Dutch with something under 1 million

deadweight tons of free shipping, representing roughly 50 per cent. and 43 per cent. of their respective ocean-going dry-cargo fleets.¹

While, therefore, before the invasion of France the British had had under their control less than half a million deadweight tons of foreign ships on time-charter (though an unestimated amount on voyage-charter) and about 200,000 deadweight tons transferred to the British flag by purchase or capture, making a total of about 600,000 deadweight tons in all,² it was estimated in August 1940 that the average amount of tonnage in these categories that would be in their service throughout the second year of war would be about 3 million deadweight tons; and in the event for various reasons, including the German invasions of Greece and Yugoslavia, which brought these countries into the ranks of the Allies, the expectations were greatly exceeded.

In the dark days of the summer of 1940 the acquisition of so much foreign tonnage provided not only physical reinforcements but moral support. The grand alliance of the United Nations was in embryo, a testimony to the will of the conquered peoples to survive, bringing its problems like all alliances but nevertheless immune from the major dangers to which alliances are subject; for there was no division of control. Though the Allied ships were put into British service on terms which were the result of negotiations between the governments concerned; though they flew their own flags and were manned by their own crews, and though their governments were given the right to be consulted about how they should be employed, nevertheless it was the British Government that made the plans and dispositions. The Allied ships, though they preserved their identity, became a part of the British pool. The Danish ships, and the French ships, even when their crews had joined and remained with the British of their own free will, had not even this degree of independence, for they were transferred to the British flag.³ This was the only possible arrangement since there was no Danish government with which to negotiate and no French government with an un-

¹ More precisely, the facts were as follows:

Under the Agreement of November 1939 the British had acquired, before 20th May 1940, 720,000 deadweight tons of ocean-going dry-cargo ships from the Norwegians. Under the Agreement of June 1940 they acquired before 30th October 1940, another 400,000. The Norwegian ocean-going dry-cargo fleet at 3rd September 1939 had amounted to 3,308,000 deadweight tons, of which (see Appendix XIV, p. 112) it has been estimated that nearly 1 million was captured by the Germans. As a result of the Agreement of June 1940 concluded with the Dutch the British acquired 1,191,000 deadweight tons of ocean-going dry-cargo Dutch shipping. All of this had been delivered by May 1941, and nearly all of it before the end of 1940, leaving 884,000 deadweight tons still free.

² See Appendix XV, p. 113.

³ The French ships captured in African ports at the time of the North African campaign were allowed to fly the French flag and their crews to be subjected to French discipline. The other French ships in British possession apparently continued to fly the British flag until 1944.

disputed right to speak on behalf of the French people, and since Danish and French ships, if flying their own flags, could have been seized in neutral ports and possibly adjudged German property. Nevertheless, the French and Danish ships, as far as was practicable, were manned by their own crews,¹ who were paid at British rates,² and the owners were given a rate of hire (the money being placed in blocked accounts until after the war) that was the same as that given to British owners for similar classes of ships. The only exceptions were the French ships taken in prize, and even they were usually not condemned, which would have made them British property without qualification, but the owners' right to restitution was admitted, though not the right to payment for use.

Thus the British and the foreign ships set out on the 'great adventure'.³ Admittedly this family of nations, like any other family, had its disputes, and harsh words were spoken and harsher thoughts harboured from time to time—by the British who, before Pearl Harbour, cast increasingly longing eyes on all the free ships, carrying cargoes of increasingly dubious essentiality at preposterous freights, and by various of the Allies who accused the British of having driven unduly hard bargains over the rates of hire for the ships they had chartered. Nevertheless the disputes were not serious enough at any time to prevent the British and Allied authorities from collaborating amicably in the management of the Allied ships on charter to the British Government. The use of these ships was continually subject to review in committees on which the Allies concerned were represented; there were even Allied representatives who were housed in the Ministry of War Transport's buildings in London and who formed an integral part of its organisation. Had the Allied owners or crews been obstructive they could doubtless have found many means of delaying their ships in port, and in general of interfering with the prosecution of the war. But these things, it seems, virtually never happened.⁴ On the contrary, the Allied owners in this country, and their ships' companies, took their share of the more dangerous voyages and knew that the British would not try to make them take a larger share than might in justice be asked of them.

¹ To make this possible Defence Regulation 47C was issued to suspend the law which required that the master, chief officer and chief engineer of any ship registered in and trading from the United Kingdom must be a British subject.

² This was always a source of grievance to the Danes, for the Allied crews got more. The Danes were reputed to say sarcastically that they were 'Allies in all but name and pay'.

³ The words were those of the Director-General of the Ministry of War Transport, written after the war.

⁴ The writer bases this assertion principally on the opinions expressed, on various separate occasions, by prominent British authorities. The writer has not attempted to discover how far justice in fact prevailed, either in financial matters or in the employment of ships; for this task would not only have involved an impossibly large amount of labour; it is extremely unlikely that it would have yielded reliable conclusions since much of the relevant information is in foreign countries.

(ii)

The Shape of Things to Come

After the fall of France, the United Kingdom's ports were filled with ships of all nationalities congregating there to escape the Germans, but it was impossible to assess the significance of this reassuring spectacle, for not only had many ships from the conquered nations been intermittently in British service before their countries were invaded, and the net gain represented by the new acquisitions could not be measured; the old order of things, governing the relation of gains to losses, the numbers of ships required by the various services, and the amount that a ship in each service could carry in a given period of time, had been engulfed by the French disaster. In Hitler's new order that emerged in the summer of 1940, all the many factors that determined the size of the fleet and its carrying-capacity appeared incalculable, as did equally the capacity of the ports.

While France was falling the threat to the ports had seemed a major peril, but the summer drew on and they were not attacked. The attacks on ships at sea, on the other hand, rapidly increased. Here were ominous signs, but for some time not enough on which to form a judgment. Throughout the summer there was nothing to indicate whether there would be too much shipping for the ports to accommodate, or enough port capacity but too few ships. Everyone expected disaster of one kind or another, but no one knew what shape it would assume.

The one thing that seemed clear in June (and that, as it turned out, was wrong)¹ was that with so much foreign shipping placed suddenly at Britain's disposal, and with the removal of the French claims, there must until the storm broke be more ships to bring imports to the United Kingdom than there had been since the war started. The immediate task appeared to be to make the best possible use of this brief affluence.

The economists in the War Cabinet Offices calculated in some rough and ready way at the beginning of June that imports would not be more than 35 million tons in the second year of war² (that is, in the twelve months from the beginning of September 1940).

¹ Imports in fact never reached the height that they reached in April (4.2 million tons) although, other things being equal, they would have risen in the summer months. They did, in fact, fall more or less steadily month by month from April 1940 until May 1941.

² The writer does not know on what basis this figure was arrived at. The considerations that appear principally to have determined it were the French demands and the threat to the ports. It was accepted in the Ministry of Shipping as a reasonable guess, though the statisticians there were at this time unwilling to make an estimate. It remained the only target after France fell until it was superseded in August by the estimate referred to on p. 107 below.

This figure represented a 25 per cent. cut on the import programme as it had been recast in the previous April, and the Economic Policy Committee, charged at this time with the duty, among others, of surveying and correlating the needs of the purchasing departments for imported supplies, divided it up on the assumption that the principal claimants—the Ministries of Food and Supply—should each suffer reductions in roughly the same proportions. The Ministry of Food was to have 15 million tons and the Ministry of Supply 19 million, leaving 1 million over for finished munitions, and for miscellaneous items sponsored by the Board of Trade. Until, however, the attacks on shipping and ports should start, the Ministries of Food and Supply were instructed to ship, over and above their new allocations, all the essential commodities on which they could lay their hands and to put them to reserve.

This sounded commonsense, but it was a commonsense impossible to translate into practice. The purchasing departments had no faith in the figure of 35 million tons, which inevitably was more of a guess than a scientific estimate, and assumed it to be unnecessarily low; they had no faith, either, in the appropriateness of their respective quotas, which indeed were wholly arbitrary. In these circumstances they made no serious attempt to observe their instructions, and did not draw up programmes on the basis of the quotas allocated to them;¹ yet without such programmes it was impossible to say, even for the purposes of the emergency purchases, which commodities in what quantities ought to be imported.

The purchasing departments, in fact, yielded once again to the perennial temptation to live beyond their means, and the Economic Policy Committee was unable to discipline them. Burdened with too many duties; lacking all the necessary statistical data; unable to judge the legitimacy of the demands for raw materials put forward by the Ministry of Supply on behalf of the Services and other Government departments; at the mercy of the arguments of the Ministry of Food—which alone at this time could produce comprehensive figures of stocks and requirements—it tolerated, and even on occasions encouraged, the breaches in its own policy of cutting consumption and building up stocks. In July, for example, it decided that nothing should be done to build up stocks which would interfere with the level of munitions requirements. Yet unless munitions requirements could be reviewed in the light of the expected level of imports, and of the needs for foodstuffs and for raw materials for other purposes, what was to prevent, say, the continued allocations of steel to build factories and plant with a capacity in excess of what any likely rate of imports could satisfy?

¹ See R. J. Hammond, *Food*, Vol. I, pp. 75-76, and J. Hurstfield, *The Control of Raw Materials*, pp. 198-199.

In the end it came to be accepted in many cases, first that the United Kingdom should continue to import as far as possible commodities which had hitherto been imported in large quantities but whose importation under a 35-million-ton programme would have to be drastically cut; secondly, that it should continue to consume them at rates far in excess of those appropriate to a 35-million-ton programme. This is what happened, notably, with fresh fruit, vegetables and animal feeding-stuffs.

These actions may seem improvident for a nation faced with invasion or a state of siege. They did indeed seem so to many people at the time; but the past unwillingness to face facts, with its legacy of inadequate statistics and inadequate means of determining priorities, could not be immediately overcome; the general unfamiliarity with shipping and port problems, the lack of any reliable estimates of the likely performance of ships and ports, and the more urgent preoccupations with the threat of invasion, made it possible to assume that the day of reckoning in the matter of imported supplies might be still further postponed.

There had been problems of this order before, and similar ones were to arise again. They were indeed the kind of problems that always arose after some revolutionary change in the strategic situation, when the consequent alterations in the plans for war production, and in the flows of supplies from overseas, had repercussions throughout the whole of the nation's economy, disrupting the intricate network of cause and effect in economic matters. The greater, however, the knowledge of and control over the way supplies were allocated the less intractable these problems became. After Pearl Harbour, when a comparable state of uncertainty existed, it was possible to provide a basis for planning by asking the purchasing departments to state their minimum needs, not, indeed, with the confidence that they would in fact do so, but at least with the confidence that they would not put forward demands that were wholly unreasonable. After the fall of France, when the Ministry of Supply often did not know even the size of the stocks or the rates of consumption of the commodities for which it was responsible, and when, in consequence, the Ministry of Food could plausibly challenge every suggestion about how a given total of imports should be divided, the word 'minimum' was virtually meaningless. In these circumstances the only way, it seemed, of making a start with the planning which everyone knew to be necessary, and of imposing the requisite discipline, was to produce an estimate of importing-capacity, on the understanding that it must be used as a standard for the necessary economies, however unpropitious the circumstances in which it had to be compiled, and however much its authors might doubt its accuracy.

The Ministry of Shipping had grave doubts about the accuracy of its first estimate of importing-capacity after France fell, which it produced on the 1st August. It thought that it might represent an overestimate of '10 per cent. or more'; but subject to this proviso, and to the further proviso 'that we retain sufficient use of the ports of the United Kingdom', it concluded that it should be possible to import 42 million tons in the second year of war.

But would the British retain sufficient use of their ports? How much could the ports handle? This was for the Ministry of Transport to answer. The Ministry of Transport, however, continued to believe that the question, which had been asked on and off for the past seven years, was unanswerable. Without knowing what was to be imported, and where the commodities were to go after they arrived, to attempt to measure the capacity of the ports, even if the likely effects of bombing were left out of account, was, in this Ministry's opinion, like trying to measure a piece of elastic.

To the Economic Policy Committee, however, this attitude would not do. The economists in the War Cabinet Offices believed that an estimate was not only urgently needed but was possible to make, and in consequence they 'heavily bombarded' the officials in the Ministry of Transport 'with memoranda and queries'. The officials viewed these activities with misgiving. As the official in charge complained: the economists 'use a language which I do not speak and only imperfectly understand'. He professed himself, however, grateful for the offer of one on loan who would, it was to be hoped, communicate with his colleagues in their own tongue and, primed with the facts, succeed in making plain to them that the matter was not as simple as they appeared to suppose. In the course of time this economist duly arrived and was given a table in the Ministry of Transport.

He found himself faced with a formidable task. He was not an expert on the subject and had only a few weeks in which to learn it up. Having discovered that the limiting factor was likely to be facilities for removing goods from the ports, he also discovered that all the data were lacking which were needed to assess the probable performance in this field. No figures were available to show what proportion of the country's imports left the ports by road, rail, canal or coasting ships; there were not even any precise figures to show the volume of imports landed in the various ports;¹ at the outbreak of war the railways had ceased to make their usual returns of the tonnage originating on their lines and of the ton-mileage of goods carried; though a very large amount of the coal moved in this country must, in peace as in war, be moved coastwise, no one

¹ The economist was thus forced to use the figures of the tonnage of vessels arriving with cargoes.

knew at this time what proportion was carried by coasters and what by rail. Thus, as the economist pointed out, 'at the very moment when full and accurate information about railway traffic is most required, we find ourselves almost completely in the dark'.

He did what he could in these circumstances and concluded that on the most likely of three alternative hypotheses nearly 41 million tons of imports could be passed through the ports in the second year of war.¹ His claim to speak with authority was, however, so dubious, and his calculations were based so largely and so obviously on pure guesswork, that even if his answer had been substantially different from that of the Ministry of Shipping, and there had thus been a *prima facie* case for considering it,² it would have been difficult to take it seriously. As things were, both answers were more or less the same, and, since no one paid attention to the Ministry of Shipping's warnings that 42 million tons represented a volume of imports that might be too high by 10 per cent. or more, the purchasing departments were bolstered up in their belief—until events forced them to revise their views—that drastic economies were impossible.

The events, indeed, were to prove that both estimates were seriously wrong. Even the statisticians in the Ministry of Shipping, who had been right in the past, and in the future were to develop a skill in making long-term estimates that would be incredible were it not proved, had failed to take adequate account of the dangers. Land-power, as it turned out, had scored an advantage over sea-power by the defeat of France greater, it seems, than had entered into the calculations of the conquerors or than even the victims appreciated for some time. After the fall of France Germany acquired large new resources that could be used to construct weapons to attack Great Britain's ocean life-lines and their terminal points. Even before the Germans could mobilise these resources, their victories enormously increased the value of the weapons they already possessed—when they acquired the French Bay ports, for example, the range of their submarines was increased at the same time that the British supply of escorts was diminished, for many British destroyers had been sunk or damaged at Dunkirk, and many of those that remained, and that otherwise would have been available for escort duty, were needed to protect the United Kingdom from invasion. The secure base in the United Kingdom, which is the prerequisite of British sea-power, now no longer seemed secure. But of greater immediate value to the enemy in the second year of war, as things turned out, were the distances that the conquest of Europe suddenly interposed between the British Isles and the rest of the free

¹ See Appendix XVI, p. 119.

² To the best of the writer's knowledge the estimate was never sent to the War Cabinet.

world, forcing the British to abandon the old trade routes and established trading practices. When the Italians entered the war the Mediterranean was closed to merchant ships; it was now 13,000 miles to Suez instead of less than 3,000, and nearly 11,000 to Bombay instead of just over 6,000. The Germans now occupied the countries from which had come most of the commodities which the British had previously imported from Europe, and though some of these imports—fresh fruit, vegetables and eggs—were of a type the British could forgo; though some of the others which they imported in large quantities—particularly iron ore—were ones of which smaller quantities had to suffice;¹ though, sacrificing their dwindling supplies of dollars, they took to buying more than formerly from North America and less from areas east of Suez, nevertheless the result of losing the continental supplies was to increase the average length of haul of the ships on importing services, and therefore to diminish their carrying-capacity. Marooned off the edge of Hitler's new empire, the British were thus forced to nourish themselves from far afield, to fight at huge distances from home, to transport across thousands of miles of ocean not only troops and their equipment, but all the materials required to develop bases, ports, railways and pipe-lines in the remote areas of Africa and the Middle East where alone at this time it was possible to fight the enemy.

Time, it was said in the summer of 1940, was on the side of the free peoples, but in a sense of the word familiar to the ship-owner it was on the side of the Germans. Round-voyage time, that complex product of innumerable causes reaching down to the roots of national existence in many lands,² enormously increased for British ships after the fall of France. On an average it increased by somewhere between 30 and 40 per cent.,³ and for the troopships it increased by much more. Not only were the sources from which the British drew their imports, and the places to which they had to transport troops and war material, now farther off; because the cargoes that had to be carried were often of unaccustomed types and were destined for places not equipped to receive them; because

¹ Because of the way in which the statistics were compiled it is not possible to make a comparison between the sources from which the British drew their imports in the first and second years of war. The comparisons can, however, be made between the first eight months of 1940 (when the British imported 30.2 million tons) and the calendar year of 1941 (when they imported 30.8 million tons). From this comparison it emerges, to note the more important changes, that in the first of these periods 20 per cent. of the United Kingdom's imports came from near sources (8 per cent. from Northern Europe and 12 per cent. from France, the Western Mediterranean and North Africa), 8 per cent. from Australasia and 36 per cent. from North America. In the second period 4 per cent. came from near sources, 5 per cent. from Australasia and 54 per cent. from North America.

² See Appendix II, p. 18, and Chapters VI, IX, X and XIX below.

³ The Ministry of War Transport assumed that, broadly speaking, average round-voyage time for ships employed in importing into the United Kingdom was about 90 days before France fell and about 122 afterwards.

ships had to sail on routes and to carry cargoes for which they were not designed, many operations all over the world were thrown into confusion, and even when the confusion had been overcome often took longer to perform. Moreover these difficulties, caused because Europe was occupied by the enemy and the Mediterranean closed, were increased by various time-consuming expedients required to protect ships from attack. The closing of the Mediterranean itself was indeed one of these, and there were others. From the end of the summer such ships as could be permitted to sail to London and to the other east coast ports in the United Kingdom could no longer proceed up the Channel, but had to sail in slow coastal convoys round the north of Scotland from the west coast where the homeward-bound ocean convoys came in. The voyage took them about eleven days there and back or more than half the time required to cross the Atlantic;¹ and besides these major deviations, necessary for protection against attack by aircraft and surface ships, there were all the other deviations, which the merchantmen sailing independently, and in the meagrely escorted trade convoys, were forced to adopt in order to avoid the submarines, and which often took them hundreds and sometimes thousands of miles out of their course.

In these ways the British expended time to preserve ships, and such a policy must obviously be proper, as long as it does not limit the pursuit of the necessary military objectives to a greater extent than would the alternative of heavy losses; for a ship that is lost in one year is a ship the less in the next and every following year, and though time that is lost cannot be recaptured, when it is lost in one year there is no less of it in the next.

In other words the result of these manœuvres, together with all the dislocation they caused, was to save ships at the expense of their carrying-capacity; and it was the loss of carrying-capacity in the second year of war that was the principal cause of the shipping shortage, not the loss of ships or the rise in the demands of the Services.² Of the total amount by which British imports in the second year of war fell short of the rate of importation before France fell, something of the order of only 15 per cent., it seems, can be attributed to the net losses (that is to the ships lost and not replaced)

¹ The figure of eleven days has been arrived at by comparing the figures for the number of days spent in United Kingdom waters by convoyed tramps and liners discharging (i) on the west coast and (ii) on the east. The phrase 'there and back' therefore excludes the time spent in port. The ships considered were those sailing between the United Kingdom and Canada, the United Kingdom and the United States Atlantic ports, and the United Kingdom and Gulf of Mexico and West Indies. It should perhaps be mentioned that the ships discharging on the west coast took longer to discharge, but this may well have been because of the nature of the cargo. The number of days spent on the Atlantic was about eighteen.

² For the increase in the demands of the Services, see Appendix XVIII (iii), p. 122. This increase, however, was itself due to a decline in carrying-capacity, principally because of the great distances to be traversed.

in the twelve months from the beginning of September 1940 to the end of August 1941.¹

But it was impossible to foresee all the ways in which carrying-capacity would be reduced; the innumerable separate decisions which brought about the final result were taken one by one in response to the dangers and difficulties as they emerged. The statisticians in the Ministry of Shipping did not greatly underestimate the losses, which they calculated on the basis of those occurring at the time. Though they underestimated the amount of tonnage the Services would need, they also underestimated the amount of help the foreign ships would provide; in total, in fact (as far as the inconvenient form in which the statistics were kept at this date permit one to judge) in their assessment of physical resources² they were almost exactly right; the pluses and minuses appear to have cancelled out, as they usually do when skilful and experienced statisticians are at work. Imports declined so much more heavily than had been expected because the carrying-capacity of the British merchant fleet had been much overrated. In the second year of war instead of 42 million tons the British only imported 31.5 million. Even so, however, the greatly reduced volume of shipping that reached the United Kingdom appeared at one time more than the ports would be able to handle. The economist's estimate, too, was some 11 million tons out.³

¹ See Appendix XVII, p. 120.

² See Appendix XVIII (iii), p. 122.

³ See Appendix XVI, p. 119.

APPENDIX XIV

Approximate proportion of the Belgian, Dutch, Danish and Norwegian ocean-going dry-cargo fleets captured by the enemy in 1940

	A		B		C
	<i>Tonnage captured</i>		<i>Size of fleet at 3rd September 1939 to nearest '000</i>		<i>Proportion of B represented by A</i>
	<i>Gross tons</i>	<i>Deadweight tons¹</i>	<i>Gross tons</i>	<i>Deadweight tons</i>	
BELGIUM	90,840	118,092	295,000	384,000	30·8
HOLLAND	405,164	486,196	2,111,000	2,616,000	19·2
DENMARK	311,101	435,541	760,000	1,130,000	40·9
NORWAY	588,767	942,027	2,100,000	3,308,000	28·0
TOTAL	1,395,872	1,981,856	5,266,000	7,438,000	26·5

Source: Column A, Ministry of War Transport's figures. For Column B, see Appendix VII to Chapter I above

¹ These figures have been arrived at by taking the ratio of deadweight tons to gross tons over each fleet as a whole and applying it to the gross tonnage shown in the table.

APPENDIX XV

*Foreign dry-cargo ships 1,600 g.t. and over under British control
(other than United States and Canadian ships transferred to the
British flag) in service and lost at various dates*

1939-40

Thousand tons

		In service 30th April 1940			Losses 3rd September 1939 to 30th April 1940		
		No.	D.W.T.	G.T.	No.	D.W.T.	G.T.
BELGIUM	On time-charter . . .	—	—	—	—	—	—
CHINA	On time-charter . . .	1	3	2	—	—	—
DENMARK	Prizes	4	17	11	—	—	—
EGYPT	On time-charter . . .	12	48	41	—	—	—
ESTONIA	Requisitioned . . .	—	—	—	—	—	—
FINLAND	Prizes	—	—	—	—	—	—
FRANCE	Prizes	—	—	—	—	—	—
	Requisitioned . . .	1	4	3	—	—	—
	On time-charter . . .	—	—	—	—	—	—
GERMANY	Prizes	11	68	45	—	—	—
GREECE	On time-charter . . .	36	269	160	1	8	5
HUNGARY	On time-charter . . .	2	11	6	—	—	—
ITALY	On time-charter . . .	—	—	—	—	—	—
	Prizes	—	—	—	—	—	—
LATVIA	Requisitioned . . .	—	—	—	—	—	—
NETHERLANDS	On time-charter . . .	—	—	—	1	3	2
NORWAY	On time-charter . . .	13	64	38	—	—	—
PANAMANIAN	Requisitioned . . .	—	—	—	—	—	—
	On time-charter . . .	—	—	—	—	—	—
	Purchased	—	—	—	—	—	—
POLAND	On time-charter . . .	3	18	37	1	19	4
SWEDEN	On time-charter . . .	—	—	—	—	—	—
U.S.A.	Purchased	15	118	75	—	—	—
JUGOSLAVIA	On time-charter . . .	1	10	6	—	—	—
TOTAL		99	630	424	3	30	11

1940-41

Thousand tons

		In service December 1941			Losses 30th April 1940 to December 1941		
		No.	D.W.T.	G.T.	No.	D.W.T.	G.T.
BELGIUM	On time-charter . . .	34	196	158	12	81	55
CHINA	On time-charter . . .	1	3	2	1	3	2
DENMARK	Prizes	43	244	162	15	70	45
EGYPT	On time-charter . . .	2	16	11	5	30	22
ESTONIA	Requisitioned . . .	3	15	9	—	—	—
FINLAND	Prizes	4	22	13	1	5	3
FRANCE	Prizes	13	88	84	1	5	3
	Requisitioned . . .	46	347	333	19	107	89
	On time-charter . . .	—	—	—	—	—	—
GERMANY	Prizes	10	89	65	10	67	48
GREECE	On time-charter . . .	156	1,164	692	58	424	252
HUNGARY	On time-charter . . .	—	—	—	2	11	6
ITALY	On time-charter . . .	—	—	—	—	—	—
	Prizes	18	135	97	11	102	66
LATVIA	Requisitioned . . .	2	9	5	1	7	5
NETHERLANDS	On time-charter . . .	147	1,191	928	48	449	310
NORWAY	On time-charter . . .	180	1,047	650	59	330	216
PANAMANIAN	Requisitioned . . .	1	4	3	1	4	3
	On time-charter . . .	20	131	86	2	11	8
	Purchased	—	—	—	1	10	6
POLAND	On time-charter . . .	13	50	58	2	10	13
SWEDEN	On time-charter . . .	40	258	156	23	130	89
U.S.A.	Purchased	73	651	428	29	253	165
JUGOSLAVIA	On time-charter . . .	34	250	149	10	71	42
	TOTAL	840	5,910	4,089	311	2,180	1,448

1942

Thousand tons

		In service December 1942			Losses during 1942		
		No.	D.W.T.	G.T.	No.	D.W.T.	G.T.
BELGIUM	On time-charter .	28	173	137	12	87	59
CHINA	On time-charter .	—	—	—	—	—	—
DENMARK	Prizes	30	163	108	13	81	54
EGYPT	On time-charter .	3	20	19	2	9	5
ESTONIA	Requisitioned .	3	15	9	—	—	—
FINLAND	Prizes	4	17	11	3	16	10
FRANCE	Prizes	10	65	66	3	23	18
	Requisitioned .	38	284	282	10	77	62
	On time-charter .	—	—	—	—	—	—
GERMANY	Prizes	12	97	80	2	18	11
GREECE	On time-charter .	127	947	559	51	394	237
HUNGARY	On time-charter .	—	—	—	—	—	—
ITALY	On time-charter .	—	—	—	—	—	—
	Prizes	14	108	78	6	45	32
LATVIA	Requisitioned .	1	4	2	1	5	3
NETHERLANDS	On time-charter .	139	982	798	48	406	292
NORWAY	On time-charter .	162	971	608	40	188	154
PANAMANIAN	Requisitioned .	2	13	7	1	4	3
	On time-charter .	18	114	77	4	21	13
	Purchased . . .	—	—	—	—	—	—
POLAND	On time-charter .	16	80	79	—	—	—
SWEDEN	On time-charter .	25	152	92	16	100	59
U.S.A.	Purchased . . .	42	374	241	31	276	187
JUGOSLAVIA	On time-charter .	24	184	108	14	96	58
TOTAL		698	4,763	3,361	257	1,923	1,257

1943

Thousand tons

		In service December 1943			Losses during 1943		
		No.	D.W.T.	G.T.	No.	D.W.T.	G.T.
BELGIUM	On time-charter . . .	28	177	142	5	42	27
CHINA	On time-charter . . .	—	—	—	—	—	—
DENMARK	Prizes	30	147	94	4	31	23
EGYPT	On time-charter . . .	3	23	13	—	—	—
ESTONIA	Requisitioned . . .	3	15	9	—	—	—
FINLAND	Prizes	4	17	11	—	—	—
FRANCE	Prizes	9	58	60	1	7	6
	Requisitioned . . .	35	260	267	3	24	18
	On time-charter . . .	15	87	86	6	33	22
GERMANY	Prizes	12	97	80	—	—	—
GREECE	On time-charter . . .	108	798	488	24	178	106
HUNGARY	On time-charter . . .	—	—	—	—	—	—
ITALY	On time-charter . . .	—	—	—	—	—	—
	Prizes	13	93	70	2	17	11
LATVIA	Requisitioned . . .	1	4	2	—	—	—
NETHERLANDS	On time-charter . . .	124	903	715	23	190	146
NORWAY	On time-charter . . .	143	834	535	19	103	63
PANAMANIAN	Requisitioned . . .	2	13	7	—	—	—
	On time-charter . . .	18	114	77	—	—	—
	Purchased	—	—	—	—	—	—
POLAND	On time-charter . . .	19	103	94	—	—	—
SWEDEN	On time-charter . . .	21	123	75	4	29	18
U.S.A.	Purchased	31	277	178	11	97	63
JUGOSLAVIA	On time-charter . . .	21	162	95	4	31	19
TOTAL		640	4,325	3,095	106	782	522

1944

Thousand tons

		In service December 1944			Losses during 1944		
		No.	D.W.T.	G.T.	No.	D.W.T.	G.T.
BELGIUM	On time-charter . . .	24	150	121	3	16	19
CHINA	On time-charter . . .	—	—	—	—	—	—
DENMARK	Prizes	30	147	94	1	3	2
EGYPT	On time-charter . . .	3	23	13	2	15	14
ESTONIA	Requisitioned . . .	2	10	6	1	6	3
FINLAND	Prizes	2	6	4	2	11	7
FRANCE	Prizes	7	44	50	2	14	10
	Requisitioned . . .	20	142	178	15	117	86
	On time-charter . . .	16	104	97	3	23	15
GERMANY	Prizes	11	87	72	1	10	8
GREECE	On time-charter . . .	97	718	431	6	49	29
HUNGARY	On time-charter . . .	—	—	—	—	—	—
ITALY	On time-charter . . .	4	36	22	—	—	—
	Prizes	9	57	43	4	37	25
LATVIA	Requisitioned . . .	1	4	2	—	—	—
NETHERLANDS	On time-charter . . .	157	1,220	993	7	61	36
NORWAY	On time-charter . . .	153	881	558	9	65	40
PANAMANIAN	Requisitioned . . .	1	6	4	1	6	4
	On time-charter . . .	17	112	76	1	8	4
	Purchased	—	—	—	—	—	—
POLAND	On time-charter . . .	18	100	91	1	5	4
SWEDEN	On time-charter . . .	21	123	75	—	—	—
U.S.A.	Purchased	26	226	147	5	51	32
JUGOSLAVIA	On time-charter . . .	22	161	96	3	24	14
	TOTAL	641	4,357	3,175	67	521	352

First six months 1945

Thousand tons

		In service June 1945			Losses during first half 1945		
		No.	D.W.T.	G.T.	No.	D.W.T.	G.T.
BELGIUM	On time-charter . . .	23	135	110	2	18	12
CHINA	On time-charter . . .	—	—	—	—	—	—
DENMARK	Prizes	26	116	72	4	30	23
EGYPT	On time-charter . . .	3	23	13	—	—	—
ESTONIA	Requisitioned . . .	2	10	6	—	—	—
FINLAND	Prizes	2	6	4	—	—	—
FRANCE	Prizes	5	31	35	2	13	15
	Requisitioned . . .	16	113	157	4	30	21
	On time-charter . . .	14	82	87	2	11	6
GERMANY	Prizes	11	87	72	—	—	—
GREECE	On time-charter . . .	95	499	419	2	19	11
HUNGARY	On time-charter . . .	—	—	—	—	—	—
ITALY	On time-charter . . .	4	35	21	—	—	—
	Prizes	8	48	40	1	9	6
LATVIA	Requisitioned . . .	1	4	2	—	—	—
NETHERLANDS	On time-charter . . .	133	1,014	870	1	3	2
NORWAY	On time-charter . . .	141	810	515	4	21	13
PANAMANIAN	Requisitioned . . .	1	6	4	—	—	—
	On time-charter . . .	17	112	76	2	9	5
	Purchased	—	—	—	—	—	—
POLAND	On time-charter . . .	18	100	91	—	—	—
SWEDEN	On time-charter . . .	21	123	75	—	—	—
U.S.A.	Purchased	26	226	147	—	—	—
JUGOSLAVIA	On time-charter . . .	23	166	98	—	—	—
TOTAL		590	3,746	2,914	24	163	114

Source: Table compiled by the author from data in the Ministry of War Transport

APPENDIX XVI

Note on the estimate of port capacity of September 1940

As was said on page 108 above, the economist's estimate that 41 million tons could be passed through the ports in the second year of war was one of three alternative hypotheses the other two of which, one higher and one lower, seemed less likely. The estimate took into account the probable effects of the bombing and assumed that 11.7 million tons, or about 28 per cent. of the total imports, would come through London and the other east coast ports. On the first, most pessimistic, hypothesis the economist estimated that the British would import 32.1 million tons, about 24 per cent. through London and the other east coast ports.

In the event (see Chapter XVII below) saturation point was reached when imports were at an annual rate of about 30.5 million tons. This was before the heavy bombing of the west coast ports had started but when only about 17 per cent. of British imports were coming through the east. The crisis in the ports was, however, soon overcome (so that it appears that afterwards imports at a rate higher than this could have been handled had they been forthcoming) partly by increasing the proportion of imports sent to the east coast, which in 1941 were about 27 per cent. of the total, largely by improvements in organisation.

APPENDIX XVII

Net losses and importing-capacity in the second year of war

The net decline in the second year of war in the tonnage under British control was roughly 1.3 million deadweight or 1 million gross tons. (These figures have been arrived at by subtracting the amount of tonnage under British control at 30th September 1941 from the amount of tonnage under British control at 30th September 1940, as given in Appendix VIII, p. 69.) The average net decline throughout the second year of war was thus roughly 650,000 deadweight or 500,000 gross tons. Assuming 1 ton of cargo to 1 gross ton and that the imports would have come from North America with a round-voyage time of 2.5 months, this amount of tonnage would have brought in about 2.4 million tons of imports in a year, or 15 per cent. of the difference between the annual rate of importation before France fell (47 million tons) and the imports received in the second year of war (31.5 million tons).

It will, however, be argued that this figure may misrepresent the position, for much of the gains in this period were in the form of foreign ships coming on time-charter, and some of these ships may previously have been in the cross trades serving needs in the Dominions and Colonies or of the armies in the Middle East, which the British Government could not allow to be neglected; so that if these foreign ships had been withdrawn, British ships would have had to be substituted for them. In such cases as this, or if the ships had been left in the cross trades, the fact that foreign ships came on charter to the British, and increased, on paper, the tonnage under their control, would not mean a real gain.

It is indeed true that net gains or losses could never be precisely measured as long as there were demands on British tonnage from claimants whose needs were being partially met, at any time in the period under discussion, by tonnage that was still trading free, and of whose employment there was no record. This was the case in the United Kingdom trades until the summer of 1940, and in the cross trades until after Pearl Harbour.

In the second year of war there was undoubtedly some increase on paper of foreign shipping that did not represent a real gain. To the best of the writer's knowledge, however, the discrepancy is not large enough to be significant.

APPENDIX XVIII

(i)

The Ministry of Shipping's estimate of importing-capacity presented to the War Cabinet, 1st August 1940

1. (A) The Ministry of Shipping's estimate of imports (other than oil molasses and whale oil) in the first year of war was $46\frac{1}{2}$ million tons.

The actual imports during the ten months to 30th June were 36.35 million tons. It had been anticipated that, with longer daylight and more settled weather, the position would show a steady improvement in the last three or four months, but, owing to the cessation of the European trade and the closing of the Mediterranean and the dislocation caused by the collapse of France, our imports have been practically stationary in this period, the figures being:

March	.	3.86	million tons
April	.	4.21	million tons
May	.	4.18	million tons
June	.	4.05	million tons

2. Since the last weeks of June, the position has deteriorated substantially, owing to the diversion of traffic and convoys to the west and north, the effects of the closing of the Mediterranean, the increase in losses and the mining of our ports. A comparison of the entrances of vessels with cargo to our ports in the two first ten-day periods of this month with the corresponding figures for June is as follows:

<i>10-day periods</i>	<i>Entrances of vessels with cargo to our ports in thousands of net tons</i>
1st-10th June	1,017
11th-20th June	1,257
21st-30th June	984
1st-10th July	791
11th-20th July	681

There are indications of a slight improvement in the last week, but imports, other than imports in tankers, are likely this month to amount to little in excess of 3 million tons. If the corresponding imports for August be assessed at the level of our imports during May, the total for the first year of war becomes about $43\frac{1}{2}$ million tons.

3. The main changes in the situation in the second year of the war compared with the first year are:

- (i) No imports will come from near European sources; they will have largely to be replaced by imports from more distant places.
- (ii) The Channel is closed to large ships and the Channel ports (including Southampton) are not available; ships are being sent to the east coast round the north of Ireland and Scotland.

- (iii) No imports will be available from the Mediterranean which is closed to through shipping so that voyages normally through Suez will be greatly lengthened.
- (iv) The attacks on our shipping and ports by submarine, air and surface craft and mining are intensified, so that losses will be higher and repairs heavier.
- (v) There is an increased demand for tonnage for the Fighting Services. The tonnage allocated to the Fighting Services has recently increased to a substantial extent, the figures at recent dates being as follows:

<i>Non-tanker vessels of 1,600 gross tons and over allocated to the Fighting Services at:</i>	<i>Thousand deadweight tons</i>
31st March	1,893
30th June	2,174
14th July	2,366
28th July	2,441

An average of 2·6 million deadweight tons has been assumed for the second year of the war.

Advantages to be set against these adverse factors are:

- (i) An increased amount of foreign tonnage under British control;
- (ii) As France has ceased hostilities, there will be no need to supply her with tonnage for goods.

4. The total tonnage of the British, Allied and other foreign non-tanker vessels of 1,600 gross tons and over available at the present time for importing to this country or likely to become so in the near future is 16·9 million deadweight tons of shipping. Of this, 13·0 million tons is British, 2·3 million tons is Allied (including German prizes captured by Holland in the Indies) and 1·6 million tons is foreign. Deductions require to be made from this figure to allow for (a) vessels laid up for repairs, degaussing, etc., (b) losses, less new building, and (c) the fact that certain of the foreign vessels included in the 16·9 million tons are not immediately available. These deductions amount to 4·0 million deadweight tons as follows:

- (a) According to recent returns the average of the British and foreign non-tanker vessels of 1,600 gross tons and over, other than those allocated to the Fighting Services, undergoing repairs was about 1·35 million deadweight tons. To this an average addition of 150,000 deadweight tons requires to be made during the next twelve months to allow for vessels of over 10,000 gross tons which are to be degaussed in that period. This gives an average total over the year of 1·5 million deadweight tons.
- (b) The losses from all causes of non-tanker vessels of 1,600 gross tons and over during the seven weeks ended 28th July were at the rate of 5·7 million deadweight tons per annum. It has been assumed

that losses will amount to 0.5 million deadweight tons (or 0.4 million after allowing for new building) during August and will be at the rate of 5.2 million tons per annum during the next year. This rate is some 10 per cent. below the rate experienced in recent weeks. New building has been taken at the rate of 1.1 million gross tons or 1.5 million deadweight tons per annum. Accordingly, the requisite deduction to allow for diminution in carrying capacity as a result of losses from all causes in the period of thirteen weeks ending 31st August 1941 is 2.2 million deadweight tons, as follows:

	<i>Million deadweight tons</i>
Losses in August 1940	0.5
Less new building	0.1
	— 0.4
Losses in next year	5.2
Less new building	1.5
	— 3.7
One half to allow for losses occurring on average in the middle of the year	1.8
	— 2.2
	—

- (c) The allowance for the loss of effective tonnage due to the fact that certain foreign vessels are not immediately available has been assumed at 0.3 million deadweight tons.

The average available tonnage during the year ending 31st August 1941 is thus 12.9 million deadweight tons of shipping, as follows:

Available tonnage (prior to adjustment)	16.9
(a) Repairs	1.5
(b) Losses	2.2
(c) Delays due to vessels not being immediately available	0.3
	— 4.0
	— 12.9
	—

5. The tonnage ordinarily employed on coasting and short sea routes cannot in general be used for bringing imports except from Eire, but in assessing the available tonnage a suitable allowance has been made for certain vessels licensed for coasting and short sea work which have recently been transferred to ocean-going service.

6. On the basis of such information as is available, it is estimated that the 12.9 million deadweight tons of shipping referred to above would be

able to import 42 million tons of commodities, provided that we retain sufficient use of the ports in the United Kingdom to enable this amount of imports to be handled, that neither they nor the ports of loading become unduly congested and further that there will be no loss of importing-capacity by foreign vessels owing to crew delays and other risks in excess of those run with tonnage completely under our control. A reduction of 10 per cent. or more upon the figure of 42 million tons might well have to be envisaged.

7. In making estimates of the amount of imports that the tonnage available can carry, it has been necessary to allow for the time likely to be taken in bringing goods from the various sources from which they come. These will be longer than the actual time in the first year of the war for the reasons indicated in 3 above.

8. In view of the rapidly changing conditions the foregoing estimate should be regarded as provisional and subject to a further review.'

(ii)

Note on the problems involved in comparing the estimate of importing-capacity with the actual position

The form in which the returns for ocean-going dry-cargo ships were kept make an exact comparison impossible. Besides the tonnage under repair and employed in coasting work round the coasts of the British Isles, the returns showed the amount of tonnage on the last day of each month (*a*) engaged in importing work, (*b*) allocated to the Fighting Services and (*c*) employed in the cross trades and in local trading abroad. The tonnage at (*a*), however, included three categories of ships: (1) ships exclusively employed in importing into the United Kingdom, (2) ships that, having carried military cargo on the outward voyages were, at the date in question, coming home, or moving into position to come home, with imports, (3) ships returning to the United Kingdom with imports after voyages in the cross trades. Similarly the tonnage at (*b*) consisted (1) of ships allocated to the Fighting Services on a permanent or semi-permanent basis and (2) of ships carrying military cargo on one leg of a round voyage.

For the purposes of the comparison, therefore, no use can be made of the figures at (*a*) and (*b*) and the writer was reduced to collecting other figures as best might be from stray scraps of information.

A further difficulty arose from the lack of any figures, over the months August to December 1940, of losses among foreign ships on time-charter. This accounts for the method adopted in the following table to compare the actual and estimated amount of the foreign tonnage in British service.

It will be seen from the following table that the available physical resources were virtually the same as those forecast in the estimate, and that the large error must therefore be attributed to a decline in carrying-capacity, though for reasons that it would be impossible to evaluate in detail.

(iii)

Comparison between the Ministry of Shipping's estimate of resources available for importing-work in the second year of war (September 1940 to August 1941) and the actual position

	<i>Estimate</i>	<i>Actual position Average throughout the year in million deadweight tons</i>	<i>Error</i>
British and British-controlled tonnage under repair	1.5	2.5 ⁴	-1.0
Foreign ships on time-charter	1.7 ¹	3.7	+2.0
British and British-controlled tonnage allocated to Fighting Services	2.6	3.3 ⁵	-0.7
[British and British-controlled tonnage in the cross trades	3.1] ²	3.1	—
Losses, minus new building, British flag ships	1.5 ³	1.9	-0.4
			—
			-0.1
			—

¹ This figure has been arrived at by assuming that losses among the Allied ships on time-charter referred to in paragraph 4 and 4 (c) of the estimate (i.e. 2 million deadweight tons) were in proportion to the total loss.

² Since the cross trades are not mentioned in the estimate, the writer has assumed that no change was expected. The above figure is that given in the Ministry of Shipping's returns for 31st July 1940.

³ Calculated as in ¹ above.

⁴ This figure, which appears in the returns kept by the Ministry of War Transport, must be on the high side since it includes tonnage allocated to the Services and under repair which is excluded from the estimate. In the survey referred to in footnote 5 below the figure given is 'over 2 million deadweight tons'.

⁵ The figure given in a survey by the Ministry of War Transport.

CHAPTER VI

THE BATTLE OF THE PORTS

(i)

The Ships with Cargo

ON THE 7th September 1940 the Germans launched their first heavy attack on the London docks and many ships and commodities went up in flames. On that night and the two following nights 21,000 gross tons of shipping were sunk and 48,000 damaged, and it was decided to move all ocean-going merchant ships out of the Port of London. Though, however, the bombing was the final reason for this decision, it was not the only one, nor the most cogent; the Port of London remained largely closed for several years after the bombing had ended; it was the E-boats and mines in the North Sea, and the air attack on ships sailing there, making the approaches to all the east coast ports extremely dangerous for ocean-going ships, that brought on the port and transit system of this country its long-expected ordeal. On the 10th September the edict went forth¹ that only ships of 6,500 gross tons and under might enter the Humber and the ports north of it, and that no ships larger than a coaster might enter any port to the south. The diversion thus started on the grand scale and port operations on the west coast were thrown into a disorder which was immediately made worse by other revolutions in the nation's economy which were proceeding at the same time.

After the fall of France the Ministry of Supply found itself in need of vastly more steel than is normally imported and in need of it immediately; for most of the iron ore (more bulky than the steel it is used to manufacture) which the United Kingdom had previously imported from Europe was no longer available, and could only be replaced, when it could be replaced at all, from much farther off;² and meanwhile the demands of war production were rising and stocks were very low. But the steel had to come from the United States, which in peace had only provided relatively small amounts,³ and it not only had to come across the North Atlantic in circumstances

¹ Admittedly it had to be qualified very soon. See p. 135 below.

² See J. Hurstfield, *op. cit.*, p. 159.

³ *Ibid.*, p. 152.

which exposed the ships that carried it to great dangers;¹ it also came in lengths which could not be fitted into British railway wagons. Because of the equipment lost at Dunkirk the British needed immediately as many weapons, however old, as the Americans could supply, and they did indeed send, among other things, over half a million rifles, 22,000 machine guns, 55,000 tommy guns, and 895 75-mm guns, together with the necessary quantities of ammunition.² The Ministry's organisation in New York, which had been set up at the beginning of the war to provide for the needs of British ships in the United States, and to ensure that the cargoes they needed reached them at the right times and places, had suddenly to arrange for the shipment of all this war material as well as for the shipment of the ordinary commercial cargoes. But in the summer of 1940 it was only in the early stages of its career with far too few people to cope with the burden of work thrust upon them. There was no time to keep proper records, so that the Government departments for whom the supplies were destined were often not informed, and liners with 10,000 or so tons of assorted cargoes, often of the most intractable kind, sometimes arrived without the papers that specified their contents and indeed without due notice in advance, so that discharge could not proceed upon any proper plans. At the same time the shipments of coal coastwise from the north-east ports to London and the south were greatly reduced because of the perils of the voyage—the coasters with cargoes for the south had to sail round 'Hell's corner' off the coast of Kent where they were within reach of the guns on the French coast as well as of all the other weapons with which the Germans molested shipping in this area. In consequence the very large quantities of coal that the coasters normally carried³ fell to a considerable extent on to the railways at the same time as many other misfortunes—the bombs, the blackout, and the need to transport to the east and south cargoes that normally would have gone there but were now arriving in the west. These multifarious difficulties, many of them occurring in places remote from the west coast, all converged in the west coast ports.

In the Ministry of Transport the word later used to describe the troubles that now beset these ports was 'confusion', but the people on the spot would have used a harsher word, for everything went wrong at once in every direction, and in so bewildering a fashion that it was impossible to see which of the alarming symptoms was cause and which effect, or to decide which were the best remedies to apply.

¹ See Chapter VII, p. 156.

² See *History of the Second World War, United Kingdom Civil Series*, M. M. Postan, *British War Production*, p. 117.

³ Measured in terms of tonnage loaded, the coasters only carried about 2½ million tons a month as compared with 20 to 25 millions carried by the railways. But if the sum is worked out in ton-miles it emerges that the coasters carried between a half and a third as much coal as did the railways.

From October onwards complaints poured into the Ministry of Transport from every possible source—from Members of Parliament, from the press, from the Port Emergency Committees, from official committees of enquiry and, unofficially, from private individuals who felt inspired to propound their own solutions. It was complained on some occasions that labour was short, and on many others that it could not be got to work. There were numerous complaints about the shortage of heavy lift cranes. Some ships came in carrying in their 'tween decks army lorries which, since they could not be got out without a crane of a type which was not easily available, held up for days or weeks the discharge of the rest of the cargo; others carried steel ingots in the lower holds which their own gear could not handle and which were stowed in such a way that, again, work had to be held up until they could be removed. In order to cope with this sort of situation ships might be moved as many as ten times from berth to berth before they could be cleared.

But yet, even so, the ship could usually 'beat the quay'; it was easier to get the cargoes out than to deal with them afterwards. Private consignees could not be identified or could not secure transport, and their property lay strewn about the transit sheds; Government departments, even when informed in advance of the consignments belonging to them, could not always decide in time where they wished them sent; no one could decide what to do with a number of the cargoes diverted from France in the previous June. Cargoes of steel could not be removed because of the shortage of bolster wagons—the only type of wagon that could carry them. Steel, therefore, piled up on the quays and prevented the discharge of incoming ships. When ordinary wagons were adapted to carry steel there were not enough of them for other purposes—yet large numbers were observed to be standing under load outside coal pits and factories; the methods adopted to control the supply of road vehicles broke down; not merely the Ministries of Food and Supply but the representatives of the various Controls within the Ministry of Supply were all competing against each other for transport and storage and no one had the power to settle their disputes.

It is small wonder that in these circumstances, even though the west coast was only being asked to handle a volume of imports barely larger than it would have handled in a peak year in peace, and though no west coast port was being heavily bombed, the delays to ships were such that, while the crisis lasted, they caused a loss of imports to the United Kingdom that must have been at a rate of at least $2\frac{1}{2}$ to 3 million tons a year (or in the neighbourhood of 10 per cent. of total imports in 1941) and may have been at a rate that was even higher.¹

¹ See Appendix XIX, p. 146.

No one knew exactly how heavy the delays were for no statistics were kept at this time of the number of days on an average that ships spent in port; nevertheless it was plain to everyone that the state of affairs was very serious and likely to get worse. As the officials in the Ministry of Transport wrote on the 7th December: 'The original conception of the Port Emergency Committees . . . has in practice broken down'. The officials found themselves driven in consequence, as they said, to a 'modest effort at introspection', from which it emerged that they were perpetually at a disadvantage because they had not 'any close knowledge either of dock-working or of the commercial practice in the handling of goods', and because they had over-estimated the amount of control that could be exercised from the centre. It was essential, they pointed out, 'to obtain settlement locally of a multitude of small difficulties which at present were constantly being referred to London by telegram or letter'; for the difficulties could not be settled in London. By the time the news of them had arrived, and an answer had been sent and received, the proposed solutions might no longer be appropriate.

It was easy to state these problems but hard to bring the interested parties to agree on a cure. All were aware that something must be done. Many were unwilling, for a number of apparently cogent reasons, to part with the independence which in fact had largely caused the trouble. The Port and Transit Standing Committee, which consisted of officials from all the departments concerned with the use and provision of port and transit facilities, was fertile in suggestions but not in conclusions. It was suggested that responsibility for the ports should be transferred to a Minister specially appointed for the purpose. This idea was turned down on the grounds that there would be 'few advantages and many disadvantages in substituting a completely new machine for that already in existence'. Various schemes were propounded for strengthening the authority of the Port Emergency Committees, but this could not be done without curtailing the authority of the Government departments represented in the ports, and these departments were unwilling to subordinate their representatives to a person endowed with dictatorial powers. 'The almost unanimous feeling of the Committee', the port authorities complained, was that there should be no interference 'with existing departmental policies and arrangements.'

As the conditions in the ports grew worse, and still no practicable remedies could be devised, the problem progressed upwards through the official hierarchy. On the 19th December 1940 the Economic Policy Committee appointed a ministerial sub-committee 'to submit, not later than 2nd January 1941, a scheme to secure the most rapid clearance possible through the ports of goods . . . to indicate what additional powers are necessary for this purpose, and to

suggest under what ministerial authority they should be exercised'. The committee held its first meeting on 23rd December. A few days later the Prime Minister intervened. 'It is said', he wrote, 'that two-fifths of the decline in the fertility of our shipping is due to the loss of time in turning round ships in British ports. Now that we are confined so largely to the Mersey and the Clyde, and must expect increasingly severe attacks on them, it would seem that this problem constitutes the most dangerous part of our whole front. Would you kindly give me a note on:

- A. The facts.
- B. What you are doing.
- C. How you can be helped.'

This was on the 27th December. On the 30th the Sub-Committee on Port Clearance decided—without the concurrence of the Minister of Food who was not present at the meeting and who had long opposed the idea—to appoint 'dictators' to the chief west coast port areas. They were to be styled Regional Port Directors. In a week's time the first two had been chosen—one for the Mersey and one for the Clyde—and the letters of appointment, setting out their powers, despatched to them. Exactly one month later a third was appointed to the Bristol Channel.

On the 30th December the Committee on Port Clearance, in advocating the appointment of Regional Port Directors, stated that it would be their function to assume responsibility for the day-to-day operation of the ports in their areas and to co-ordinate all the activities involved in working them. In the course, however, of the debates in the committee the Minister of Labour succeeded in forcing through the idea that the Port Directors should also become responsible for dock labour. The Minister of Transport protested that even without this additional burden they would have a full-time job. Their business, he asserted, was to see to it that other people performed their duties adequately, not to take on executive duties themselves. The Minister of Labour, however, could not be brought to accept this point of view. Port labour, it was generally agreed at this time, must be decasualised; but in that case the whole structure of the industry would have to be altered and the labour operated on a new basis. Here was an immense task, but the Minister of Labour insisted that no one except the Regional Port Directors could undertake it. The Ministry of Labour, he pointed out, was a supplier of labour; it could not set up as an employer. But if the Ministry of Labour were not to employ the dockers then someone else must and 'there could not be two managers in the ports'.

Of all the Ministers who sat on the Port Clearance Committee the Minister of Labour was the only one with any personal experience of dock labour, or, for that matter, of any aspect of port working.

His arguments could not, at the time, be refuted. The first two directors, appointed respectively to the Mersey and the Clyde were therefore made the legal employers of the labour in their areas, though when directors were appointed later to other areas, other arrangements were made.¹

Since the beginning of the war there had been a more or less constant state of friction between dock labour and employers, which the crisis in the ports had intensified. Though many of the observers who had reported on conditions in the ports had blamed labour to a large extent for the delays, it seems clear that this was unjust. Labour cannot be expected to work properly when the management cannot give adequate directions; as the Minister of Labour said: 'There is no doubt that the congestion of the quays has had a bad psychological effect on the dockers. It is difficult to get men to appreciate the urgency of turning ships round quickly when they see, scattered over the docks, material they had unloaded days, weeks, or even in some cases months ago'. In the Minister of Labour's opinion the maximum rate of turn-round could only be achieved if, first, the causes of confusion in the ports were removed, secondly, the men were provided with the necessary incentives to work, including the necessary economic security, and, finally, if the task of allocating and disciplining labour were undertaken by an authority with no financial interest in the results. One person on a committee with a clear idea of what he wants, while the others are undecided, will usually win his point, and the Minister of Labour on this occasion won his.

The winning of it, however, had there been the time to consider its implications, must have created many difficulties for the Ministry of Transport when it came to select the Regional Port Directors. To operate for the first time a scheme involving many thousands of men notorious for their intractability; to impose on them a degree of discipline to which they are unaccustomed and may be unwilling to submit; to make use of the services of some of the former employers on terms and, if necessary, to dispense with those of others—all this must require a very high degree of tact, judgment, skill and firmness, and could hardly be achieved by persons with no previous knowledge of the industry. But where was one to find a person of the right type, let alone several persons?

Since the ship-owners as interested parties were ruled out, the obvious place to look, it might seem, would have been among the existing port managers. In fact, however, this was not a very fruitful field, for in peace the various bodies which administered the ports did not in general themselves directly engage in port

¹ In the other ports, including the Bristol Channel ports, the control of dock labour was vested after September 1941 in the National Dock Labour Corporation—a body representing both employers and labour.

operations. With one or two exceptions, of which the Port of London Authority was the chief, these bodies were in the main merely toll-collecting institutions which provided certain of the facilities, but not the labour, for a fee. There was thus no body of trained port administrators on whom to draw in an emergency.

The problem of whom to choose was therefore a very difficult one, even before the labour complication was added to it. Whenever, in fact, the need for a single source of authority in the ports had been expressed the departments who were the chief users of port facilities, and who were unwilling to surrender their powers, had pointed out that no suitable person would ever be discovered. This was still the opinion when the Committee on Port Clearance held its first meeting. As the Minister of Food put it: 'he was not in favour of a single controller because of the impossibility of finding anyone with the necessary gifts'. On second thoughts, however, it appeared that though no one person could be expected to possess the necessary combination of qualities three in conjunction might. The solution, it seemed, was not a dictator in the ports but a triumvirate. It is, however, well known that the members of triumvirates are apt to disagree and this idea had therefore to be abandoned. The final solution was a hurried compromise, based on the knowledge that it was no use looking for perfection, but necessary to do something and to do it immediately. The essential was to have a single overriding authority in the ports; the essential attributes to be required of the persons appointed were, it seemed, independence of local interests and wide commercial experience of some sort. It thus came about that of the three Regional Port Directors appointed in the spring of 1941 to the vital importing areas, two—those for the Mersey and the Bristol Channel—had no previous knowledge of ports, shipping or industrial relations. Only the third—the Assistant General Manager of the Port of London, who was appointed first to the Clyde, shortly afterwards for the whole of Scotland, and in 1942 to the Mersey, when the existing arrangements there had broken down—combined by a piece of good fortune all the qualifications which the Committee on Port Clearance had to start with listed as essential.

To attempt to determine whether or not the Regional Port Directors can legitimately be termed dictators would be to argue over words. The distinguishing feature of their position was that they were given virtually a free hand to override the various local authorities, and the various representatives of Government departments in the ports, including the representatives of the Service departments, who had for so long been a thorn in the flesh of the Port Emergency Committees. The Regional Port Directors were not incorporated into the Civil Service hierarchy. As one of them put

it in the course of a dispute with Headquarters: 'When I was appointed to this post I was assured that . . . I did not, in accepting the appointment, become a Civil Servant in the sense of submerging my personality and initiative in strict conformity with Civil Service practice'. The Regional Port Directors were responsible only to the Minister of Transport. The Minister bestowed on them the right to exercise such authority as he himself possessed in port matters, subject only to one or two provisos which constituted no limitation on the activities of a director competent to fulfil his task.

The Regional Port Directors were thus empowered to manipulate as they saw fit all the complicated machinery of the ports in their areas and in consequence, where necessary, to force individuals or Government departments to incur expenses which they would wish to avoid and might otherwise have succeeded in avoiding. When ships had to be worked overtime, for instance, someone had to pay. It rested with the Regional Port Director in the last resort to determine whether overtime was necessary or not. To move goods by coaster was for a long time much more expensive than to move them by road or rail; in the ordinary course of things the Regional Port Director was responsible in the last resort for deciding whether, in any particular instance, the general transport position demanded that coasters should be used. To the powers of this sort, as has been said, was added later, in the cases of the Regional Port Directors in the Mersey and the Clyde, the power to control dock labour.

To possess powers, however, is one thing, and to use them is another. Dictators, whether on the small or the grand scale, can never escape from the pressure of forces that, in fact though not in law, must limit their capacity to do as they choose. Obstruction on the part of subordinates, rivalries between different groups that demand compromises for the sake of peace; the intrigues of people dispossessed of their former rights; the contempt of the expert for the amateur—the Regional Port Directors, like other dictators, had at the beginning to contend with some or all of these difficulties. How they dealt with them depended on their personalities and their qualifications for their tasks. Executive powers as unfettered as theirs were, apparently, granted to no other civilians in the country. But, particularly in those areas where the control of labour was also one of their functions, they had, to start with, to cope with forces capable of breaking any dictator except the strongest, whatever his legal powers. Of the two Regional Port Directors appointed originally to the Mersey and the Clyde these forces did in fact break one; and the other, who had by that time settled the problems of his own area, had to be transferred to his neighbour's area to solve the difficulties there.

The Regional Port Director for the Clyde entered upon his duties in January 1941. He found a state of affairs worse even than that in the other west coast port areas, for in the existing confusion it had proved impossible to distribute the ships diverted from the east coast in equitable proportions, and the Clyde had received a much heavier burden than either the Mersey or the Bristol Channel.¹ The port of Glasgow, the only substantial port in the Clyde, was singularly ill equipped to deal with this situation. In peace it served for the greater part only the city and the surrounding districts and its rail connections with the south and east were bad; it was not in the main a terminal port and the liners that called there normally discharged only a part of their cargoes, but after the diversion started they proceeded to discharge the whole, so that sheds designed for 500 to 2,000 tons of goods were suddenly required to accommodate from 7,000 to 8,000; at the same time, as everywhere else, there was an acute shortage of storage space, and these physical difficulties were exacerbated by the many competing, irreconcilable demands on transport and storage, and by the uncoordinated actions of a large number of separate firms of road hauliers; the labour problems were more intractable than they were elsewhere. The Regional Port Director had to solve all these conundrums.

Though an Englishman, he was not new to the district. In the previous summer he had been called in to set up the emergency port of which there had been so much inconclusive talk in the autumn of 1939, and which it was finally decided to establish in the Clyde estuary. It had at first been intended to put the Port Emergency Committee in Greenock in charge of the affair, but as the threat to the ports loomed larger the respect for vested interests diminished. The Greenock committee, it emerged, had no experience of discharging ships into barges and coasters, an operation which is indeed extensively practised only in the Port of London. It was therefore decided to call in an expert. Within a matter of weeks he had collected the necessary labour, barges and coasters—of which there were now many more than before France fell; the number of ships that could be discharged was determined, for the time being, by the number of dockers that could be billeted in Greenock and Gourock; the first ship arrived in the port on the 12th September; by the end of the month five were working there.

The emergency port thus started in a small way and in fact the scope of its operations was never increased, for the supply of coasters would not have permitted this, augmented though the coasting fleet was by foreign ships, and by British ships withdrawn from the French coal trade and other short-sea services. Five ships must indeed seem

¹ See Appendix XX, p. 147.

very few, nevertheless they relieved the pressure on the west coast ports to a much larger extent than their numbers suggest,¹ and the difficult task of discharging general cargo overside—for this was the type of cargo that, contrary to the expectations, it proved necessary to handle—proceeded with an efficiency and despatch that no one previously had imagined to be possible.² The new Regional Port Director was thus able to leave behind him a flourishing undertaking which others could operate in accordance with established principles while he directed his attention to the major task now assigned him in the struggle to save the west coast ports from disaster.

He and his colleagues in the other ports were given all the help that it was immediately within the power of the Government to provide, and it was easier to provide help now than earlier, for the large number of causes that determined the rate at which ships could be turned round in the west—particularly the supply and disposition of road vehicles, railway wagons, coasting ships and storage space—could for the first time begin to be seen in their proper relationships. Statistics were ordered to be got out so that in due course it should be possible to observe how all the various operations were proceeding, and to make the necessary adjustments. Some adjustments could be made immediately. It was judged, for example, that the endeavour to preserve ships at the expense of carrying-capacity had gone too far, and the Admiralty's ban on sending deep-sea ships to the east coast was lifted in the case of ships of under 8,500 gross tons. Thus the pressure on the west coast ports was relieved³ though at a price, which was paid in terms of greater risks to the ocean-going tramps that had to make the voyage northabout to London and the other east coast ports, and of enormous difficulties in the way

¹ The purpose of the port was to relieve the pressure on the berths in the west coast, but in the winter of 1940-41 berths were short because ships were spending much longer in port than normal; and this was happening largely because road and rail transport from the docks was insufficient. From the beginning, therefore, it was obvious that the ships to put into the emergency port were those whose cargoes—or passengers—presented the inland transport authorities with peculiar difficulties. Which ships these were emerged in the natural course of events; they were the large troop-carriers—and particularly the two 'Queens'—who came regularly to embark and disembark their passengers there, and the larger cargo liners loaded to 'mixed destinations'—i.e. liners which it was forbidden or undesirable to send to the east coast, but which carried cargo required in the east as well as cargo required in the west. By discharging these ships overside at the Tail of the Bank it was possible to send such cargoes as jute for Dundee, for example, or tea for London by coaster northabout to the east coast ports.

² When in April 1941 the average rate of discharge of general cargo other than in the emergency port was only 560 tons per ship-working day, at the Tail of the Bank it was 760. This achievement is to be explained not only by the extreme efficiency of the management, but because when a ship is worked in an anchorage she can be discharged to coasters and barges all round her. In the established ports of this country, apart from London, she can in general be discharged only to the quay.

³ As a result the monthly average of ships in the foreign trade arriving with cargo in the east and south coast ports, which had been only 418,700 net tons, or roughly 17.5 per cent. of total arrivals, in the months September to December 1940, rose to 594,000 net tons, or roughly 27 per cent. of the total, during 1941.

of loading the ships. For only certain types,¹ as well as certain sizes of ships, and only certain kinds of cargo,² were allowed to go to the east coast, and to arrange for the proper combinations was a puzzle of such complexity that the Ministry's organisation in New York, to whom the task of solving it mainly fell, never, it afterwards maintained, faced another like it in the course of its seven years of arduous life.³ The congestion on the railways—caused to a large extent by the endeavour to supply London by rail, in the period of the air-raids, with huge quantities of coal which could not get through—was tackled in many ways, among others by transporting more coal by sea. Some administrative difficulties—those, for example, that arose from the competing claims of the purchasing departments on transport—were simple to solve once the need was clear; others had to wait till the amalgamation of the Ministries of Shipping and Transport in May 1941 and, even after that, for the accumulation of more knowledge and the evolution of new techniques.

In the meantime, while policy on a national scale was being evolved, the Regional Port Directors had to make do where it was lacking as best they could. They were supposed to 'co-ordinate' the various activities in their areas, but this word, like the 'confusion' in the ports for which it was intended to prescribe the remedy, was merely one of those abstractions by which the human mind naturally seeks to explain facts so numerous and complicated as to defy description. It is not possible to co-ordinate chaos as the Regional Port Director in the Clyde immediately discovered. He had to set up the whole of the organisation needed to run his ports and he proceeded to do so. He devised a scheme in which he laid down the precise parts which all the authorities concerned—the port authorities, the ship-owners, the master stevedores and master porters, the road hauliers, the representatives of the railways and of the purchasing departments—were to play; he devised his own emergency storage arrangements, commandeering premises and storing goods under tarpaulins in the open; he increased, in effect, the supply of transit sheds by arrangements for working overtime and by simplifying the procedure of sorting to marks; he set up his own cartage scheme—and the officials in the Ministry of Transport, when they received a copy of it, wrote in the margin 'grand'—he finally summarised all these proceedings in a single document, of ten pages, entitled 'Traffic arrangements at the Glasgow Docks',

¹ No ships, for example, with diesel engines, which were peculiarly liable to detonate acoustic mines, were allowed off the east coast.

² Aeroplanes and other cargoes particularly valuable to the war-effort were not allowed to go to the east coast. Moreover, in order to save railway hauls it was desirable that cargoes required in the west should not be delivered in the east and vice versa.

³ On the Ministry's organisation in New York see Chapter X, p. 253, and Chapter XX, pp. 441 and 442.

which the Ministry of Transport then forwarded to the other ports to serve as a model.¹ Meanwhile he had been having to undertake the reorganisation of dock labour, which presented in the Clyde difficulties far more acute than any that existed in the other port areas. In 1931, the dockers in Glasgow had broken away from the Transport and General Workers Union which, in the period under discussion, supported the decasualisation scheme, and had set up a union of their own. Throughout the summer and autumn of 1940 they had succeeded, in opposition to the advice of their union officials, in frustrating the attempt to introduce compulsory registration which, in June 1940, the Government had successfully introduced elsewhere. The Regional Port Director was thus faced with a collection of ill-organised and ill-disciplined men, in the main honest and hard-working as the event ultimately showed, but at this time suspicious of change and of the intentions of the Government, of the employers and of their own leaders. Their leaders were in fact afraid to lead them and were anxious to lay on other shoulders the responsibility for any trouble which the attempt to introduce the decasualisation scheme might cause. At the same time there were, as the Minister of Labour had foretold earlier that there would be, employers to whose interest it was that the scheme should not go through. On the Regional Port Director alone rested the responsibility for amalgamating into an effective team these various combustible elements which at any moment, it seemed, might explode into a conflagration. This responsibility, too, he discharged successfully.²

By the end of March he was able to report that all his schemes were working in an orderly way and that no ships were being delayed;³ and at about the same time, it would seem, there was a return to order in the other west coast ports. For in these ports the burdens had never been as great nor the organisation as inadequate as in the Clyde; so that a single source of authority, combined with the remedies devised at the centre, as well as those devised locally in Glasgow which served as a guide elsewhere, were able to dispose of the crisis, though there were to be labour troubles in the Mersey later.

¹ On the 12th August 1943 it was stated that these arrangements, in all their details, 'have stood the acid test'.

² The following tribute was paid to him by the Minister of Transport on the 18th January 1941. 'I am so delighted at the successful issue of the long drawn-out negotiations with regard to the dockers in Glasgow. It has all been tremendously difficult and the burden has fallen on your shoulders, which are indeed broad. I would like, however, to let you know how much we appreciate the wonderful work that you have done up there. Your tact and human understanding have been the reason, I believe, why the men eventually fell in with the scheme, as they realised that they were getting a fair deal with you in charge. It has been a great victory for you and we are very much in your debt.'

³ I.e. presumably that there were no periods of idleness, not that turn-round was as fast as it might have been.

One or two months, in fact, of intensive effort, applied both locally and at the centre, had been enough to dispel, without any increase in facilities, the danger that the cause of the free peoples would come to disaster in this country's ports. It had indeed been dispelled in the nick of time before a state of congestion, properly so called, had been reached; for though port operations had proceeded much more slowly than is normal, they had never proceeded slowly enough to produce the queues of ships waiting for berths that had been seen in the United Kingdom during the first World War, and were now and again to be seen in the course of the second in ports abroad under British control, although they had less significance there than they would have had at home, because a much larger volume of shipping used the ports in this country than used any other group of ports in the world except in the United States. In the United Kingdom the danger of port congestion never re-emerged after the spring of 1941; for though there was then still room for improvement—the number of days spent on an average by ships in port in fact diminished by 4 per cent. in the course of the rest of the year¹—and though there were great difficulties later at the time of the big military operations, when large quantities of war material had to be moved in and out, the situation never again got out of control. That goal of the planners before the war, and in the summer of 1940—a measurement of port capacity—was reached at the time of the North African campaign when it next seemed necessary, by estimating, in effect, in relation to each port area: 'this is what we are now moving in and out and, given the necessary labour and appliances, we can (or cannot) move so much more'; for by this time the quantities and types of cargo required, and where they were to go to or come from, and the capacity of the roads, railways and coasting ships to deliver them, were all approximately known; and appliances could be ordered and supplies of labour budgeted for with a precise knowledge of where and for what purposes they would be needed.

It was fortunate that the crisis in the ports in the winter of 1940 to 1941 was tackled when it was, for it had no sooner been disposed of than the heavy bombing started. Until the end of 1940 the Germans had mainly concentrated their attacks on London. Night after night they bombed the London docks from which, after the unhappy experience of the 7th to 9th September, nearly all the ships had been removed. They left the Clyde and the Bristol Channel largely in peace, and even the raids on Liverpool, though frequent at this time, were in the main not heavy. The west coast ports do not seem to have become a serious objective until about January or February 1941. The heaviest raids did not come till May.

¹ See Appendix XIX, p. 146.

It is clear that the raids might have reduced British imports and importing-capacity by several different means, many or even all of which might have operated at the same time. They might have sunk or damaged ships in port, thereby, among other things, reducing the amount of available tonnage; they might have destroyed cargoes afloat or on the quays and in warehouses, thereby in effect reducing the volume of imports; they might have destroyed processing plant, thereby nullifying the value of certain cargoes, particularly imported wheat, which must be milled before it can be consumed; they might have caused delays to ships, and thereby reduced carrying-capacity, in a hundred and one different ways—for example, by demoralising the labour; by obstructing the traffic through the sinking of ships; by disorganising the transport in the port and outside it, and, at the worst, by creating a general state of chaos.

To judge by the experience of the French ports used by the British forces during the 1914-18 war it was the last of these dangers—the delays to ships—that was likely to be the most serious, principally for two reasons; for it had emerged in that war that military cargo could not be removed from the quays if the transport behind the port broke down, and even if this did not happen it could not be removed until it had been sorted; and it could not be sorted while a heavy raid was in progress. For one or other of these reasons it piled up on the quays and incoming ships could therefore not discharge.¹

But, as has been shown, many other things besides bombs can produce this state of affairs, and whatever its causes the remedies need to be of much the same order. To the people who had struggled with the difficulties in France, one of the necessary remedies had seemed to be inland sorting depots. This idea, which had been propounded but never seriously listened to in the nineteen-thirties, came up again in the autumn of 1940, but it bristled with so many difficulties,² and led to so many arguments, that when, in the end, the Prime Minister intervened, and ordered the depots to be built, there was not time to complete even the first until the beginning of 1942, eight months after the end of the bombing.³ While the raids lasted the only possible means of averting congestion on the quays, and the resulting delays, were those that had already been devised at the time of the crisis in the early months of 1941.

The raids did indeed cause enormous havoc. In the first week of May the Germans bombed Liverpool heavily on eight successive nights; in the first ten days of May they bombed Hull heavily at least three times, and they combined these raids with raids on a

¹ See A. M. Henniker, *Transportation Problems on the Western Front*.

² See Appendix XXI, p. 148.

³ *Ibid.*

number of minor ports. At one moment in Liverpool, out of some 130 berths normally available for deep-sea ships, only 12 could be used; the railways serving the docks were mainly out of action because of debris on the lines; the telephone system had completely broken down; passenger transport in the city was in a state of chaos. In this one week 3,966 people were killed and 3,812 seriously injured; 10,000 dwellings were completely destroyed and 184,000 damaged.¹

There were, however, no more raids on Liverpool after the 8th May, the bombing of the other west coast ports also came to an end at about the same time, and, as it later emerged, it was principally the civilians who had suffered, not the war-effort. A certain amount of shipping was sunk or damaged, but it was infinitesimal compared with the losses at sea, and not enough materially to reduce imports in 1941; some commodities were destroyed but, in relation to the total volume of imports, the quantities, with the exception of timber, were only very small,² even though at this time a high proportion of the United Kingdom's stocks was still being held in the ports for lack of storage space elsewhere. There was some loss of milling-capacity which at one time seemed likely to be serious, but it proved only a temporary, though an acute, inconvenience.

As for the delays to ships: though they had been the most serious menace they turned out to have been the smallest of the misfortunes. This might not have been so if the German strategy had been different—if they had concentrated their attacks on the transport system that maintained the ports instead of on the ports themselves, or if their bombing had been precise enough to hit the key points, or if they had had sufficient resources to bomb all the major ports continuously and simultaneously. As things were, according to a survey conducted by the Ministry of Home Security,³ the delays to ships in Liverpool were so small that, at a rough estimate, they can only have caused a loss of about 12,000 tons of imports, when total imports in 1941 were 30·8 million tons, and in the other ports attacked it seems that they must have been much smaller still. Over the country as a whole, in other words, the May raids, which were the heaviest of the war, delayed ships to an extent so small as to be virtually negligible.

This may seem a very extraordinary fact that at first sight must appear repugnant to common sense, besides being contrary to what most people believed at the time. It is, of course, obvious that a port that is being bombed, or that is having to work in the blackout and

¹ *Port at War, being the Story of the Port of Liverpool, its Ordeals and Achievements, during the World War, 1939-45.* Mersey Docks and Harbour Board, 1946.

² See Appendix XXII, p. 151, and also R. J. Hammond, *op. cit.*, Table IX, p. 397.

³ See Appendix XXII.

with frequent alerts, must be less efficient than it would have been, other things being equal, had these disturbances been absent. The one safe prediction, however, about what will happen in a port in war is that in any comparisons between different periods other things never will be equal. Human ingenuity in a crisis can be very fertile. Raids or the fear of them may produce such an improvement in the general organisation of the port that, if one compares the achievements before the bombing with those which follow it, one may find an increase and not a decline in the speed with which ships are turned round. This is, in fact, precisely what one does find. The statistics of times spent in port did not start before April 1941. But the time spent in port in April was much less than it had been in the previous winter. The statistics themselves show that it was less in May than in April. In other words, what British ingenuity contrived between September 1940 and May 1941—in spite of some fumbling and an unduly late start—was a system designed to eliminate the causes of delays to ships in port that was, providentially, in operation before the most severe test came.

The achievement was due, however, not only to all the measures, already described, that were taken to improve the rate at which ships were discharged and loaded, but also to the part played by the Diversion Room—that body that met at 10 o'clock every morning to determine the ports to which incoming ships should be sent. The Diversion Room had been impotent to prevent the 'confusion'. Though things must have been much worse if it had not existed, once saturation point had been reached in every port the rate of turn-round could not be increased by diverting ships from one port to another. Now, however, the Diversion Room came into its own as the mechanism that made the final adjustments in a system whose other parts were functioning properly. It is clear that while the raids were in progress, and while the debris was being cleared up and the damage set to rights, Liverpool could not possibly have managed to discharge as many ships as it would have discharged normally. In fact, between the 5th and the 15th May, thirteen ships, with a total tonnage of 83,592 gross tons, which had been ordered to discharge there were sent elsewhere, and others must certainly have been diverted later. That the delays were so small in Liverpool, in fact, is partly to be explained because such facilities and labour as were available after the raids, were distributed among a smaller number of ships than would have been worked had the raids not occurred.

Without a great deal of labour it would not be possible to discover where all the diverted ships went to, but it is significant that they did not go in substantial numbers to the place where one might have expected to find them—that is to London, the only port in the United Kingdom that is of a size comparable with Liverpool, that

had a large amount of capacity to spare, but to which at this time, because of the dangers of the voyage, it was highly undesirable to send any ships except those whose cargoes could not be got there by other means. The number of ships in the Port of London did not rise significantly during the period of heavy bombing in the west.¹ If any further evidence were needed, this fact alone would be sufficient proof of the failure of the Germans' attempt to defeat Great Britain by attacking the United Kingdom's ports, as well as of the success of the reorganisation undertaken between January 1941 and the following May.

In Liverpool, in May, the writer understands, it was currently said that one or two more nights of bombing and the port would have been put out of action altogether. In general it seems sometimes to have been believed that had the raids gone on any longer defeat would have been in sight. There can never be any certain answer to assertions of this sort, but it must be confessed that the second of these at least seems to have no basis in fact. No one can say in advance what human ingenuity and endurance can achieve, or decide in retrospect where the limit must have come. All that can be said about the position in May is that the available evidence gives no support at all to the pessimists. On the contrary, not only had the average rate of turn-round throughout the country never been so good in any previous month as it was in May; even if one looks at the figures of shipping in the Mersey in May and June, and compares them with the figures for the preceding and following months, it is barely apparent that anything unusual had occurred.²

(ii)

The Ships in Need of Repair

By March 1941 it was clear that the British war-effort was not going to founder because goods could not be moved through the port and transit system of the United Kingdom, but as this danger receded other dangers took its place, and such indeed was the nature of war as those in control of merchant ships knew it. In the increasing struggle to overcome one obstacle after another in which they now became engaged, they might be compared to people climbing a mountain, who no sooner imagine that they are within sight of the top than they see another peak rising in front of them.

Since September 1940 all the sinister results of the fall of France had gradually been emerging one by one. By the spring of 1941 it

¹ See Appendix XXIII, p. 152.

² See Appendix XIX, p. 146.

already seemed possible that the vast and intricate problems involved in supplying the armies in the Middle East might place on the British burdens they would be unable to bear; the nature of their responsibility to maintain the civil economies of the countries of the Commonwealth was already taking on a clearer, more disturbing shape; to it was added the responsibility of maintaining the economies of the countries in the Middle East where the fighting was in progress; the sea-borne trade of the whole free world in the Eastern Hemisphere was beginning to seem their province in a period of growing confusion in this country, the base and arsenal of the war-effort, where each of many separate difficulties matured into a crisis at about the same time.

While the quays in the west coast ports were piled with cargo that could not be removed, the repair-yards in the west were filled with ships that could with difficulty be repaired if they could be repaired at all. Before the fall of France, as nearly as could be estimated, about 1.5 million deadweight tons of British-controlled ocean-going dry-cargo ships,¹ or roughly 7 per cent. of the fleet, were, as it was said, 'immobilised under repair' (that is, were undergoing repairs or conversions that required over seven days, and could not be done while the ships were loading or discharging). By January 1941 this figure had risen to 2 million gross tons² (say, roughly 2.8 million deadweight tons) or nearly 13 per cent. of the total fleet. Enemy action was not the principal reason for this huge increase, which was the result for the greater part of a large number of other causes—of the need, particularly, to equip the foreign ships entering British service with degaussing apparatus to protect them from magnetic mines; of the arrival in the United Kingdom of considerable numbers of old American ships, in a delapidated condition, which the United States Government had sold to Britain after France fell, but which, because of the high costs in America and to save dollars, it was decided to repair in this country; of the increase in marine damage in the British fleet because of the need to employ ships on routes and to carry cargoes for which they were not designed; of the loss of the repair-yards on the Continent; of the unwillingness to repair ships in the east coast ports of this country; of the rising costs and declining efficiency in many ports of the British Commonwealth to which British ship-owners (who, under the terms on which their ships were requisitioned, had to pay for their repairs themselves) became increasingly unwilling to send their ships.

After France fell, in fact, a multitude of causes conspired both to increase the number of merchant ships in need of repair (as well as the numbers of naval ships which competed for the same facilities)

¹ See Appendix XVIII, p. 121.

² See Appendix XIX, p. 146.

and to reduce the means of repairing them; and the organisation in the Admiralty responsible for ship-repairs found itself overwhelmed, as did many other organisations at this time, by problems that no one could ever have imagined would arise. Before February there were no detailed statistics of the tonnage under repair and no means, therefore, of assessing the scope of the problems; for in this as in many other matters it had been decided at the beginning of the war to leave as much as possible to individual initiative and to give the Government merely a negative control. In February 1941 it still rested with the ship-owner to decide who should repair his ship, though with the Government to give or withhold the licence; the licence was granted or refused on the advice of the Senior Naval Officer (often ignorant of many of the relevant facts) in the port concerned; if it was refused the ship-owner started his search afresh; if he was successful he might find that though he could get a berth he could get no labour, or that though the labour was available a berth was not. For all these reasons it was impossible to decide on any rational basis between the relative needs of merchant and naval ships or between the needs of the various merchant ships themselves; so that scarce supplies of labour and facilities were often devoted to repairing heavily damaged ships to the exclusion of ships whose damage was relatively slight and which could quickly have been got to sea again, and so that an unnecessarily large number of ships was immobilised because work on many was undermanned. Behind the figure, in fact, of 2.8 million deadweight tons of dry-cargo tonnage immobilised under repair, lay a story of mounting confusion and crisis, comparable with the story of the other, undamaged ships, that at this time were taking so unconscionable a time to discharge and load, with the result that at the beginning of 1941, as the damaged survivors returned from the Battle of the Atlantic, they merely went to swell the queue of ships on which work could not even be begun.

Drastic steps were taken to deal with this situation. They had so far succeeded that by September 1941 the volume of tonnage immobilised under repair in the ports in this country had diminished by about 60 per cent. and nearly all the backlog had been worked off. This seemed a great achievement, but it was not so great as was sometimes supposed, for among the remedies applied was the decision to repair abroad all the ships it was possible to repair there. (The repairs in the United States were ultimately done free by the Americans under the Lend/Lease Act, and for those done in the countries of the Commonwealth the Treasury paid the whole of the difference between the costs there and in this country.) The result was that though the amount of damaged tonnage in the United Kingdom diminished, the total did not do so to any great extent,

for the ships that were repaired abroad took their problems with them, causing shortages of labour and facilities all round the world, and in places where they were harder to overcome than in this country because the necessary controls were more difficult to impose. The figure of tonnage immobilised under repair was higher in 1942 than in 1941, and even in 1943 and afterwards it remained obstinately at about 2·5 million deadweight tons, or between roughly 11½ per cent. and something over 13 per cent. of the British-controlled fleet.¹

¹ Figures arrived at on basis of estimates for tonnage under repair at the 'Quadrant', 'Sextant' and 'Argonaut' Conferences and on total fleet as given in the *Statistical Digest of the War*.

APPENDIX XIX

The loss of imports due to delays in port in the winter of 1940-41

The figure of $2\frac{1}{2}$ to 3 million tons given on page 128 above has been arrived at as follows:

1. 'Systematic examination of time spent in United Kingdom ports began in April 1941. Vessels were divided into two groups, (i) tramps carrying mainly bulk cargoes, and (ii) liners carrying general cargoes, though significant amounts of bulk imports also came in liners.

Imports, in terms of deadweight, were divided about equally between the two categories of vessels.

Comparing the earlier months of 1941 with the later, the average time spent in United Kingdom ports by tramps improved by about 2 days: from 14.5 to 12.5. Liners showed an improvement of about $8\frac{1}{2}$ days: from 26.5 to 18.0. The average overall improvement was therefore $0.5 \times 2.0 + 0.5 \times 8.5 = 5.25$ days.

The average round-voyage time was about four months or 122 days, hence the saving in United Kingdom port time amounted to 4.3 per cent. of the round-voyage time. The importing-capacity of shipping was therefore increased by more than 4 per cent., without any corresponding increase in the tonnage engaged in supplying the United Kingdom.¹

2. Imports in the calendar year of 1941 were 30.8 million tons; the improvement in turn-round between the spring and the end of the year must thus have resulted, at a rough approximation, and other things being equal, in an increase in imports at a rate of something over 1.2 million tons per annum.

3. But by April 1941, when the turn-round figures start, the worst of the difficulties had already been largely overcome. It does not seem unreasonable to suppose that if it had been possible to compare the performance in October, November and December 1940 with that in April 1941 one would find, allowing for seasonal differences, an improvement as large as that achieved between April and the end of the year. Admittedly this supposition cannot be adequately tested, but it is supported by the recollection of various of the authorities concerned, and it seems not unlikely, and in fact probably an under-estimate, when judged by such figures as exist.

4. The Prime Minister declared (see page 130 above) that 'it is said that two-fifths of the decline in the fertility of our shipping is due to loss of time in turning round ships in British ports'. In his reply the Minister of Shipping stated that 'I do not know the basis on which the statement is made . . .' The writer must confess to an equal ignorance. If, however, the statement assumed that two-fifths of the decline in imports, comparing the annual rate of importation at the end of 1940 (30.5 million tons) with that before France fell (47 millions), was due to delays in United Kingdom ports, it seems that it must have exaggerated.

¹ Estimate made for the writer by Statistics and Intelligence Division of the Ministry of War Transport.

APPENDIX XX

Percentage increase or decrease in tonnage arriving in the west coast port areas

(Comparing the monthly average in the three months before the fall of France with the monthly average in subsequent three-monthly periods)

Monthly average of shipping with cargo at United Kingdom ports (foreign trade)

	A April } May } 1940 June }	B July } Aug. } 1940 Sept. }	C Oct. } Nov. } 1940 Dec. }	D Jan. } Feb. } 1941 Mar. }	E April } May } 1941 June }
	'000 net tons	'000 net tons	'000 net tons	'000 net tons	'000 net tons
Glasgow and Greenock	321.3	371.7	421.0	401.0	395.7
Liverpool and Manchester	992.0	1,072.3	809.3	628.3	664.3
Swansea, Cardiff and Newport	227.0	190.3	171.7	123.7	131.0
Bristol	176.7	190.0	171.7	122.0	169.7
Total United Kingdom ports	3,613.3	2,822.3	2,313.7	1,995.3	2,183.0

Percentage increase or decrease

	Comparing A and B	Comparing A and C	Comparing A and D	Comparing A and E
	'000 net tons	'000 net tons	'000 net tons	'000 net tons
Glasgow and Greenock	+15.7	+31.0	+24.8	+23.2
Liverpool and Manchester	+ 8.1	-18.0	-36.7	-33.0
Swansea, Cardiff and Newport	-16.2	-24.4	-45.6	-42.3
Bristol	+ 7.8	- 2.8	-30.9	- 4.0
Total United Kingdom ports	-21.9	-35.9	-44.8	-39.6

Source: Table compiled by the author from data in the Ministry of War Transport

APPENDIX XXI

Note on inland sorting depots

Though this question can have no interest for the general reader, the Prime Minister attached so much importance to it and in general it created so much disturbance that it seems necessary to explain what happened.

Inland sorting depots, as their name suggests, consist of a number of transit sheds situated, not as transit sheds normally are, on the quays, but at some safe distance away from them. The purpose of the depots is to enable goods to be sorted in some place where the process will not cause delays by immobilising with the cargo from one ship space without which the next ship cannot discharge. The need for inland sorting depots arose even before there was any bombing, but bombing it was clear would intensify it, not only because it would make all port operations, including sorting, more difficult, but because it might add to the volume of cargo to be sorted; for if the Germans were to succeed in seriously damaging British factories there would have been a need to import fewer raw materials in bulk and more finished and semi-finished articles, including munitions of war.

Some people, who had foreseen this situation, had suggested even before the war that inland sorting depots should be constructed. In the autumn of 1940 both the Admiralty and the Ministry of Shipping urged that the construction should be started immediately. It presented, however, peculiar difficulties. As was shown earlier, after the fall of France an enormous number of difficulties emerged simultaneously, and it was hard to see which among them were the symptoms and which the causes of the confusion in the ports. There seemed an equally large number of possible remedies, but many of these were mutually exclusive. How could it be decided in such circumstances which difficulties should be tackled first and which of the alternative remedies should be applied to them? The inland sorting depots, by their very nature, were the particular victims of this situation, for if they were to occupy any place at all in port and transit policy it had to be a place very precisely determined.

Inland sorting depots, if they are to fulfil their purpose, must meet a number of requirements. They must be in places of at least relative safety; they must be within easy reach of the docks by road and rail; they must be provided with road and rail facilities adequate to distribute the goods once they have been sorted. An inland sorting depot cannot be of use if for any reason it is impossible to get the goods into it, or if the goods, having been got in, cannot be got out again.

It must seem from this argument that there may be conditions in which even the most carefully devised depot will only be an encumbrance. Supposing, it will be suggested, there is an acute shortage of transport from the docks; or acute congestion on the main lines; in each case the depots will be valueless. To this it can only be answered that if either of

these misfortunes is of such a type that it is impossible to cure it, the war will be lost whatever else happens, but if neither is incurable then the depots, provided they are properly designed and in the right places, must be an advantage.

This is the logic of the case. But in 1940 it was not abstract principles that were at issue but immediately practicable policies. In the autumn of that year no one denied that inland sorting depots, had they been in existence, must sooner or later be of use. The question was: could one most profitably employ labour and materials to construct them or to construct alternative and apparently equally desirable facilities?

This problem gave rise to an inter-departmental dispute that lasted for six months. In the autumn of 1940 a number of authorities, and particularly the railway companies, pointed out that the crucial shortage was a shortage of wagons. Inland sorting depots, they argued, could not remedy this difficulty but must in fact make it worse since the depots would require additional wagons to operate them. This argument was so cogent that one of the port managers whose advice was sought, after having pronounced in favour of the depots found himself forced to recant, lamenting, as he said, that he must 'eat his own words' and 'kill his own baby'. Meanwhile the officials at headquarters who were in charge of the ports, bewildered by so much contradictory advice, found it hard to reach a conclusion.

By the end of October, however, they had made up their minds—with a number of misgivings—that the depots must be built. The Port and Transit Standing Committee, though many of its members still remained unconvinced, had been brought to agree. On the 16th December the Minister of Transport presented a memorandum to the Lord President's Committee proposing that authority should be granted him to put the depots in hand—although he had not as yet solved the problem of their sites. On the 20th December the Lord President's Committee agreed to the proposal.

After this the matter had to be referred to the Ministry of Works and Buildings, which, however, refused to sponsor the scheme with the Production Executive on the grounds that other schemes were more urgent. How, it was asked in the Ministry of Works and Buildings, could the need for inland sorting depots be as pressing as the Ministry of Transport claimed, when the sites were not yet chosen nor the designs completed? The question of the shortage of wagons—and of track—emerged again, and also the question of storage. The Ministry of Transport had advocated the erection of six inland sorting depots, each estimated to cost some £600,000, and each requiring 40–50 acres of land, 3,000 tons of steel, 350 standards of timber and 8 miles of track, besides an unspecified number of wagons and lorries. Who was to say that the immediate problem of keeping the quays clear might not be more quickly solved if all this material were employed in railway works designed to relieve the congestion at the junctions, or the wagon shortage, or in building more storage accommodation? This question was indeed impossible to answer without greater knowledge about the causes of the various shortages and how far they could be cured by better organisation as distinct from more facilities.

In the end, as has been said, the dispute was settled by the intervention of the Prime Minister, but only after the relative significance of the various shortages had become much clearer. The decision to proceed with the construction of the inland sorting depots was taken in March 1941, but by this time it had become apparent that with proper organisation there need be neither a shortage of transport to clear the quays, nor insuperable congestion at the junctions.

APPENDIX XXII

Estimated loss of shipping in Liverpool and Birkenhead from various causes resulting from the raids of 1st-8th May 1941

The following is the summary of the conclusions arrived at by the Ministry of Home Security in its report, of June 1941, on the effects of the great air-raids on the port of Liverpool.

The writer was told that the summary was drawn up after consultation with the Ministry of War Transport. Though the results may be stated with too great an appearance of statistical accuracy there seems no reason to suppose that they are not substantially right.

Causes	G.R.T.	Days out of commission in first year after raids	Ton-days lost	% of ton-days lost	Equivalent number of 5,000-ton ships per one year
Ships totally lost . . .	39,100	365	14,271,000	55	8
Ships damaged ¹ . . .	40,400	148 (mean)	5,962,000	23	3
Ships diverted ² . . .	83,600	*	115,000	—	—
Ships delayed while working ³ . . .	185,000	*	988,100	4	—
Ships required to replace lost imports ⁴ . . .	66,000	72 (mean)	4,780,000	18	3
<i>Total</i>	414,100	63 (mean)	26,116,100	100	14

* The writer has omitted the figures in the places marked with an asterisk because they are evidently given incorrectly in the original text. The text, however, gives the data from which the sum was worked out in the case of the ships delayed while working cargo. The writer worked out the sum again and found that the answer in the fourth column was correct. The writer has therefore presumed that it is also correct in the case of the diverted ships for which no data are available.

The figure of a loss of imports of about 12,000 tons, given on page 140 above, has been arrived at by assuming an average ship of 5,000 gross tons, 1 ton of cargo per gross ton, and 4.5 round voyages per annum.

¹ Calculated from time taken for repairs.

² Based on estimates of extra time necessary for ship to reach its changed destination.

³ Based on Table A in the Appendix to the Ministry of Home Security report.

⁴ Estimated tonnage required to carry destroyed imports multiplied by the number of days taken in the out and return voyages. This figure is based on the losses of foodstuffs and timber only.

APPENDIX XXIII

Number of ships in the Port of London

<i>January to June 1941</i>	<i>Averages</i>	<i>January to June 1941</i>	<i>Averages</i>
25.1.41 . 26	} . 29	3.5.41 . 32	} . 33
1.2.41 . 33		17.5.41 . 35	
8.2.41 . 27		19.5.41 . 28	
15.2.41 . 26		24.5.41 . 34	
1.3.41 . 28		31.5.41 . 38	
8.3.41 . 34	} . 33	7.6.41 . 32	} . 36
15.3.41 . 32		14.6.41 . 37	
22.3.41 . 28		21.6.41 . 33	
29.3.41 . 42		28.6.41 . 42	
5.4.41 . 33		} . 26	
12.4.41 . 31			
19.4.41 . 20			
26.4.41 . 20			

Source: Table compiled by the author from data in the Ministry of War Transport

APPENDIX XXIV

Departures of British and foreign shipping in the foreign trade from Liverpool and Manchester, January–August 1941

<i>1941</i>	<i>'000 net tons</i>		
	<i>With cargo</i>	<i>In ballast</i>	<i>Total</i>
January . . .	273	411	684
February . . .	337	466	803
March . . .	319	520	839
April . . .	310	369	679
May . . .	318	408	726
June . . .	268	374	642
July . . .	301	454	755
August . . .	305	509	814

Source: Ministry of War Transport

APPENDIX XXV

British and British-controlled dry-cargo vessels, 1,600 gross tons and over, repairing, damaged or not in use

Thousand gross tons

Date	(1) British vessels			(2) Allied and Neutral vessels			(3) British, Allied and Neutral vessels	
	A. Undergoing or awaiting repair only (included in B)	B. Repairing, damaged or not in use	C. Monthly average of B	A. Undergoing or awaiting repair only (included in B)	B. Repairing, damaged or not in use	C. Monthly average of B	A. Repairing, damaged or not in use	B. Monthly average of A
1940								
November	988	1,286	1,366	344	413	409	1,699	1,775
December	1,268	1,446		367	405		1,851	
1941								
January	1,587	1,685	1,450	426	454	432	2,139	1,882
February	1,492	1,603		350	387		1,990	
March	1,242	1,357		330	360		1,717	
April	1,180	1,209		334	396		1,605	
May	1,095	1,107		328	425		1,532	
June	1,335	1,344		378	427		1,771	
July	1,440	1,442		450	486		1,928	
August	1,255	1,319		417	446		1,765	
September	1,556	1,601		377	396		1,997	
October	1,567	1,569		514	525		2,094	
November	1,634	1,642		461	486		2,128	
December	1,493	1,518		391	401		1,919	
1942								
January	1,788	1,816	1,472	401	413	463	2,229	1,935
February	1,615	1,648		508	539		2,187	
March	1,469	1,532		423	431		1,963	
April	1,472	1,478		441	445		1,923	
May		1,272		405	405		1,677	
June		1,311		456	456		1,767	
July		1,447		368	368		1,815	
August		1,362		577	577		1,939	
September		1,148		415	415		1,563	
October		1,424		459	459		1,883	
November		1,425		511	511		1,936	
December		1,805		538	538		2,343	
1943								
January		1,754	1,332		550	405	2,304	1,737
February		1,508		443	443		1,951	
March		1,546		524	524		2,070	
April		1,442		527	527		1,969	
May		1,206		467	467		1,673	
June		1,111		401	401		1,512	
July		989		407	407		1,396	
August		1,126		327	327		1,453	
September		1,184		316	316		1,500	
October		1,219		323	323		1,542	
November		1,331		321	321		1,652	
December		1,567		252	252		1,819	
1944								
January		1,547	1,410		336	332	1,883	1,742
February		1,461		355	355		1,816	
March		1,256		335	335		1,591	
April		1,378		302	302		1,680	

Source: Table compiled by the author from data in the Ministry of War Transport

The breakdown between columns A and B in (1) and (2) is not possible after April 1941. Various returns of tonnage under repair were kept during the war and differ considerably one from another, particularly because ships being repaired while working cargo were sometimes included and sometimes excluded and because certain categories of ships—for example tankers, troopships and hospital ships—were, equally, sometimes included and sometimes excluded. The writer has chosen the above figures because they include all categories of deep-sea dry-cargo ships and relate only to tonnage immobilised under repair (i.e. taking seven days or over to repair). The attention of the reader should be drawn to the fact that these figures are in gross tons, no figures in deadweight tons being available.

CHAPTER VII

THE CREWS

THE 2·8 MILLION deadweight tons under repair in the spring of 1941 meant 2·8 million withdrawn from service, and in the spring of 1941 the damaged ships were another item that reduced the carrying-capacity of the fleet. In the second year of war (and equally in the calendar year of 1941) the loss of carrying-capacity, it was shown, was a much more serious threat to the war-effort in the immediate present than was the loss of ships that were not replaced. But it was of course necessary to look ahead of the immediate present. It did in fact happen that between the end of 1940 and VJ-Day there was only one period—from January 1942 to March 1943—when the dry-cargo fleet under British control declined consistently and significantly. Even in these months it only declined by 2·9 million deadweight tons or 13·5 per cent.¹ But the extent to which losses could be replaced could never be foreseen, for it largely depended on the amount of foreign shipping, including American, that the British could acquire. All that was known in the spring of 1941 was that the sinkings had begun to rise immediately after France fell, and that they had gone on rising, slowly but inexorably, ever since. By April 1941 (the worst month before Pearl Harbour) they were at an annual rate of roughly 7·7 million deadweight tons a year, excluding tankers and coasting ships; it was impossible to tell when they would end and their effects were cumulative. They overshadowed all the other problems, not only because it was difficult to see how the British could win the war in such circumstances, but because of the horror that was felt, as the casualty lists came in, at the numbers of good ships and men that disaster engulfed. For a ship, to those who know or own or serve in her, is not just a mechanical contrivance for carrying people and commodities about the world, but a creature endowed with a personality, for whom one feels affection (or, on occasions, dislike) and whose loss one mourns; and as for the officers and men: out of a population of serving British seamen that on an average throughout the war cannot have been more than 145,000 and must have been a good deal smaller in the early days,² nearly 6,000 were killed by enemy action in 1940 and over 7,000 in 1941,³ and many—though

¹ See Appendix VIII, p. 69.

² See Appendix XXVIII, p. 181.

³ See Appendix XXVI, p. 178.



Ships discharging overside into barges and coasters in the emergency port in the Clyde anchorages, summer 1941

Overleaf:
Ships in Convoy







British and Allied Masters at a convoy conference

in numbers which cannot be exactly assessed but which are known to be very large—died afterwards from the effects of strain and exposure.¹ Merchant ships at this time were going to sea with such meagre escort that there were masters who felt that ships in convoy were merely a provocation to attack and that they would be better off sailing unescorted and independently. This was not in fact true; even now the ships with speeds of between 13 and 15 knots, which, in the autumn of 1940, it was decided to sail independently, suffered immensely heavier casualties than the ships in convoy;² for a merchant ship had virtually no defence against a submarine, and if she were hit she would very probably sink. She could do something to ward off attack from the air with her own guns if she had any that were adequate, but generally at this time she had not, for the short-range guns that were the principal need were only ordered shortly before the war, and after the war started it was a long time before they came into full production; they were not available in substantial quantities until the first half of 1942.³

It is true that even when the supply of escort ships was most meagre the escorts managed to pick up a large proportion of those whose ships went down, but rescue work was not their main function and they could not hang about to search for survivors. In the later years of the war the chances of a man's surviving if he were shipwrecked were rather better than even,⁴ but in the second half of 1940, and perhaps in the first month or so of 1941, they may have been as much as three to two against him,⁵ for the devices that helped to ensure his being picked up and staying alive till then—particularly the light attached to his life-jacket that made him visible at night when he was in the water, and without which his would-be rescuers often passed him by, the protective clothing, the pumps to keep the water out of the boats, the appropriate scale of rations—had either not been invented or were not available in sufficient quantities.⁶

¹ See Appendix XXVIII, p. 181.

² See Captain S. W. Roskill, *op. cit.*, p. 457.

³ See *ibid.*

⁴ See Appendix XXVI, p. 178.

⁵ See *ibid.* This assertion is based on the fact that the proportion of men shipwrecked who survived must have been about the same in the first half of 1940 as in the last four months of 1939, so that, in that case, the proportion killed in the second half of 1940 must have been nearly 60 per cent.

⁶ The following table shows the dates when the principal appliances first began to be issued and when they were available in sufficient quantities to make it possible to require owners to provide them.

<i>Appliances</i>	<i>Date when supplies first issued</i>	<i>Date when made compulsory</i>
Lifejacket light	September–October 1940	6th March 1941
Manual pump	July 1941	27th July 1942
Protective clothing	September 1941	27th July 1942

That a proportion so large as even 40 per cent. of the men shipwrecked in the first six months or so after France fell should have managed to survive in these circumstances must seem extraordinary, but the will to live was evidently very strong. In the course of examining 118 depositions made before the Commissioners for Wreck¹ the writer only came across one case among white seamen where this was not so. He was the carpenter of a ship sunk in November 1942, 500 miles south-west of Iceland. 'This man', it was reported by the Nautical Surveyor who was present when the Master made his deposition, 'was of middle age, Scottish, and did not appear to be more distressed than were the others', but after some days adrift, 'at about 9 a.m., he huddled at the mast-step, said "I'll die, I'm not going to freeze to death for anyone", and at 10 a.m. he was dead. The Master said that we have all heard of fatalistic Indians, but to hear and see a white man do this was incredible. . . .'

Yet there must be a limit to courage and endurance. With totally inadequate protection, and largely lacking even the rudimentary means of self-defence and self-preservation, the men of the Merchant Navy in the winter of 1940 were sailing out and home through the submarine-infested waters of the Atlantic, often with cargoes of steel that caused their ships to sink like a stone within a few minutes of being hit, when the water poured into the half-empty holds.²

'Their shoulders held the skies suspended
They stood and earth's foundations stay.
What God abandoned, these defended
And saved the sum of things for pay.'³

So it seemed. But how long could it go on? This was not the sort of question that was publicly asked, nevertheless, as the losses began to rise after the fall of France it could not fail to occur to the mind, and by the spring of 1941 it had begun to force itself on the attention of the authorities. Were the British going to be able to find the crews to face these ordeals?

At this moment of more or less universal crisis the arrangements for manning the Merchant Navy were of the most haphazard kind, and the crews, as always, though to an even greater extent than in peace, were the most polyglot collection of men; for in March 1941

¹ The depositions examined were in relation to the years 1940, 1941 and 1942. The writer's original intention was to pick out every tenth ship sunk, though it must be confessed that for various reasons the intention was to some extent frustrated.

² Half-empty because steel is very heavy cargo and puts a ship down to her marks leaving much of her space unutilised. The ship-owners' ideal of a ship that is 'full and down', could only be achieved by combining steel with some other cargo, e.g. timber. This was done later. But in the winter of 1940 steel was needed with such urgency that it had, it seemed, to be carried in full cargoes—that is, without being combined with any other cargo which must, to some extent, have reduced the amount of space available for steel.

³ A. E. Housman, *Epitaph on an Army of Mercenaries*.

about 20 per cent. of the British-controlled fleet consisted of foreign ships which, for the greater part, were manned by their own crews, and even in the ships that were properly speaking British there were men of many nationalities.

Before the war the population of serving British seamen was estimated to be roughly as follows:¹

	1936	1937	1938
British .	130,830	133,110	131,885
Foreign .	7,830	8,920	9,790
Lascars .	47,310	48,660	50,700
Total .	185,970	190,690	192,375

It will be seen that of the 192,000 men in the Merchant Navy in 1938 only about 69 per cent. were British (and not all of these were natives of the United Kingdom²); about 5 per cent. were foreigners (who came from the countries listed in Appendix II); something over 26 per cent. were in the category of men known as Lascars. The word 'Lascar' is not, however, a term denoting nationality. Though it is generally applied only to Indian seamen, strictly speaking—as, for example, in the table given above—it means a native of Asia or East Africa employed on special types of articles which open and terminate in Asia. Of the 50,700 men described above as Lascars not more than perhaps 75 per cent. were Indians. The rest were natives of other parts of Asia and were mainly Chinese.

All these various categories of men had their own particular problems in peace and war, but in war the most urgent problems were among the British seamen,³ for they formed by far the largest group, they provided all the senior officers in the British-controlled fleet—except in the foreign ships manned by their own crews—and it was for them to set the example.

To be sure, before the war started the Government did not know how extensive and prolonged the ordeals of the Merchant Navy were going to be, nevertheless what it imagined, though different in degree was not different in kind from what actually happened. The problem in consequence that faced it was a typical problem

¹ Sir William Elderton, *Merchant Seamen during the War* (paper submitted to the Institute of Actuaries, 25th November 1946. Table 3, p. 6, and Appendix (C). These figures exclude the men who served in coasting-ships.

² See Appendix XXVII, p. 179.

This chapter, in other words, leaves out of account the problems that arose in connection with the men on Lascar articles. In general, however, these men (employed only as ratings) who were always plentiful and almost invariably docile, gave no trouble. They had to be employed to some extent on the Atlantic where they would not have been employed in peace, and must have suffered from the conditions there even more than did the others. But they were never employed there proportionately to the same extent as the others; so that though they probably had less resistance to exposure they nevertheless had a lower death rate (see Sir William Elderton, *op. cit.*, pp. 2 and 9).

of total war—how to sustain the courage and resolution of people trained to a peaceful avocation and required to carry it on, not in the easy conditions of peace, when it is extremely rare for an ocean-going merchant ship to sink, but always in the shadow of violent death. The Government, however, in the nineteen-thirties, though much preoccupied with the similar problems that arose in connection with civilians ashore¹ did not consider them in relation to merchant seamen, among whom there were no women and children, who, in the popular estimation, had all proved themselves heroes in 1917 and who, for the rest, were largely a statistical abstraction. Before the war the Government did something, it is true, though as it turned out much too little, to provide the men of the Merchant Navy with the guns and other necessary means of self-defence, but, apart from this, the principal question with which it felt itself concerned was whether there would be enough of them in the various categories to man the fleet during a future war.

The ship-owners had also expressed alarm on this point because the slumps in the inter-war years had driven men out of the industry and discouraged the entry of new recruits. As the Board of Trade and the Admiralty, however, pointed out before the war, it is ridiculous to suppose that the effects of a slump may so reduce the supply of skilled men as to involve serious risks, for the danger which arises in war because of slumps in peace is principally a shortage of ships. The skilled men remain, even though their skill gets rusty, and the results of a slump, which has a delayed action, will only manifest themselves after several years and if demand grows, because of a shortage of junior officers who take some time to train.

But the fleet is unlikely to grow at the beginning of a war; it is on the contrary much more likely to decline; for ships are apt to be sunk faster than they can be replaced. They are also apt to spend longer in port and to need more frequent and more extensive repairs; and since crews are only needed while the ships are at sea, for these reasons, too, fewer men than in peace may be needed to man the fleet. Admittedly, on the other hand, some of the foreign seamen may return home on the outbreak of war and many men may be lost to the service through death and sickness; for although when a ship sinks a high proportion of her crew usually survives, nevertheless the wastage may be very heavy. Yet all the same, in the early stages of a war the demand for seamen is unlikely to grow beyond what can be satisfied by drawing on the reserves of skilled men in shore employment, unless the population of serving and former seamen is depleted because men join the armed forces. And before the war started the Government agreed that it would not compel to join the

¹ See *History of the Second World War, United Kingdom Civil Series*, R. M. Titmuss, *Problems of Social Policy*, pp. 16-18.

BRITISH RATINGS



Boat drill



Impromptu sing-song

BRITISH RATINGS



Splicing a rope



Lighting up a boiler

armed forces either serving merchant seamen, unless they were members of the Royal Naval Reserve,¹ or former merchant seamen if they could find jobs at sea.

Thus manpower problems in the Merchant Navy on the outbreak of war, like most other problems there at all times, were *sui generis*. When the Fighting Services and vital civilian industries had to expand as fast as possible, the need for men in the Merchant Navy was likely to contract or at least not to grow to any marked extent; when the Fighting Services and vital civilian industries had to recruit, train and dilute on an increasing scale, the Merchant Navy could rely to start with on its own reserve created in peace by a natural process unregulated by authority. Yet nevertheless this reserve, the gift of an apparently beneficent providence, had its drawbacks, for it was not only or even primarily the slumps that had created it. It was the result of the more or less casual nature of employment in the Merchant Navy, and this gave rise to many difficulties in war.

The need for crews for merchant ships has always fluctuated to a much greater extent than has the need for men in most other industries. In general no tramp will sail—and roughly half the British merchant fleet in 1939 consisted of tramps—unless there is at least enough cargo to cover expenses on the outward voyage; but while the tramp is in port no crew is required. Only the oil companies employing large tanker fleets, and the larger liner companies—whose ships sail to schedule whatever the state of trade, at least up to the point when the services have to be reduced—were prepared, before the war, to offer even to their officers any degree of permanency in employment.

Employment for ratings in the Merchant Navy was largely on a voyage basis. It was usual for the ratings in foreign-going tramps to sign on for a single round voyage, and even in the best of the liner companies this was the practice to a considerable extent. At the end of the voyage the men spent as much time ashore as they could afford (on an average it was thought that they spent about two months in the year).² When their money gave out they sought another job—sometimes with the same company, sometimes with a different one, sometimes, and in times of slump frequently, with an employer ashore.

Even for officers there was not the same continuity of employment

¹ The Ministry of War Transport estimated that 800 officers and 5,500 ratings who were on the active list of the Royal Naval Reserve joined the Royal Navy in the first few months of the war. A further 2,000 Merchant Navy officers were commissioned in the Royal Navy before the end of 1943. In April 1940 the Admiralty agreed that it would not take any more men with a second mate's certificate without the consent of the Ministry of Shipping, since men in this category were running short in the Merchant Navy.

² This in any case can be inferred from comparing the figures in the table on page 157 above with those in Appendix XXVII, p. 179.

as is usual in other industries. The oil companies and the larger liner companies, provided times were good, offered a permanent career to the officers in their service. In the liner companies these men could rise from rank to rank until at the end of some twenty years a deck officer might expect to get command of a ship.¹ But times, even for the best of the liner companies, were by no means always good in the inter-war years, and in the tramp companies they were often very bad. In the tramp companies, which were exposed to the full effects of any slump that occurred, there was much less security, as well as smaller prizes and, in general, lower standards than in the liner companies. Masters and other officers, as well as ratings, were in general engaged by tramp-owners for a single voyage. No doubt it often happened that at the end of the voyage an officer was taken on by the same company again, but there was no guarantee that this would be so, or indeed that he would get any employment at all. 'The lean years of 1931 and 1932', one ship-owner wrote just before the outbreak of war, 'must still haunt the memories of all of us, who saw in every creek and estuary the long lines of deserted ships and knew of the hundreds of honest, reliable fellows turned adrift to fend for themselves in that economic blizzard.'²

This same writer—a partner in one of the most enlightened liner companies—deplored the effects of a system which offered a continuous career to so few of the industry's employees. 'We shall never', he wrote, 'establish a fully exacting standard of competence and loyalty in our officers until we can offer them reasonably permanent employment.' The same, too, was true of ratings. But casual employment breeds a corresponding mentality, and this writer also noted that there were men who could have had security who did not want it. In his own company 23 per cent. of the able seamen in eighty-five home-coming ships whose crews were questioned, preferred taking their discharge to remaining at their posts, with short spells of leave while the ships were in port, and then signing on for another voyage. 'They were not going to sea again until they felt like it.'³

Among the officers there were parallel cases, for many did not desire even as much security as they might have attained. The prospect of commanding a ship some twenty years hence in, say, the Blue Funnel Line, did not commend itself to every young deck officer, for this prize had to be paid for at the price of many years in subordinate positions and a life-time spent largely away from home.

¹ See R. H. Thornton, *British Shipping*, p. 295. 'We shall be nearer the mark if we assume that, before our officer gets his first foreign-going command, he will have served as junior officer, second mate and first mate, an accumulated total of perhaps twenty years at sea.' The writer understands that in the big oil companies promotion was quicker.

² See R. H. Thornton, *op. cit.*, p. 237.

³ See R. H. Thornton, *op. cit.*, p. 223.

There were other prospects that might seem more attractive—say, service with a tramp company where promotion was quicker even though employment was more precarious, and, later on, a normal married life in some job ashore, supposing it were possible to find one.

And while there are reasons that may make a deck officer unwilling to look on the merchant service as a permanent career, there are many more in the case of an engineer. The engineers normally constitute about half the ship's complement of officers. Their services are as vital to the ship as are those of the deck officers. But ships have only had engines for about 100 years, and for many centuries they sailed the seas without them. In the past the deck officers were apt to look on the engineers as it were as parvenus, and the young engineers in their turn, to a far greater extent than other young officers, looked on service in ships as a temporary occupation. To have served as a deck officer equips a man directly for few other posts; to have served as an engineer equips him for many. The Board of Trade's second engineer's certificate, granted to a candidate who passes the prescribed examination and has had four years' workshop experience and eighteen months at sea, is a commercial passport, for the engineer only carries on 'afloat a job of which there are numerous precise counterparts ashore'.¹ The Merchant Navy was thus a service in which employment was precarious, which a man often entered without intending to devote his life to it, and in which, as a result, the population changed very considerably from year to year; and though before the war no one knew precisely how many men in the various ranks or ratings left the Merchant Navy every year, or entered it for the first time, or came back to it after an interval in other jobs, it was known that, taking ranks and ratings together, but excluding Lascars, the movements in and out were very large. It was thought that something more than 14,000 left and entered the service every year² and it is clear that this figure must have been a considerable under-estimate.

But though in peace this state of affairs had its drawbacks,

¹ R. H. Thornton, *op. cit.*, p. 242.

² This was because all seamen on foreign-going ships are entitled by law, under the Merchant Shipping Act of 1894, to receive at the end of every voyage a 'certificate of discharge' in which the Masters make a report on their conduct. Normally they acquire for this purpose what is called a 'continuous discharge book', and in the late 'thirties it was claimed that some 14,000 new discharge books were issued every year. Since the numbers in the Merchant Navy did not greatly vary this meant, equally, that some 14,000 left the service every year.

For various reasons, however, this figure of 14,000 was unilluminating and misleading. In the first place it was not as accurate as it might have been; in the second place it was not broken down into categories—it provided no guide as to the ranks and ratings among which the movement of population occurred; finally, to measure the turnover in terms of the new discharge books issued is to under-estimate it; for cadets and apprentices—of whom about 1,000 before the war went to sea every year for the first time—were not entitled to these books; the men who went to sea for a voyage or two without intending to remain there did not apply for them; the men who left the sea for work ashore and then came back again already had them and did not need new ones.

nevertheless labour relations in the shipping industry were extremely happy. Employers and employed worked together with a harmony unknown elsewhere. The bitter feelings of the bad old days when the owners and the unions had fought each other with every weapon at their disposal belonged to a past that had been buried in 1920 with the setting up of the National Maritime Board,¹ a body representing all the owners on the one hand and the officers' and seamen's unions on the other. The National Maritime Board proved itself the most successful piece of negotiating machinery in the world. Since its foundation there had never been a strike. The owners were progressive, the unions pressed their claims in a statesmanlike manner. Together they settled amicably all the questions of life and work in the Merchant Navy without ever having recourse to arbitration (for which indeed no provision was made) and even without any formal agreements.

Equally, no Government department had established such happy relations with any industry as the Mercantile Marine Department had established with the shipping industry in the course of carrying out its duty to enforce the provisions of the Merchant Shipping Acts, and the tradition which it had built up was handed on to its successor, the Ministry of Shipping, later the Ministry of War Transport. The shipping authorities never took any step that might affect ships or seamen without discussing it fully with both sides of the industry. The owners and unions for their part looked on the shipping authorities as their friends.

This state of harmony was of great value when it came to controlling the industry's activities during the war. Nevertheless it was not by itself sufficient to solve many of the problems to which the war gave rise. Particularly it could not ensure that the supply of men in all the various categories remained adequate; for the assurance was impossible without powers to apply compulsion if necessary.

But merchant seamen were civilians who could not be compelled at the beginning of the war, nor, on the other hand, could they be deprived of their civilian status. Their ships were not weapons of war and it would have been inadvisable, by putting the crews into a fighting service, to provide the enemy with a further excuse to attack them; in any case the crews had their own traditions, appropriate to their tasks, which it would have been foolish, and indeed impracticable, to change. As civilians, however, merchant seamen could not be forced to stay at their posts, or having left them to return to them, when similar measures were not applied to other civilians; and

¹ See L. H. Powell, *The Shipping Federation*, pp. 36 ff. In 1917 a Board bearing this name was set up with a chairman and secretary provided by the Government. The Board set up in 1920 had no connection with the Government, nor did the Government ask for representation on it in the Second World War.

before the fall of France no one contemplated industrial conscription. Between, in consequence, the outbreak of war and the introduction of the Essential Work Order in May 1941, the law did nothing to prevent the officers and men of the Merchant Navy from leaving the sea for civilian jobs ashore unless they were of military age when, if they would not go to sea, they were liable to be called up; nor, except again through the threat of conscription, did it do anything to compel former seamen to return to the sea. The Mercantile Marine Departments of the Board of Trade set, it is true, great store by these threats; it presumed that no merchant seamen (apart from those who were members of the Royal Naval Reserve) would choose to join a fighting service if they could go to sea in merchant ships. Even if this assumption, however, had been justified, and it may have been, on the outbreak of war men of military age were men of only 20 to 23 years of age, while in June 1938 (and this state of affairs was no doubt much the same fourteen months later) about 73 per cent. of British serving merchant seamen (other than Lascars) were 25 or over (nearly half were 35 or over) so that they could not have been called up in any case.¹ As time went on, it is true, the conscription age was raised, nevertheless even by May 1941 only about 69,000 serving British seamen, or not much more than half the total, had been required to register under the National Service Acts.

Thus during the greater part of the first two years of war a large though diminishing freedom was left to serving seamen to seek, and to former seamen to remain in, safe, civilian jobs, which were growing progressively more plentiful and more remunerative. Indeed the freedom was even greater than appears, for after the fall of France the arrangements broke down by which it had been intended to keep track of the serving seamen of military age;² so that in practice it was perfectly possible for even men in this category to take jobs ashore; and meanwhile the sea, who had been an inconstant mistress during the slumps of peace, was becoming an increasingly cruel one in war. The temptation to desert her was very great.

There were other temptations too. Seamen who did not leave the sea were tempted to take more time off between voyages. The ratings who took in peace as much leave as they could afford, could afford more in war for wages rose. In the spring of 1941 the ports where most of them had their homes were being bombed, and they wished

¹ *Census of Seamen, June 1938*, p. 9, H.M. Stationery Office, 1939.

² As the Registrar-General of Shipping and Seamen put it: 'A seaman registered under the National Service Acts had a special registration card. He ceased to be eligible to hold that card if he left the sea, and he was in these circumstances supposed to surrender the card and re-register with the Ministry of Labour. The card bore no record of sea service. A Superintendent could not know, when paying a man off from his ship, that he had no intention of returning to the sea unless the man told him'.

to be with their families. As civilians required when at sea to face dangers more extreme than any other civilians ever faced, they were morally entitled when ashore, it might well seem, to the civilian rights which tradition and the law allowed them. But the longer the amount of time spent between voyages the smaller in effect the supply of men.

Again, men were tempted to pick and choose among the ships in which they would sail, for there were better and worse ships—ships, at one end of the scale, against which no man willing to go to sea at all could find any complaints, and, at the other end, the 'dirty little tramps', as they were often described, in which no man who had known better would go to sea if he could help it. It was in consequence generally more difficult to find crews for the tramps than for the liners, and by and large, by a process of natural selection, in war as in peace the worse ships got the worse and the more undisciplined crews. In these ships, in consequence, and indeed to some extent even in the others, the trouble did not end when the men had signed the articles. In fact it very often did not begin till then.

A ship's articles are a form of legally binding agreement between the master and the crew in which each side undertakes to fulfil certain engagements. Among other things the crew undertake 'to conduct themselves in an orderly, faithful, honest and sober manner, and to be at all times diligent in their respective duties, and to be obedient to the lawful commands of the Master, or of any person who shall lawfully succeed him, and of their Superior Officers . . .'. Among the lawful commands which have to be obeyed is the command to be on board the ship at a specified time.

But, as every master knows, to get every member of the crew on board is by no means always easy even in the best ships, and even in peace when labour is plentiful. Among the deck-hands, and still more among the stokers—officially known as the 'firemen'—of the coal-burning ships there are many undisciplined persons—as is, indeed, not to be wondered at for stoking a ship is a 'wretched business'.¹ These people not uncommonly get drunk at the last minute and, legally binding engagements notwithstanding, are to be found in pubs and other places where they should not be. In the conditions that existed after France fell it was to be expected that these bad habits would increase and that others would be added to them.

In the spring of 1941 it was said that men who had signed on sometimes discovered afterwards that they did not like the Master, or the Chief Officer, or the Chief Engineer, or that they objected to the food, or to the accommodation or to a variety of other things.

¹ See R. H. Thornton, *op. cit.*, p. 224.

In such circumstances, though it was a legal offence, they might refuse to 'join', or to sail, and if this happened the ship was held up until the defaulters could be replaced. For the Merchant Shipping Act of 1894 lays down that it is a misdemeanour to send, or to attempt to send, a ship to sea in an unseaworthy condition,¹ and that a ship may be deemed unseaworthy among other things 'by reason of undermanning'.² In peace the necessity of earning a living provided strong sanctions against behaving in this way, and the Merchant Shipping Acts provided others; but when there was full employment the Merchant Shipping Acts alone, it emerged, were not much use.

In these Acts are listed the major offences which Merchant Navy officers and ratings have contrived to commit, together with the courts in which the offences may be tried or investigated and the penalties that may be imposed. In addition the Acts provide that certain of the offences, including drunkenness and absence without leave, may be punished by the Master at his discretion in accordance with a scale of fines agreed to by the shipping authorities and set out in the ship's articles.

In the spring of 1941, however, the sums which a Master might levy in fines were still those prescribed in 1894, though the A.B.'s wages had risen by over 600 per cent. in the interval.³ The punishments, on the other hand, which the courts might inflict had been increased, though for all practical purposes not very drastically, in June 1940. Under Defence Regulation 47A, which was amended in that month, a seaman who committed any of the offences already described, or various others that were enumerated,⁴ became liable, on summary conviction, to imprisonment for a term not exceeding three months, or to a fine not exceeding £100, or to both.

The trouble with these penalties, however, was that for various reasons they could not be enforced. In the first place a seaman who committed any of the offences described in ports abroad could not, in general, be tried there, for the Master had other matters to attend to and in any case the ship—with the crew on board—had to get home in the shortest possible time. Only two alternatives, therefore, were usually open to the Master; either he could fine the culprits the negligible sums which the law permitted, and which they were

¹ J. D. H. Temperley and W. McNair, *Merchant Shipping Acts*, 4th Edition, Part V, Section 457.

² *Ibid.*, Section 459.

³ These fines were not increased until March 1942. Then they were raised from a general level of 5s. for a first, and 10s. for a second offence and subsequent offences to 10s. and £1 respectively.

⁴ The offences specified were: refusing, without reasonable cause, to join, or to proceed to sea in the ship; deserting or being absent from duty without leave; joining, or being afterwards, 'in a state of drunkenness so that the performance of his duties or the navigation of the ship is thereby impeded', assaulting the Master or any other officer; wilfully damaging the ship, or embezzling or wilfully damaging her cargo.

perfectly prepared to pay, or he could threaten them with legal proceedings when they reached this country. This indeed was what the Ministry of War Transport continually admonished him to do, but even the most conscientious Masters were exceedingly and persistently unwilling to start proceedings against even the most troublesome members of their crews, and everyone concerned knew why. After a harassing voyage no Master wished to waste his time ashore in arguments in the Mercantile Marine Office when the crew was paid off, and thereafter in giving evidence in court.¹

If seamen, therefore, because of drunkenness or other misdemeanours, caused their ships to be delayed in ports abroad they could usually at this date, and indeed throughout the war, escape with very small penalties. If they behaved in this way in United Kingdom ports, escape, in the spring of 1941, though not so easy, was still not difficult. For even if the evidence could be collected, the malefactors caught, and proceedings started within a reasonable time—and it was not easy to do any of these things—the magistrate usually proved unwilling to take action even as drastic as the law allowed.

Magistrates' reactions to seamen's misdemeanours varied very considerably, but this, as the Ministry of Shipping pointed out, was in the nature of the British system of justice, and, unfortunately, unavoidable. The same offences were punished very differently in different places. In general, however, the magistrates were lenient.

¹ The following was a case in point, reported to the Ministry in the spring of 1941, by a well-known Master of a famous ship belonging to a famous liner company.

'During the voyage', he said, 'I had a great deal of leave breaking amongst the crew. About twenty-five men out of a total crew of about 330 were habitual offenders. I commenced the voyage by punishing them in accordance with the "Regulations for maintaining discipline sanctioned by the Board of Trade in pursuance of S. 114 (2) of the Merchant Shipping Act of 1894"—as set forth on page 4 of the Agreement and List of Crew (Foreign-going ships)—otherwise known as the "Articles". This had no effect so I resorted to Form (N). This form is issued by the Board of Trade for the information and guidance of shipowners, Masters and seamen, and they were urged to peruse it carefully. I perused Article 221 (b) on page 1 and decided to apply it—for absence without leave during working hours only. This began to make the men think and some improvement resulted.'

Unfortunately, however, the punishments listed in Form (N) were not designed for use by Masters, and this particular Master discovered that he had exceeded his powers.

'When the ship paid off in Glasgow on 22nd May 1941', he continued, 'I was amazed to find that the Officer from the Mercantile Marine Office who superintended the pay-off thought fit to reduce many of the fines I had inflicted. This not only undermined my authority but nullified any good effect that had been achieved in a disciplinary sense.'

A few days later I called on the Superintendent of the Mercantile Marine Office, Glasgow, and discussed the matter with him. He pointed out that Form (N) deals only with offences that are liable to be punished summarily, and that this means police court proceedings. I may be excused for misinterpreting this word because Webster's Dictionary gives "SUMMARILY—In a summary manner; briefly; promptly".

This was the way I had dealt with leave-breaking offences during the voyage.'

The Superintendent was of course in the right. The Ministry informed the Master that 'an examination of the official log book of your ship . . . disclosed that, notwithstanding your statement that some twenty-five members of your crew were habitual offenders, all members of the crew were given "very good" character reports at the time of discharge'.



ATLANTIC TOLL





ATLANTIC TOLL



They knew the ordeals that seamen were required to face at sea and, in the circumstances, it seemed to them, a man could not be blamed if he were troublesome when he was ashore. Usually, according to the information the Ministry received, they did not condemn a man to imprisonment—the only punishment he minded. Instead, as the Shipping Federation (the employers' organisation that dealt with labour problems) once complained in a moment of exasperation, they were apt to fine him merely a 'meagre sum', and to deliver him, not always in the most convincing terms, a harangue on his iniquities.¹

All told, in fact, in the spring of 1941 there were many ways in which merchant seamen could cause trouble, and some seamen, it is clear, were causing it. Reports came in that ships were being delayed in considerable numbers and were missing their convoys. Other ships apparently only escaped this fate—as the Flag-Officer-in-Charge in Greenock put it on one occasion—because of 'endless work . . . often all night, with doubt up to the last moment whether the ship will sail'. This was not from any failing among the officers. Admittedly, for some time it had been growing progressively more difficult to find enough men with a second mate's certificate, for among other reasons many of these young men had joined the Royal Navy on the outbreak of war; it was even harder to find engineer officers for whom there was an insatiable need ashore. Nevertheless it was extremely rare for a ship to be held up for lack of engineer officers and no ships, it seems, were ever held up for lack of navigating officers. Almost invariably the shortage of officers was overcome, partly by minor alterations in the requirements laid down by the Merchant Shipping Acts,² partly because many serving officers took less leave than they would have taken normally. In general, when a ship was delayed, it was because the requisite numbers of deck-hands or firemen could not be found.

The delays seemed very disturbing and the troublesome incidents magnified themselves in the imagination. Inevitably there were

¹ The following case was recorded in *Lloyd's List* for 23rd August 1940. Two men were convicted of absence without leave. The magistrate said: 'I am told, and I know of my own knowledge, that you can't hold up a ship without causing a good deal of expense to the company. One of the consequences of your action is that the owners have been fined—there is no other word for it—a considerable sum a day. It has cost them a considerable sum a day. I can't overlook this offence'.

² These were summarised by the Ministry of War Transport as follows: 'Throughout the war there has been no reduction in the standards fixed for certificates of competency either for navigating or engineer officers. The only changes that we have allowed are: (a) navigating apprentices have been permitted to take the certificate for a temporary second mate after three years' service instead of the normal four; (b) junior engineer officers have been allowed to take the second engineer's examination at the end of twelve months' sea service instead of the normal eighteen—they are still required to have done four years' workshop service ashore; and (c) uncertificated engineers with long experience at sea have been permitted to serve as second engineers in ships with engines of the type to which they have been accustomed provided no certificated second engineer was available . . .'

suspicious about the state of morale. No one it is true need have harboured them if all the facts had been known. But in the circumstances it was impossible to discover all the facts. The Division in the Ministry that was responsible knew, for example, that some men had joined the Merchant Navy since the beginning of the war. Three thousand men had responded to its appeals for volunteers; a few hundred men had been procured from Newfoundland; further, something over 1,000 stewards for whom there was no employment when the luxury liners ceased to ply their trade had been trained as deck-hands and firemen. Great play was made with these facts. Nevertheless if all the recorded numbers of newcomers are added up they amount to much less than the numbers of foreign seamen who serve in the Merchant Navy in peace,¹ of whom many presumably went home when the war broke out, but about whom there was no information. It was known that some men were taking too much leave and others too little, but what was the result on balance? It was constantly said that men were behaving in an undisciplined way but how large were the numbers involved? It was known that the arrangements which the National Maritime Board had devised in peace to ensure that ratings were available in the places where they were needed were working very badly now that ships often did not go to their accustomed ports, but how much available labour did the maldistribution conceal? It was known that some men were leaving the sea, but how many?

In the spring of 1941 no one was in the mood to bother with the complicated statistics which indeed were much more complicated even than these statements suggest.² It was the human problems that concerned them, and (since this was in general a time when many things in many places were going wrong), the fear that the strain might be growing too great to be endured. It was natural to suppose that men should leave the service. Though every one knew that other causes, too, contributed, it was generally believed—as the National Union of Seamen stated at a meeting presided over by the Minister of Shipping in February 1941—that ‘the main cause [of the shortage] appeared to be a drift of deck- and engine-room ratings to shore occupations’. No one appears to have considered the very heavy wastage from death, sickness and other causes outside the men’s control,³ for (except for the men in the Royal Naval Reserve who had joined the Navy on the outbreak of war) most of the figures were not available and indeed cannot be precisely established even now.

¹ See the table on p. 157 which shows that there were 9,790 foreigners in the Merchant Navy in 1938, and Appendix XXVII, p. 179, which shows the nationalities of the foreign seamen on articles on 15th June 1936.

² See Appendix XXX, p. 186.

³ See *ibid.*

Afterwards, when the war was won, it was the many deeds of heroism and the extraordinary feats of endurance that were remembered. The transient suspicions were forgotten that had disturbed the authorities in the one brief moment when it seemed that there might not be enough men willing to man the merchant fleet. The faults, in any case, would have been excusable enough even if the suspicions had been justified. But they were not justified. The delays to ships, it turns out, were so small in the spring of 1941 as to be negligible.¹ Even during the few weeks when they were at their peak they cannot have reduced the United Kingdom's imports by an annual rate as high as 1 per cent. Doubtless there was some indiscipline. There always had been. But it was in minor matters only.² It may well have been a natural, perhaps an indispensable, concomitant of the peculiar virtues which merchant seamen had been displaying since the outbreak of war. Doubtless some seamen had left the service since the outbreak of war—over 14,000 normally left it in peace—and many fewer than normal had come in. But if the net losses were sizeable, the men who remained must more than have filled the gaps by taking, on an average, less time off between voyages than they took in peace. For by the spring of 1941 the service had lost such large numbers through death, sickness and other causes outside the men's control that even if no man had left of his own free will there must still, it seems, have been a considerably smaller number of serving seamen, in relation to the demand, than there is in peace. Yet this was the time when the chances of escaping death in a disaster were smallest, the future most precarious and the sustaining comfort least that comes from the knowledge that everything possible is being done to succour those in distress. So much can rarely, if ever, have been asked before of any group of civilian volunteers as was asked then of merchant seamen; for volunteers for a fighting service in previous wars only made the choice once; when they were in they had to stay, on pain of being shot as deserters; by far the greater part, on the other hand, of the men serving in the Merchant Navy when war broke out must have made the choice of their own free will on a number of successive occasions before the spring of 1941.

Nevertheless, though in the spring of 1941 what was happening was not altogether understood, even if the full truth had been realised it would have made no practical difference. In either case it must have been clear that things could not go on as they were. Justice could not be done to the men, nor the necessary security provided for the nation, when so many of the relevant facts were unknown and so many necessary operations left to the mercy of chance. The

¹ See Appendix XXIX, p. 185.

² See, for example, footnote 1 to p. 166 above.

shipping authorities had to estimate how many men they needed and to see that they got them; the men had to be employed on a permanent basis; they had to be given a fixed and proper amount of leave with pay; there had to be a reserve or pool of men on pay ready for appointment to ships in all the principal ports in the United Kingdom and abroad. All this, however, implied compulsion—that serving seamen should be compelled to stay in the service, that former seamen should be compelled to return to it in such numbers as seemed necessary, and that a supply of new recruits should be assured.

Arguments of this sort applied to various other vital industries and had come to be accepted by the spring of 1941. Under the Essential Work Order of March 1941 the Minister of Labour acquired the power to prevent any employee from leaving work deemed to be of national importance, or from being dismissed from it except for serious misconduct and with the consent of a National Service Officer, though it was stipulated that in the industries that were thus protected conditions of employment and welfare arrangements must be satisfactory. Under the Registration for Employment Order, issued in the same month, the Minister acquired the power to transfer people compulsorily from one occupation to another.¹ These Orders came into operation in the Merchant Navy in the following May. Under the Registration for Employment Order men between the ages of 18 and 60 who had served in merchant ships at any time since 1936 were required to register so as 'to enable the Minister to locate and mobilise the services of seamen who may now be unemployed or who have taken shore employment', and many were directed back to the sea both in 1941 and in 1942.² The Essential Work Order transformed conditions in the Merchant Navy in many ways. It provided continuous employment—for men who were not at sea or on leave were held in reserve; it fixed the amount of leave a man should take at roughly one month in the year;³ it provided that men should be paid while on leave or while waiting to be posted to a ship. Though the scheme was introduced on the Government's initiative its details were worked out by the National Maritime Board and the ship-owners remained the employers—collectively through the agency of the Shipping Federation in the case of the men who passed through the pool and who accounted for about 60 per cent. of serving seamen; individually when the owners wished to re-engage their crews at the end of a voyage.

¹ See W. K. Hancock and M. M. Gowing, *op. cit.*, pp. 306 ff.

² The numbers appear to have been just over 6,000 in the second half of 1941 and nearly 5,300 in 1942.

³ In the case of officers two and a half and in the case of ratings two days for each completed month of service on articles.

By this typically British compromise the unions, the owners and the Ministry came to work more closely together and the authorities to exercise a more comprehensive and beneficent control. From now on the Ministry (through the Registrar-General of Shipping and Seamen) kept a close and continuous watch on the movements of all merchant seamen in whatever part of the world they happened to be. It began increasingly to concern itself with their welfare—with their mails, to which they attached great importance, with their health, with their comfort generally, and with their conditions of life in the ports of this country and abroad. From now on the work that had been started earlier to improve life-saving apparatus began to yield large returns.¹

By all these means the authorities ensured that there should be enough men in the various ranks and ratings to meet the needs until the defeat of the submarines, and that everything possible was done to sustain morale. It is true that it remained difficult to find officers with a second mate's certificate, and more difficult still to find enough junior engineer officers for whose services there were many other claimants; after the end of the submarine campaign, when the British merchant fleet began to increase and when American ships were transferred to the British flag, training schemes for deck-ratings and firemen had to be developed on a large scale. There were always, however, enough Masters, and senior navigating and engineer officers, and, as problems of this sort went at the time, the task of finding the skilled men for the Merchant Navy presented no unusual difficulties. The task that was unusual, indeed except for 1917 wholly without precedent, was the one the men themselves were called upon to perform.

The shipwrecked's chances of survival must have been a good deal better at the end of 1941 than they had been during the twelve months after the fall of France,² and they were much better in 1942 than in 1941;³ moreover, the new life-saving devices and the greater solicitude, it was always said, helped much to maintain morale even when—as in the case, for example, of the rescue ships that began to accompany the convoys but were too few and small to save many lives—the practical results did not amount to much. The British success in saving life, however, was surpassed by the German success in destroying it. Though a smaller proportion of those who were shipwrecked lost their lives in 1942 than in earlier years the number of shipwrecks greatly increased.

¹ See Appendix XXVI, p. 178.

² See footnote 5 to p. 155 above.

³ See Appendix XXVI. After 1942 they got worse again. The writer does not know why this was so, but presumes that it must have been because more men were killed outright by the explosion.

Just over 7,000 men had been killed by enemy action in 1941; nearly 8,000 were killed in 1942; and since the fleet was diminishing at the same time, and there was not, in consequence, a demand for new recruits in the numbers that would have been needed in a fighting service in similar circumstances, the losses fell to an overwhelming extent on the same group of people who had suffered them in the past. Though the point could not be proved, it seems not unlikely that a quarter of the men who were in the Merchant Navy on the outbreak of war, and perhaps an even higher proportion, did not survive until the end, or, if they survived, lived permanently damaged lives, still in the shadow of death.¹

Nothing of this sort, it seems, can have been experienced in any Fighting Service considered as a whole.² In any case, among her followers the sea showed a peculiar harshness to the men of the Merchant Navy, requiring of them a continuously active courage, never ordinarily asked of civilians in war, although they always largely shared the ordinary civilian's impotence when attacked. They were never fighting men and never had fighting men's weapons. The uniform training and discipline, the knowledge accumulated throughout the centuries by the Fighting Services of how, by a combination of discipline and leadership, to sustain a man's spirits in the hour of danger, were not for them; all they had were their native qualities and standards of skill and conduct bred in the diversified conditions of peace. At the time when the Essential Work Order was imposed, and the end of the ordeals was not even in sight, could it be supposed that these would be enough?

After the spring of 1941, however, no one feared, or ever had cause to fear, that they would not be. Among the various responsible authorities, and particularly in the Ministry of War Transport which bore the largest share of the responsibility, there were many people of a temperament not unlike that which prevailed in the greater part of the Merchant Navy itself—resolute, practical, willing to accept men and conditions as they were and unconcerned if the various courses of action that seemed appropriate from time to time, could not be systematised into a policy capable of logical defence. The solutions thus emerged naturally out of the circumstances.

The peace-time regulations relating to merchant ships and seamen were kept in force, amended as seemed necessary and supplemented by instructions and admonitions on principles that defied analysis. In peace, for example, a Master's first duty in an emergency is to his crew, and to his passengers if he has any, and not, as in the Royal Navy, to his ship; and the law which lays this down was not

¹ See Appendix XXVIII, p. 181.

² Although there were some branches of some Fighting Services, e.g. Bomber Command, where the dangers were worse. See Sir William Elderton, *op. cit.*, p. 17.

suspended. For the vast majority of ships that were hit by submarine attack and that did not sink immediately sank in the end—often after they had been reboarded by a party of volunteers—and could not have been saved in any circumstances; and over 40 per cent. of those attacked received two or more torpedoes after the initial one.¹ In these circumstances to have demanded that very large numbers of men should face almost certain death, in order to increase by a minute proportion the numbers of ships saved, could hardly have been possible even in a Fighting Service, and would have been folly for every reason.

Masters nevertheless were instructed that they should not 'tamely surrender' to a U-boat—though indeed surrender in any ordinary sense was out of the question, since the U-boat commanders, with the best will in the world, could not accommodate the survivors of a wreck—that they should not abandon their ships without taking account of their 'ability to remain afloat', and that in cases of doubt 'the boats should remain in the vicinity of the vessel so that she may be reboarded if her apparent condition gives cause for hope'.² For the rest, what the Masters should do was left to their discretion and they exercised it in different ways. Besides the Masters who on rare occasions clearly did not do all that was possible to save their ships, there were the Masters and crews who succeeded in bringing 'their ships to port in almost impossible circumstances';³ the Masters, whom the Ministry commended, who got all their crews safely away in lifeboats before the ship started to sink; the Masters and crews, awarded medals for gallantry, who defended themselves to the last—as did, for example, the crew of a tanker, and there were many like her, attacked while sailing out of convoy in October 1941. This ship fought a submarine single-handed for five hours after she had first been hit; though the position was nearly hopeless from the start the men manned the guns until, when there were only four rounds of ammunition left, 'the third torpedo struck and the vessel began to break in half'.⁴

There was indeed no clearly defined policy or practice in these matters. If the authorities took one line more strongly than another it was that it was best to save lives if this could be done without clearly risking the ship—that it was best in most cases not to wait till the last minute. But there were many who chose to wait, even

¹ This figure was arrived at by the Ministry of War Transport after an examination of 250 depositions relating to ships attacked between 1st July 1942 and May 1943.

² This was not, in fact, the solution to the problem which might at first sight appear, for to board a drifting ship from a lifeboat is not at all an easy matter.

³ The words were the Admiralty's.

⁴ The *San Florentino*, sister ship of the more famous though not more gallant *San Demetrio*.

though they would not have been blamed and might even have been praised had they not waited.

These anomalies were typical of a service which belonged neither to the world of fighting men nor to the world of civilians and in which the practices of peace and war were combined after a fashion that only the British, it would seem, with their habit of grafting the new on to the old, however curious the appearances, could ever have contrived or made to work. It was a service in which, though the State was responsible for ensuring the supply of labour, the owners remained the employers; in which the State from the beginning had instituted a war pensions scheme comparable to that in the Royal Navy, but in which the normal bargaining over rates of pay went on, although the ensuing financial benefits were not on a large scale and so ludicrously disproportionate to the dangers that it would have been impossible to suppose that they provided an incentive.¹ It was a service in which the State in the accustomed fashion rewarded the many outstanding acts of heroism by decorations—6,500 were given in the course of the war for specific acts of personal gallantry—but in which individual employers might, if they chose, provide more tangible rewards.

In general, in fact, although the shipping industry is perhaps more extensively regulated by Acts of Parliament than any other industry, throughout the war it nevertheless displayed to a considerable extent the diversified, individualistic, unregimented appearance characteristic of a former age. Although it was supposed in a general way that the risks were more or less evenly distributed (for relatively few ships or crews were kept permanently in the safer trades) no one knew how they worked out in individual cases, and while some men were torpedoed many times others seemed to bear a charmed life.² The survivors from wrecks suffered the most extraordinary and diverse hazards, sometimes floating about on rafts for long periods or sailing for weeks in lifeboats through the storms and bitter cold of the North Atlantic, or through the South Atlantic in tropical heat. It was a service which boys of sixteen, too young to be conscripted into the armed forces, might enter (if their parents consented)

¹ The following shows the extent to which the A.B.'s wages rose throughout the war:

3rd September 1939 . . .	£9 12s. 6d. a month
15th September 1939 . . .	£12 12s. 6d. a month
1st March 1940 . . .	£15 12s. 6d. a month
1st January 1941 . . .	£17 12s. 6d. a month
1st May 1942 . . .	£22 12s. 6d. a month
1st February 1943 . . .	£24 0s. 0d. a month

Included in the above figures was a sum for 'war risk' (or 'danger') money which was £3 to start with and rose to £10. The writer has been told, however, that war-risk money was granted to start with in order to prevent the increase in the A.B.'s wages, which were very low on the outbreak of war, from serving as a precedent to other industries.

² The writer recollects having been told by one Master that he had sailed unescorted across the Atlantic fifteen times without ever having seen a submarine.



Types of British Masters



Types of British Masters

because it was a civilian occupation. They always flocked to enter it in numbers much larger than the authorities could accommodate, sometimes falsifying their ages for the purpose—as the Shipping Federation once observed: they grew at a phenomenal rate. Once admitted, they took their share of the dangers and were even known on occasions to show more self-possession in disaster than elders, as happened, for example, in the case of a ship, torpedoed in August 1941, which sank within fifteen minutes of being hit. Of her crew of eighty-four, only the third and fourth engineers, eighteen Lascars and three apprentices survived. The third engineer, who was required to make a deposition, 'was in a very nervous state after his recent ordeal'; moreover he had been on watch in the engine-room at the time of the explosion and did not know much of what had happened. It was decided to interview one of the apprentices who had been on deck. This boy had performed various duties in the few minutes that elapsed between the explosion and the sinking of the ship. He was under standing orders to dump the ship's log and other confidential papers overboard in such a case, and this he did. On the Master's instructions he told the wireless operator to send out the distress signal. These and other matters, and the means by which he succeeded in escaping, he related to the Receiver of Wreck in a clear way 'and with a complete air of detachment', which the Ministry's Nautical Surveyor attributed to 'his extreme youth, he being some fifteen and a half years of age and of about twelve months' sea-service'.

Such things could not happen in the Royal Navy where boys of this age do not go to sea, but in this and other matters the Merchant Navy kept to its own ways of doing things. Merchant Navy ratings retained their troublesome habits. In spite of attempts to improve matters, the number of undisciplined characters did not, it was held, significantly diminish. Masters continued to be plagued by the offenders who got drunk in port, and mixed up in brawls, and who used 'insolent and contemptuous language' when reprimanded. The proportion of men, however, who behaved in this way was not large, and the behaviour though irritating was without significance; apart from any other reasons, since the indiscipline chiefly manifested itself ashore, the pool in the United Kingdom and its counterparts overseas prevented any ill results; for if a man was not to be found at the last minute, there was another to take his place. Inevitably, among the Masters and other officers there were the more and the less efficient, and though the variations were not so great as in the days when Conrad (himself an officer in the Merchant Navy) wrote *Lord Jim*, the spiritual descendants of those who figure there tell their stories or have them told in the depositions that the survivors of shipwrecks made before the Commissioners of Wreck.

From the many moving stories thus chronicled it is plain that merchant seamen during the war faced danger and death in different moods and that, as in the Royal Navy, there were 'those who died well and those who died badly';¹ for not all were heroes though the times were heroic. Nevertheless, the fate of nations in moments of crisis turns not so much on the instinctive reactions of human nature as on the spirit, proceeding no one knows exactly whence, that dominates the group, and that may cause people in general to behave either with less or, as in this case, with more courage than human nature ordinarily shows. No difficulty was ever found after the spring of 1941 in getting men to serve; no murmur of protest ever reached the ears of the authorities; no demands involving unusual risks which it was necessary to make from time to time were ever refused. When volunteers were asked for D-Day, pretty well all the merchant seamen in the United Kingdom must, it seems, have volunteered. They were even reported to have found the idea of asking them an insult. 'Morale', the Deputy-Director-General of the Ministry of War Transport informed the Parliamentary Secretary at the height of the submarine campaign in the middle of 1942, 'has not so far been affected, and the only thing one can say with conviction on the subject is that it is admirable and indeed wonderful.' Statements of this sort—the easy tribute, it might seem, paid to those who bear the burden and heat of the day by the others who prefer not to think too closely about the cost—appear suspect to a sceptical generation. This statement, however, was made by a person who knew all the facts for the private information of another who needed to be told the truth.

There can be no precise explanation of the achievement. Those with first-hand knowledge of it always saw it as a kind of miracle: a unique expression of the spirit of a free people into whose causes one did not enquire further. No doubt it would not have occurred but for the generally happy relations in the industry, and between the industry and the Government, and but for the existence of a great tradition and the mood of the times. This is, however, mere supposition. There were many thousands of serving officers and men in the Merchant Navy and even if there had been a general answer to the question of what they felt it was not to be discovered, for men in these circumstances usually do not talk. At the moment of doubt, in the spring of 1941, the authorities tried to find out the state of their morale. They devised a questionnaire, with thirty-nine questions, which they gave to representatives of the officers' and seamen's unions with instructions to make enquiries. But the attempt failed.

¹ See Nicholas Monsarrat, *The Cruel Sea*, pp. 269-272. 'Some men died well. . . some men died badly . . . some men just died.'

Everyone was willing to answer the incessant questions. They grumbled about food; they realised, they said, what it would mean if Britain were defeated; they had not been approached by enemy agents; they had listened to Haw Haw at the beginning of the war because they had thought him funny, but he did not seem funny any longer. The rest was silence.

APPENDIX XXVI

Deaths among the crews of merchant ships that were lost by enemy action¹

(excluding D.E.M.S. personnel and men serving on T.124 agreements²)

A	B	C	D	E	F
Period	Number of ships lost by enemy action in which members of the crew were lost ³	Gross tonnage of ships in B	Total numbers of crew in ships in B ⁴	Numbers of crew who were lost from ships in B ⁵	Proportion of crews lost in ships sunk. (Proportion of D represented by E)
Last 4 months of 1939 . . .	53	209,398	1,466	490	%
1940 . . .	363	1,743,751	12,206	5,553	33·4
1941 . . .	416	1,822,334	12,756	6,873	45·5
1942 . . .	427	2,561,038	17,927	7,622	53·9
1943 . . .	202	1,163,979	8,148	3,923	42·5
1944 . . .	71	339,983	2,380	1,087	48·1
1945 . . .	33	142,609	998	316	45·7
TOTAL . . .	1,565	7,983,092	55,882	25,864	31·7

Source: Table compiled by the author from data provided by the Registrar-General of Shipping and Seamen

¹ The figures in columns A, B, C and E above were provided for the writer by the Registrar-General of Shipping and Seamen. The figures in column E do not represent the total number of deaths in the Merchant Navy (see Appendix XXVIII, p. 181).

² D.E.M.S. (defensive equipment merchant ships) personnel were men from the Fighting Services who manned the guns; men on T.124 agreements were merchant seamen subject to naval discipline employed on merchant ships flying the White Ensign.

³ i.e. the figures in this column exclude ships lost from enemy action in which no lives were lost, and ships lost from marine causes, although most losses in this category were attributable to war conditions, particularly sailing in convoy and without lights.

⁴ These figures should be reasonably accurate but are not wholly so; they have been arrived at by the writer on the assumption, used in the Ministry of War Transport during the war, that one can reckon on an average seven men per 1,000 gross tons.

⁵ These figures exclude merchant seamen who lost their lives in rescue ships that were sunk, and in ships in which they were being carried as passengers.

APPENDIX XXVII

'Nationality of seamen, other than Lascars, employed on 15th June 1936 on sea-going vessels (except yachts and fishing vessels) registered in the United Kingdom, the Isle of Man and the Channel Islands'

The table on page 157 is taken from the Census of Seamen of 15th June 1936. This was the last census published before the war which included details of the kind given below. The writer understands that comparable details could be provided for the years 1937 and 1938. The labour required, however, did not seem justified for the present purpose.

The figures given below yield smaller totals than the figures in the text because they relate only to men on articles—i.e. to all intents and purposes at sea—while the figures in the text relate to the serving population and include, particularly, men ashore between voyages.

Of the 101,887 seamen from the British Empire nearly 27,000 were officers (i.e. Masters, other navigating officers and engineers). There were 206 foreign officers.

<i>Country of which citizen or subject</i>	<i>Total number of men employed</i>
<i>British Empire</i>	
England	62,674
Wales	6,853
Scotland	17,797
Northern Ireland	3,017
Isle of Man	566
Channel Islands	269
Irish Free State	3,470
Malta and Gozo	1,079
Aden	320
British India	840
Other Asiatic Possessions	254
British West Africa	412
British South Africa	387
Canada	616
Newfoundland	182
<i>British West Indies</i>	
Bermuda, British Honduras and British Guiana	584
Australia	613
New Zealand	421
Other British countries	1,515
Nationality not specified and born at sea	18
TOTAL	101,887

<i>Foreign countries</i>	
Norway	201
Sweden	147
Other Baltic countries (incl. Soviet Union)	502
Germany	47
Denmark	93
Netherlands	374
Belgium	42
France	42
Portugal	173
Spain	227
Italy	130
Greece	369
Other European countries	169
Egypt	322
Arabia	120
China	788 ¹
Japan	64
United States	204
Other foreign countries	396
British Protected and Mandated Territories	238
Coloured seamen whose claim to British nationality has not been established:	
Arabia	192
West Africa	361
Other British countries	193
TOTAL	5,394

¹ The reason why these Chinamen are not included with the others under the heading Lascars is because they lived in this country, or in other places outside Asia and East Africa, and therefore were not engaged on Lascar articles.

APPENDIX XXVIII

(i)

Deaths among British merchant seamen, excluding Lascars, due directly to enemy action, and estimated deaths and 'permanently damaged lives' due indirectly to enemy action

The numbers of merchant seamen who died when their ships were sunk by enemy action are given in Appendix XXVI. The total number who died as a result of enemy action is somewhat larger, since it includes men who were lost in rescue ships that were sunk by the enemy, or who were being carried as passengers in merchant ships similarly sunk. This total is estimated by the Registrar-General of Shipping and Seamen as follows:

1939 . . .	493
1940 . . .	5,832
1941 . . .	7,003
1942 . . .	7,978
1943 . . .	4,037
1944 . . .	1,173
1945 . . .	317
Total . . .	26,833

Besides, however, the men who lost their lives directly from enemy action there were many who lost them from causes for which the enemy was indirectly responsible—from so-called marine causes, such as collisions, for example, which would not have occurred but for war conditions, or from war causes (e.g. because a ship hit a British or Allied mine) which the enemy had not directly created. There were also men who died in prisoner-of-war camps or ashore elsewhere as a result of injury or disease which the Ministry of Pensions accepted as attributable to war service.

All told the deaths due directly or indirectly to the war were estimated by the Registrar-General of Shipping and Seamen on 30th June 1952 as 31,908.

It is known, however, that this total is not complete and that it may be a long way removed from being so. For, among other reasons, if a man died ashore of disease due to his service at sea, and if he had no dependent relatives to claim a pension, his death would not figure in the Registrar-General's lists. The Merchant Navy contained throughout the war many young men without dependants (the average age in the service was about thirty-six when the war started and about thirty-two at the end¹), and a number of these young men must have died leaving no trace.

In 1945 the Ministry of War Transport's Statistical Adviser, Sir William

¹ See Sir William Elderton, *op. cit.*, p. 7.

Elderton, after analysing samples of the cases of men discharged from the Merchant Navy pool in 1943 and following years, concluded that:

Though many of the men discharged would be fit for some occupation ashore, either immediately or after a few months, there is a considerable proportion that consists of permanently damaged lives and some who can have had only a few months to live. From the tabulated material it could be said that probably over 60 per cent. of the men discharged in 1943 for physical reasons and about 40 per cent. of those discharged in 1945 would be regarded by a life assurance company as uninsurable or insurable only on special terms.¹

On the basis of these assertions and of the figures of men discharged from the pool, and allowing for the fact that only about 60 per cent. of British seamen passed through the pool, the others being employed by individual liner companies, the writer has concluded that in 1943 there were roughly 3,500 and in 1944 roughly 4,600 British seamen who must have died shortly after they were discharged or whose lives were permanently damaged.

According to the records in the Ministry of War Transport it seems that roughly about as many men must have left the service for physical reasons in 1942 as left it in 1943, though they constituted a smaller proportion in 1942 (53 per cent.) of those killed by enemy action.

The writer has assumed the same ratio of 53 per cent. in order to calculate the deaths and damaged lives due indirectly to enemy action between the outbreak of war and the introduction of the Essential Work Order. This proportion must seem too large, and indeed may be so, but life-saving appliances were much less effective after the fall of France than later, and those who survived shipwreck suffered presumably even greater strains and hardship.

On the basis of these assumptions the writer has compiled the figures on p. 184 for deaths and permanently damaged lives among British seamen. It need hardly be pointed out that the most that can be claimed for these figures is that they give some idea of the orders of magnitude involved. Among their other defects they make no allowance for the fact that the deaths of some of the men in Category B may have been included in the figures of the Registrar-General of Shipping and Seamen. We know, however (see p. 181 above), that the number of deaths which were due to illness ashore before June 1952, and which are included in these figures, were less (and may have been substantially less) than 5,000.

In order to make a rough estimate of the merchant seamen who were in the service on the outbreak of war and who had not lost their lives or had them 'permanently damaged' before the beginning of 1945 the writer has assumed:

- (i) that the population of British serving seamen on the outbreak of war was roughly 132,000;²

¹ See Sir William Elderton, *op. cit.*, pp. 11-12.

² See Sir William Elderton, *op. cit.*, p. 6, Table 3.

- (ii) that this figure had been reduced to about 108,000¹ by June 1941 and that though it is not possible to say how many of these 108,000 had been in the service since the beginning of the war, the chances are that the overwhelming majority had;
- (iii) that the total number of serving British seamen, estimated by Sir William Elderton at 'not over' 145,000 on an average throughout the war, is unlikely to have reached 145,000 until some time in 1944,² so that the rate of loss from death and in terms of permanently damaged lives must have been of the order of 2 per cent. in the second half of 1941, of 9 per cent. in 1942, of 5 per cent. in 1943 and of 4 per cent. in 1944.

¹ This figure has been arrived at by subtracting from the 132,000 the net loss estimated in Appendix XXX, p. 186, at 19,000 minus 5,000 for the French and Danish seamen.

² From the information in the files of the Ministry of War Transport it appears that there were nearly 9,000 new entrants in the second half of 1941, roughly 10,300 in 1942 and 12,500 in 1943. The writer has not collected the figures for 1944 but notes that in November 1943 the Ministry was putting in a claim for 25,000 for that year. Besides the casualties from death and sickness there was a considerable wastage recorded every year after the setting up of the pool as a result of discharges for misconduct, unsuitability, on compassionate grounds, etc. The writer has not made any allowance for these.

(ii)

Deaths among British merchant seamen, excluding Lascars, due directly to enemy action (A), and estimated deaths and 'permanently damaged lives' due indirectly to enemy action (B)

(1) <i>From the outbreak of war to 30th June 1941</i>			
A.	Last four months of 1939	490 ¹	
	Calendar year 1940	5,832	
	First six months of 1941	5,084 ²	
	Total		11,406
	Minus 18 per cent. for deaths among Lascars	9,355	
B.	(53 per cent. of 9,355)	4,958 ³	
	Total		14,313
(2) <i>Second half of 1941</i>			
A.	1,919 ³		
	Minus 18 per cent. for deaths among Lascars	1,576	
B.	(53 per cent. of 1,576)	835	
	Total		2,411
(3) <i>1942</i>			
A.	7,978		
	Minus 18 per cent. for deaths among Lascars	6,542	
B.	. . . . .	3,480	
	Total		10,022
(4) <i>1943</i>			
A.	4,037		
	Minus 18 per cent. for deaths among Lascars	3,311	
B.	. . . . .	3,480	
	Total		6,791
(5) <i>1944</i>			
A.	1,173		
	Minus 18 per cent. for deaths among Lascars	962	
B.	. . . . .	4,620	
	Total		5,582

¹ Figures supplied by the Registrar-General of Shipping and Seamen and quoted on page 178 above.

² Half the figures supplied by the Registrar-General of Shipping and Seamen for 1941 adjusted in proportion to tonnage sunk in the first six months.

³ Half the figures supplied by the Registrar-General of Shipping and Seamen for 1941 adjusted in proportion to tonnage sunk in the second six months.

APPENDIX XXIX

Loss of importing-capacity because of delays to merchant ships as a result of crew difficulties

The statement on page 169 that delays to merchant ships because of crew difficulties were so small that even at their peak in 1941 they cannot have reduced the United Kingdom's imports by a rate as high as 1 per cent. in 1941 was arrived at as follows: Imports in 1941 were 30.5 million tons, of which 1 per cent. is 305,000. If one assumes that an average ship was 5,000 gross tons and carried one ton of cargo per gross ton, that average round-voyage time was 122 days, and that ships that were delayed were delayed on an average for five days, then roughly 120 ships would have had to be delayed on an average a month throughout 1941 in order to lose 305,000 tons of imports.

The Shipping Federation kept records of the number of foreign-going British ships delayed in United Kingdom ports and the number of days' delay, from December 1939. The Ministry of War Transport Representative started to keep returns in January 1941 of the numbers of (a) British and (b) foreign ships delayed, though they did not record the number of days' delay. One or both of these sets of figures is obviously unreliable, since they neither agree with each other nor stand in any constant relation to each other. Indeed, had the Shipping Federation's figures been designed to obstruct analysis they could hardly have succeeded better. Nevertheless there is no single month in which either set of figures shows as many as 120 ships delayed, and in almost every month each set shows a vastly smaller number; nor is it clear that most ships that were delayed were delayed for as long as five days.

APPENDIX XXX

Note on the loss of merchant seamen to shore employment between the outbreak of war and the introduction of the Essential Work Order

By the summer of 1941, when the pool had got into working order, but before there had been time to withdraw men from the shore under the Registration for Employment Order, there were just, but only just, enough men to go round. This, it seems, can only mean that when arrangements had been made to ensure that men were available where they were needed, and when the amount of leave was fixed at roughly one month in the year,¹ the shortage was so far mitigated that crews could be found without delay for all foreign-going ships although there was no margin to meet emergencies. The problem is to discover how this state of affairs came about.

First of all it is clear that the numbers of crews required must have been smaller when the Essential Work Order was introduced than it had been when the war started, for the tonnage of tankers and dry-cargo ships flying the British flag, other than those on Dominion registers (that is, the ships for which the United Kingdom had to provide crews) had declined by nearly 1 million gross tons. There was also much more tonnage immobilised under repair. As a result demand may have been reduced by about 14,000.² This seems a probable figure for other reasons.³ As against this, however, some of the French and Danish ships which had been transferred to the British flag were manned by their own crews. It was estimated that in June 1941 there were 5,000 French and Danish seamen in the British Merchant Navy.

It is known or can be assumed that the following numbers of British seamen had been lost to the Merchant Navy by the spring of 1941:

Royal Naval Reserve	6,300 ⁴
Prisoners of war	600
Foreigners (say)	6,400 ⁵
Dead and disabled (say)	14,400 ⁶
	27,700

¹ Since the average amount of time spent between voyages was about two months a year in peace, the war-time scheme may well have reduced the average amount that was being thus spent in the spring of 1941, even if, as seems likely, this average was smaller than the peace-time average.

² Allowing 1 million gross tons for an increase in tonnage immobilised under repair, and seven men per thousand gross tons.

³ It was assumed that on an average throughout the war the number of men required on articles was 10 per cent. less than in peace. The serving population (excluding Lascars) was about 140,000 in peace.

⁴ It is true that some ships were also commissioned by the Royal Navy. The writer understands, however, that their crews in general went with them so that the 6,300 may legitimately be reckoned as a loss.

[Continued on opposite page]

The known numbers of new entrants (volunteers and Newfoundland seamen) was of the order of 3,500, though since the volunteers came in near the beginning of the war they must have been diminished by death and sickness. There must also have been other new entrants besides these. The writer, for example, has seen no figures for the deck-boys, cadets and apprentices who joined the Merchant Navy between the outbreak of war and the spring of 1941, although a considerable number must have joined, as well, perhaps, as some men besides the volunteers and Newfoundland seamen referred to above.

Roughly, therefore, it seems that the balance sheet can be drawn up as follows if one neglects the new entrants referred to above, for whom no figures are available:

<i>Losses</i>	<i>Gains</i>
	Volunteers and Newfoundland seamen 3,400
	French and Danish seamen . . . 5,000
	<hr/>
27,700	8,400
	<hr/>

It thus appears that between the outbreak of war and the introduction of the Essential Work Order there was a net loss to the Merchant Navy of about 19,000 men, although demand had only declined by about 14,000.

But in these circumstances, even allowing for some possible exaggerations in the estimated numbers of dead and disabled and of the foreigners who left the service, it would have been impossible to man the fleet if there had been a drift to shore industry unless one of two things, or both together, had happened: unless many more men came in than the records show, or unless the serving population spent, on an average, considerably less time between voyages than in peace. Even if these things happened, however, they would be as creditable to the Merchant Navy as the assumption that men did not leave the service.

Continued from opposite page]

* This figure has been arrived at on the following assumptions:

(i) that (see Appendix XXVII, p. 179) seamen of the following nationalities went home after the outbreak of war:

Norwegian	Portuguese	'Other European Countries'
Swedish	Spanish	United States
German	Italian	'Other British Countries'
Dutch	Greek	

(ii) that the resultant total must be adjusted to allow for the fact that Appendix XXVII refers to men on articles, not to the serving population. The writer made the adjustment with the help of Table 3 of Sir William Elderton's *Merchant Seamen during the War*.

* See Appendix XXVIII, p. 181.

CHAPTER VIII

THE FALL IN IMPORTS TO THE UNITED KINGDOM AND THE APPEALS FOR AMERICAN HELP

AS THE SPRING wore into summer in 1941 each of the various crises was brought under control, new techniques were developed for dealing with the unprecedented situations, and ways of proceeding began gradually to settle into routines; but before the crises were overcome the shipping situation was obscured by many uncertainties and nothing could be clearly discerned except that the volume of imports that reached the United Kingdom was diminishing month by month. It was the most anxious moment of the war, for though, later, ships were to be fewer, sinkings heavier and military commitments larger, the future was never again to seem so much in doubt; and even in the spring of 1941 when the crises were in sight of being overcome, and it appeared that the British were not in danger of defeat because ships could not be discharged or repaired, or because crews could not be found in sufficient numbers, it emerged that since all these dangers had been tackled more or less in the nick of time, before they had had significant results or before the results had lasted long enough to have significant consequences, little improvement was to be expected. If the dangers had not been overcome imports must have fallen much more heavily than they did; even though they were overcome the fall seemed, and indeed was, cataclysmic.

Then, as earlier and always, there were three categories of demands which the British-controlled fleet of merchant ships had to meet—the demands of the United Kingdom, of the Commonwealth and friendly countries in the Eastern Hemisphere, and of the Fighting Services. Of these, the demands of the United Kingdom absorbed at this time by far the largest amount of shipping and were of fundamental importance, since it would be impossible to continue the war if the morale of the British people were to crack for lack of food, or if, for lack of raw materials, they failed to produce weapons in adequate quantities or of the right types. Nevertheless it did not follow that the demands of the United Kingdom came first.

On the contrary, in general¹ the demands of the Services at this

¹ There was an exception in the case of refrigerated ships used as troop transports. See Chapter IX (iii) below.

time had an overriding priority. They were growing, slowly but continuously: it was doubtful if they could be met; but the doubts arose not from fear that, in the immediate present at any rate, there would not be enough tonnage, but because of lack of ships of the right type—of enough troopships with the necessary qualifications, of enough cargo-ships with a speed sufficient to keep up with the military convoys, with enough height in the 'tween decks to accommodate the military lorries, with enough endurance to sail, from this country and North America, to Freetown without a stop.¹

These requirements gave rise to a great many difficulties. Nevertheless, in 1941—and, for that matter, in 1942—the War Cabinet never questioned the right of the Services to determine how many men and how much supplies and equipment were needed in the theatres of war, nor their right to the tonnage necessary to transport them provided that ships of the right type were available and provided that they were not wastefully used. If the war were to be won it must be the Services who would win it, so that though it seemed proper to require them to make their plans in such a way as to cause the shipping authorities the least possible inconvenience, it also seemed proper, even if they did not do this, to give them what they asked for, whatever the cost to other claimants.

It is true that at this time the cost was only very small if compared with what it became later. The ships that carried war material to the Middle East would, had they not been thus employed, only have brought something under 1½ million tons of imports to the United Kingdom in the second year of war—or less than 4 per cent. of the total amount received.² All the same this seemed a heavy loss at a time of so many misfortunes; and it was the harder to bear because no one could tell where it would end, and because of all the confusion created in the other shipping services as the Army time and time again demanded ships at the last moment. Nevertheless the military demands were met, in general without questioning though not without grumbles.

As for the demands of the Commonwealth and other territories in the Eastern Hemisphere: they, too, could not be effectively challenged at this time, for no one could measure them, and in consequence they came to have a priority second to the military demands;

¹ See Chapters IX (iii) and XI below.

² See Appendix XVIII. The ships allocated to the Fighting Services were on an average 0.7 million deadweight tons or, say, 0.5 million gross tons more in the second year of war than they had been before France fell. These ships must have been carrying troops or cargo to the Indian Ocean area. Assuming 1 ton of cargo per gross ton and 4.5 round voyages on the North Atlantic per annum they could have brought in 2.2 million tons of imports in a year. Assuming a round-voyage time of 7.5 months they could have brought back 0.8 million tons of imports from the Indian Ocean area. The figure of 1½ million tons of imports given above, however, must be something of an over-estimate since a number of the ships were troopships with little importing value.

for since they could not be measured, it was impossible to say how far they could be safely cut, and it proved impossible to cut them beyond the point which the governments concerned—ignorant themselves, since their economies were wholly or largely uncontrolled, of how much they could safely do without—professed to find tolerable after they had listened to the United Kingdom's appeals.¹

By a curious paradox, therefore, it was the needs which everyone knew to be the most fundamental—the needs of the United Kingdom for imports—which came at the bottom of the list. This country, as it was the fashion to point out at the time, was the residuary legatee. She got what was left over after the Fighting Services had been satisfied and after the territories of the Commonwealth and the other territories for which the British were responsible had received the least on which they claimed to be able to make do. As the carrying-capacity of the fleet diminished and the demands of the Services increased, it was the United Kingdom that suffered the consequences.

It was a long time before the consequences became clear. In August 1940, it was shown, the Ministry of Shipping had assumed that imports in the second year of war would probably be 42 million tons; shortly afterwards this figure was apparently scaled up to 43 million, but on the 30th October it was back again at 42; in December it was down to 35, and in February 1941 to 31. Thereafter the calculations started in relation to the calendar year of 1941 and became even more alarming. In April, even though by that time the haul of Allied ships had increased considerably since the beginning of the year, it seemed that the British would only import 28½ million tons in 1941.

This was less than they had imported in 1917² although the population was smaller then, and although 1917 was near the end of the war and 1941 near the beginning. Large military operations would be necessary in 1942, yet in that year the British would suffer the full effect of the net losses in 1941, at the same time that the attacks on ships continued and might become more severe, and when there would be few if any more foreign ships to take on time-charter. In these circumstances the Americans would have to build a very large number of ships for Britain's benefit if 1942 were not to be a worse year even than 1941. Yet no nation willingly places its destinies so unreservedly in the hands of a foreign power; the menacing, precarious future demanded that the British should hold large stocks; but if they were to build up their stocks they would have to consume even less than the meagre amount that it seemed that the ships would bring in in 1941. The task appeared to be impossible.

¹ See Chapter IX (iv) below.

² See Chapter II, p. 38 above; imports in 1917, excluding oil, were 29·8 million tons.

When, therefore, the Lend-Lease Act was passed on the 11th March 1941, and the dollar problem largely disappeared, the urgent need seemed not only to persuade the Americans to build ships as soon as possible to replace the British losses; it also seemed necessary to persuade them to hand over ships to Britain at once, for a building programme is slow to yield returns, and even the most optimistic forecasts did not assume that the rate of new building would overtake the loss rate before the middle of 1942.¹ In the meantime, the British would need ships in large numbers. This had seemed clear even in December 1940, when imports, it had been supposed, would be 35 million tons in the second year of war.

It is . . . in shipping and in the power to transport across the oceans, [the Prime Minister had then written to President Roosevelt] that in 1941 the crunch of the whole war will be found . . . we ask that in 1941 the U.S. should make available to us every ton of merchant shipping, surplus to its own requirements, which it possesses or controls. . . .²

The British made these requests with an even greater sense of urgency when, in April 1941, Sir Arthur Salter arrived in Washington, as head of the British Merchant Shipping Mission in the United States, to press Britain's claims for ships on the Americans. He was instructed to say that Britain needed large numbers of tankers, some fast troopships, enough cargo-ships to bring in some 7 million tons of imports a year (enough, that is, to yield 35 million tons in all), and, in addition, 100 cargo-ships, in instalments of 20 a month, some of them of special types which the British could not provide themselves, to meet the growing demands of the armies in the Middle East. Altogether, the British estimates of their needs, excluding the tankers and the troopships, involved the loan of about 2 million gross tons or 3 million deadweight tons of dry-cargo shipping.

Apart, however, from the problems created by the Neutrality Act, which at this time prevented United States ships from entering the war-zone (as defined by the President), and from carrying war material, but whose provisions could, it was rightly supposed, be got round, how were the Americans to find 3 million deadweight tons of cargo-shipping? Depleted by sales to Britain and to other nations, their total dry-cargo fleet, it later emerged, was, excluding passenger-ships, a good deal less than double this amount, at a time when their own demands were rising with the need to accumulate stocks and to supply their Fighting Services, and when their new

¹ Sir Arthur Salter assumed on the 8th August 1941 that losses would be 5 million d.w.t. in 1942 and that there would be a combined building output of 'about 6½ million [d.w.t.] a year'.

² W. S. Churchill, *Second World War*, Vol. II, pp. 495 and 499.

building was only expected to yield about 1.2 million deadweight tons in 1941, and did not in fact yield so much.¹

The British demands, it may therefore seem, were out of all reason, but they were not in fact so unreasonable as might at first sight appear, for there was a variety of sources from which, with a little ingenuity, the pool of American ships might be replenished; and 1941 was a year of ingenious contriving in many spheres on both sides of the Atlantic.

In the Western Hemisphere, for example, at this time there were many ships taking refuge from the British blockade—not only French and Danish ships, but also ships belonging to the Germans and Italians. All told they amounted, in January 1941, according to the British estimates, to over 1 million gross tons or about 1½ million deadweight tons, of which roughly 600,000 gross tons were in the ports of the South American countries and the rest in the ports of the United States. If the United States were to succeed in finding means to requisition the ships in their ports and get them to sea in essential services, and if they were to induce the South American States to take similar action, with suitable guarantees against trading with the enemy, there would be a notable addition to the tonnage of the free world which could be used, directly or indirectly, to meet British needs. Nearly 2 million deadweight tons of Norwegian dry-cargo ships had or were about to come on charter to the British in March 1941, but about 750,000 deadweight tons were still free, the greater part in trades between the United States and territories east of Suez. The owners maintained that they could not charter these ships to Britain because they could not forgo the dollar earnings, but it would be difficult for them to persist in their refusal if the United States Government were to undertake to pay the hire in dollars. Though there were British ships in the cross trades that could not be removed because the countries of the Commonwealth that were concerned claimed to be unable to do without them, they could—or so it seemed—be released, at no cost and indeed at much benefit to the United States, if they were replaced by the American ships that were their peace-time competitors.² If the United States Government were to combine with Britain to control the freights and direct the services of all the ships, other than those under British control, which were sailing the oceans of the world, and many of which at this time were carrying inessential cargoes at fantastic profits, more ships would become available for essential British services, both in and outside the war-zones.

¹ Only 507,000 g.t. or 672,000 d.w.t. (major types) of United States dry-cargo shipping was built in 1941, and 42,000 g.t. or 61,000 d.w.t. on British account in the United States.

² See Chapter IX (iv) below.

In the spring of 1941 it thus appeared that there were many means by which the United States might provide Britain with the help she needed without even infringing the Neutrality Act; for though the United States was not a large ship-owning nation, though if she were to embark on a programme of new building the fruits could only be gathered slowly, and though she was still neutral, she was the focal point of the commercial activities of the free world, her powers of pressure and persuasion, if joined with the British, would be irresistible, and her good will seemed assured.

The response which Sir Arthur Salter met when he arrived in Washington was extremely encouraging. The isolationists, whose chief argument had been that Britain was already defeated, were temporarily silenced by the British victories in North Africa; Sir Arthur had, he cabled to the Prime Minister, arrived at the 'psychological moment, when events in the "Battle of the Atlantic", your messages and reports from Harriman, Wilkie [and] Winant had given merchant shipping a foremost place in the mind of the President and his colleagues'. A month after his arrival, on the 1st May, the President instructed the Maritime Commission (a body whose principal function in peace was to foster the growth of the United States merchant navy) 'at the earliest possible moment to secure the service of at least 2 million tons of merchant shipping which exists and plan the operation thereof in such a manner as will make their cargo space immediately effective in accomplishing our objective of all-out aid to the democracies'. In April the President had declared the Red Sea to be outside the war-zone; if it were necessary to employ American ships in the Atlantic they could, it appeared, be transferred to the Panamanian flag.

It seemed, therefore, as if British needs were to be met, largely at least in 1941 and wholly in 1942. Sir Arthur had the highest hopes. A grandiose, though at this time still somewhat nebulous vision, born of a large number of projected expedients devised piecemeal, began gradually to take shape in the minds of those who directed policy in Britain and America. The greatest ship-owning and imperial power, and the country with the largest natural resources and productive capacity, would between them control the greater part of all the ships sailing the seas and oceans of the world. By prohibiting the voyages they held to be inessential and thus forcing owners into ones of which they approved, and by requisitioning the enemy ships in the Western Hemisphere, they could, it seemed, supply the urgent needs of the United Kingdom and of the armies in the Middle East, and thus bridge the gap between supply and demand until the flood of American new building should begin to flow.

Between the vision and the reality, however, there was unfortunately a large difference, and fears that this might be so very quickly

emerged in London. When the President had ordered the Maritime Commission to provide '2 million tons' of shipping, what exactly had he meant? Had he meant 2 million gross tons, that is 3 million deadweight, or 2 million deadweight, that is 1.3 million gross tons? Did the term 'democracies' include China? Did the phrase 'ships which now exist' mean the existing United States fleet, or all existing ships—Norwegian, Danish, German, French, Italian and others on which the United States might hope (but possibly fail) to lay their hands? Did it represent the most Britain might expect or only a first instalment—for, as Sir Arthur said, the British would, in the course of time, need more than 2 million gross tons (or 3 million deadweight)?¹ Did it refer only to dry-cargo ships or did it also include tankers?

In a troublesome way, as it appeared to the British Merchant Shipping Mission, the civil servants in London began to ask all these questions. Sir Arthur Salter maintained that the ambiguities were inevitable. The President's directive, he said, 'was intended to impel the Maritime Commission to the greatest possible effort and to help them in overriding protests from the interests affected It was therefore put as high as possible and intentionally not precise in terms. I was consulted throughout and believe that . . . [it] was the best possible for its purpose'. It would, he felt, be impolitic and ungenerous in the extreme to look the gift horse in the mouth. The attitude of the President, and of the Maritime Commission which was working with immense energy on Britain's behalf, seemed to him beyond praise. It was hard, he felt, for people in London, harassed as they were by their own overwhelming problems, to realise how unparalleled were the energy and generosity displayed by the United States in coming to Britain's help at great inconvenience to themselves.

Very soon, however, though Sir Arthur's sense of gratitude did not diminish, a note of caution began to appear in his reports. As he was to say later: 'though the policy has been determined, the harvest has still to be gathered', and the gathering presented great and increasing difficulties. All the projects for helping Britain gave rise to intricate problems of administration; most of them, in the nature of the case, involved hardship or financial loss to people who immediately sought for strings to pull in Washington and, as it was said, for skeletons to draw out of the British cupboard in the shape of British ships inefficiently employed, British commercial interests seeking protection at the expense of American, and exaggerated British needs. These difficulties could only have been overcome by

¹ Sir Arthur Salter wrote to the Prime Minister: 'even if we get 2 million tons we shall want more'.

sustained, co-ordinated application, but the various departments of the United States Government were never much given to acting consistently and in concert, and the British supporters in Washington found it particularly difficult to make them do so now, when the country was still at peace and disunited on the question of help to Britain, and when, after the invasion of Russia, the heroism of the Russian resistance eclipsed the news of the Battle of the Atlantic, already becoming tedious from long familiarity.

As early as the end of May it had emerged that the 2 million tons which the President had instructed the Maritime Commission to put at the disposal of the democracies meant 2 million deadweight tons not 2 million gross tons; that the help it represented was destined for all the belligerent countries and not merely for Britain; that the sources from which it was to be provided were all the possible sources and not merely the existing United States fleet, and that it included tankers. As time went on it became increasingly doubtful how much hope could be placed even in these diminished prospects.

It is true that the United States came increasingly to help the shipping situation in many ways besides providing merchant ships. They had augmented Britain's supply of escorts after the fall of France by giving her some of their old destroyers in exchange for bases in the Western Hemisphere: after September 1941 the American navy began to take part in escorting British trade convoys; British ships were repaired in the United States ports in large numbers; the ability to procure supplies in North America without paying for them not only permitted the British to employ as many ships as possible¹ on the relatively short voyage across the North Atlantic; it enabled them to import more finished and semi-finished articles, and fewer raw materials which take more space, and thus to increase the value of their imports. In these and other ways great and in most cases continuing benefits accrued to them. Nevertheless by the beginning of the summer of 1941 it was becoming daily clearer that in the matter of dry-cargo ships Britain must for some time to come meet her needs largely if not almost entirely from her own resources.

In the spring of 1941, it was said, this had appeared impossible, but partly, or so it appears in retrospect, from lack of determination to try. The lack of determination, however, arose not because the British hoped that they could transfer to the Americans burdens which they could shoulder themselves, even though with great difficulty—such a view was never held—but from other reasons dating far back into the past.

¹ For the limits of the possible see Chapter IX (iv) below.

The purchasing departments had always been suspicious of the Ministry of Shipping, and the frequent changes in the estimates of importing-capacity after France fell did not increase their confidence. It was plausible and comforting to say that the Ministry of Shipping was always wrong; it was tempting in these circumstances to assert, first that it was impossible to exist on 35 million tons of imports and then, as time went on and the estimates and the imports continued to fall, that though 35 million tons might, at a pinch, be tolerable, nothing short of this amount was to be endured and means must be found—by employing more ships on shorter voyages, by taking more ships from the cross trades, by sailing more ships independently to save the waits at convoy assembly points—to increase the rate of importation. All these things were constantly said in the autumn of 1940 and the spring of 1941.

Facts, however, do not change because one shuts one's eyes to them. All the projected expedients were either impracticable or did not serve their purpose.¹ There were no means of substantially raising the rate of importation, and refusal to admit this only meant that the imports that came in were to a greater or less extent the wrong imports (for the proportions that are appropriate to, say, a 35-million-ton programme are not the proportions appropriate to a programme of 28½ million) and that there was a perpetual wrangle between the departments about who was to have what when the results fell short of the expectations.

These difficulties first became acute in the winter of 1940, when imports were always lower than the forecasts and when each of the principal purchasing departments constantly maintained that even the allocations, made by the Economic Policy Committee on the basis of the forecasts, were too small for safety. The result was a state of uncertainty which impeded the planning of production, and perpetual threats of disaster as the endeavour to meet the larger requirements in full put the smaller ones, which were often nevertheless essential, in danger of being squeezed out altogether.

Since the Economic Policy Committee could not prescribe a remedy for this state of affairs, the Ministry of Shipping took it in hand. It knew considerably more at this time about the relative urgencies of the various needs for raw materials, and about the level of raw material stocks, than the Ministry of Supply knew itself. Judging that the stocks of raw materials were in a much more precarious state than the stocks of food, it proceeded, not indeed to meet the Ministry of Supply's programme in full, but to allocate to it a

¹ For the difficulties in the way of employing more ships on the shorter hauls see Chapter IX, p. 236, below; for those in the way of diminishing the tonnage in the cross trades see Chapter IX, p. 235; for what happened when it was decided to sail ships of slow speed independently see Capt. S. W. Roskill, *op. cit.*, p. 457.

larger proportion of the diminishing total than the proportion to which it was entitled under the existing, but inappropriate, allocations. Over the months August to November 1940 the Ministry of Supply's programme had been fulfilled to the extent of nearly 96 per cent., but the Ministry of Food's programme was some 15 per cent. short.

This brought the Minister of Food into battle. He did not, he said, enumerate his deficiencies in imports 'by way of complaint, since I have no doubt that the Ministry of Shipping have done their best for the Ministry of Food under very difficult conditions'. His point was that the conditions were so difficult that they could not be allowed to continue. 'The vital issues of the food supply of the civilian, industrial and fighting services of this country', he maintained, 'can hardly be regulated in such a fashion.' He appealed to his colleagues on the Economic Policy Committee to reconsider the departmental allocations.

The Economic Policy Committee, however, had never been competent to fulfil this function and was not competent now. It met too rarely, it considered too many subjects, it lacked all the necessary statistical information. It was decided to transfer to a new ministerial committee, the Import Executive, the task of correlating the various demands for imports and of keeping them within proper bounds.

The Import Executive held its first meeting on the 3rd January 1941. Though it had only one function instead of a large number, it suffered in other respects from the same disabilities as had its predecessor. It inherited the attitude of suspicion towards the estimates of importing-capacity and the belief that with more forethought and efficiency the volume of imports could be increased, so that it spent much time in propounding and investigating fruitless projects; it had no figures of stocks and consumption rates, and lacked, therefore, the only means (although admittedly they must have been very imperfect) of adjudicating between the rival claims for food and raw materials; in any case the chairman was the Minister of Supply who was one of the parties to the dispute.

The dispute therefore went on. At the beginning of March, when the programme of the Ministry of Supply for 1941 stood at 16.8 million tons and the programme of the Ministry of Food at 13.2, the Minister of Food went to Chequers and demanded that the Prime Minister should intervene.¹ The Prime Minister proceeded to decide the issue by establishing general principles which remained in force throughout the rest of the year and were accepted without challenge.

¹ See R. J. Hammond, *op. cit.*, Vol. I, p. 164.

These general principles were based on the assumption, which prevailed throughout the rest of the war, that food imports must be sufficient, both in quality and quantity, to sustain the nation's health and morale, and that there could be no sense in increasing the imports of raw materials to be used for war production if the energy to make use of them were lacking. It was essential, the Prime Minister said at a meeting of the War Cabinet on the 31st March, 'to import sufficient to maintain the staying power of the people, even if this meant a somewhat slower development of our Service programmes. Nothing must interfere with the supplies necessary to maintain the stamina and the resolution of the people of this country'.

Precisely what is necessary to maintain stamina and resolution is, of course, a matter of dispute. The Prime Minister did not believe that the 'apparent tendency in our food policy to move towards a basal diet of bread, oatmeal, fats, milk and potatoes' would in fact do so. But on any other basis, the Minister of Food had been asserting since November, food imports must reach a level in the neighbourhood of 15 million tons a year. The Prime Minister directed that he should receive this amount as long as the estimates of importing-capacity remained unchanged—that is approximately 31 million tons for the calendar year of 1941. At the same time he directed that finished munitions and miscellaneous imports of manufactured goods were to be allowed 1 million tons. The imports sponsored by the Ministry of Supply were to have what remained—that is 15 million tons or nearly 30 per cent. less than this Ministry had declared four months earlier to be the bare minimum. Further, if imports were to decline below 31 million tons, the Prime Minister decreed, the deficit was to be met by a cut of 2 tons on the programme of the Ministry of Supply to every 1 ton cut from the Ministry of Food.

The same methods were therefore adopted in 1941 towards the demands for raw materials as had been adopted in February 1940. The claims of the Ministry of Supply, for which it could not provide a precise justification, were placed at the bottom of the list. It was told, in effect, that it must make do on what was left over after the more urgent needs had been met.

It would, the Prime Minister pointed out, be helped towards making the necessary reductions by a revision of the army scales. These would be reduced to a size more appropriate to the type of war the British would in any case have to wage. There would be 475,000 fewer men taken into the Army up to the end of 1942 than had previously been allowed for and, in consequence, a smaller demand for accommodation, clothing and weapons.

Primarily, however, it would seem, it was not because of the economies that resulted from these measures, but through a drastic scrutiny of requirements all round, that the Ministry of Supply

managed to cut its programme down. The main cuts fell in the only places where they could fall, on the largest items—steel and steel-making materials and timber. At the end of November 1940 the Ministry of Supply had estimated its minimum timber requirements at over 3 million tons per annum, and its minimum requirements for steel and steel-making materials at nearly 12 millions. In April it had got the minima down to 1.3 and 7.4 million tons respectively. The revised Army scales cannot have accounted for these differences.

In April, in fact, the Ministry of Supply at last applied itself to drawing up, to quote its own words, a 'realistic programme', that is a programme which in total did not exceed the expected volume of imports, and in detail ensured that a reasonable balance was maintained between the various items. Among other things, it appears, it had not previously ever checked the past demands of its various clients against the amounts that they had consumed, and it was not until the spring of 1941 that it emerged that their consumption was often as much as 25 per cent. less than what they had put forward as their minimum needs.¹ When these practices were moderated (for it does not seem that they were ever completely stopped) it turned out that with the help of the growing yields of timber and iron ore from home sources, 15 million tons of imported raw materials a year would suffice for essential civilian consumption and to maintain war production at the level which the supply of the necessary labour permitted.

By the end of the spring of 1941, therefore, although the British were hoping for ships from the Americans to mitigate the austerities of civilian life and to build up stocks, they were preparing to make do without them. Without them, it was clear, the present must be uncomfortable and the future bleak. The 31-million-ton import programme, allowing for 1.4 million tons to build up stocks,² involved cutting the ration of many foods and the virtual elimination of almost all imported fresh fruit and vegetables, and of almost all imported animal feeding-stuffs. In 1941 the pig population fell 41 per cent. and poultry nearly 17 per cent. below the pre-war average.³ But these sacrifices did not jeopardise the war-effort. The war-effort, it appeared, would not be jeopardised, at least in 1941, even if imports fell, as in April and May it appeared they must without American ships, to 28½ million tons.

Thus ended the last of the domestic crises that were caused by the fall of France, and that were more disturbing than any of those that came afterwards because they had led to a confusion which had

¹ See J. Hurstfield, *op. cit.*, pp. 201 and 238-239.

² This is the amount by which stocks were built up from existing imports, which in the event did amount to nearly 31 million tons. See Appendix XXXI, p. 201.

³ *Statistics Relating to the War Effort of the United Kingdom*, Cmd. 6564.

seemed as if it might become beyond control. In May the Ministries of Shipping and Transport were amalgamated in the Ministry of War Transport under Lord Leathers, of whom the Prime Minister was later to say that 'It was very rarely that he was unable to accomplish the hard tasks I set'.¹ Shipping and ports came under the same management. The right of the Ministry to speak with authority was established. The intricate system of controls and committees began to take a shape that permitted all the various demands on ships in the United Kingdom to be considered together, and adjusted to each other and to the supply.

All this gave cause for confidence, but for confidence qualified nevertheless by many doubts. Though the British could have survived on 28½ million tons of imports in 1941, this amount, at this stage of the war when home production was some distance from its peak, would not have sufficed to build up stocks. Nor, in May 1941, could Britain be entirely certain even of 28½ million tons; for while the difficulties were being solved in the United Kingdom, they were only just beginning in the overseas territories for whose economies the British were responsible, and for whose benefit they might be called on to make further sacrifices. Alternatively, the shortage of troopships, and of port capacity in the theatres of war, might, it seemed, set a limit to the war effort, even though problems of production, morale and distribution in this country did not.

¹ See W. S. Churchill, *The Second World War*, Vol. III, p. 132.

APPENDIX XXXI

Net consumption of imported supplies

(i.e. imports plus amounts withdrawn from or minus amounts put to reserve)

	<i>Imports</i>	<i>Changes in stock level</i>	<i>Net consumption</i>
First year of war	44·2	+0·9	43·3
Second year of war	31·5	+1·9	29·6
Calendar year 1941	30·5	+1·4	29·1
Calendar year 1942	22·9	-2·45	25·35
Calendar year 1943	26·4	+2·8	23·6
Calendar year 1944	25·1	-1·9	27·0

Source: Table compiled by the author from data in the Ministry of War Transport

CHAPTER IX

THE INDIAN OCEAN AREA

(i)

The Problems

UNTIL THE SPRING of 1941 the seriousness of the shipping situation had been judged principally by its manifestations in the United Kingdom. Most of the ships that were sunk until then were sunk in the north-western approaches; the only ports that were bombed were this country's ports; it was the civilians at home,¹ or so it seemed, who were the principal sufferers from the decline in the volume of tonnage and in its carrying-capacity, and from the growing demands of the Services for ships. The dangers to which the shipping situation exposed this country and the imperative need to overcome them, were the principal preoccupations of the shipping authorities.

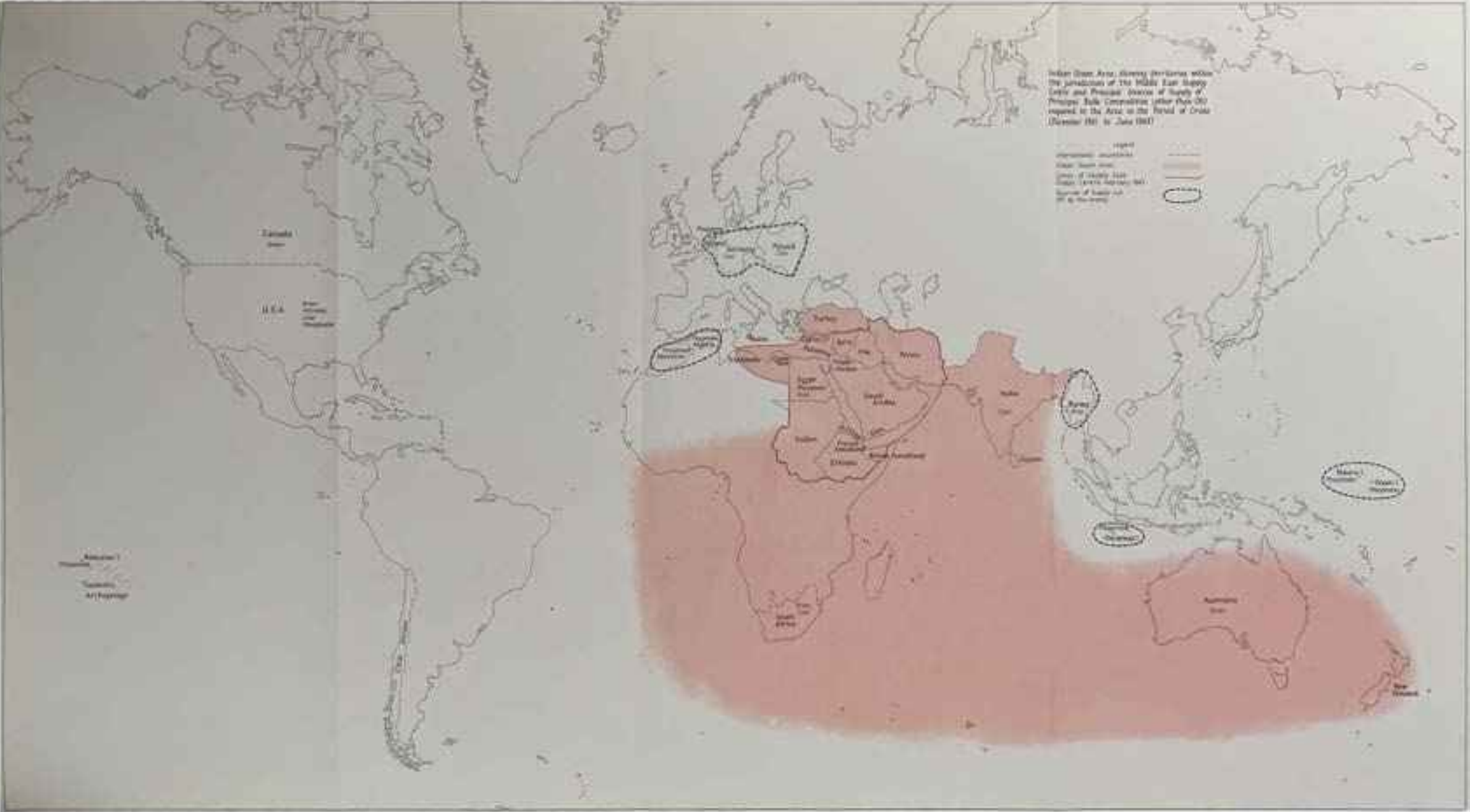
Long before the spring of 1941, however, the War Cabinet had been concerned with other matters besides the defence and provisioning of the United Kingdom. While the battle was being fought in the North Atlantic to guard the supplies moving into this country, other supplies and large numbers of troops were moving outwards to what came, somewhat curiously as it may seem, to be called 'the Indian Ocean area'.

'The Indian Ocean area' was a term, like many others used during the war, by which people violated the ordinary conventions of speech in the attempt to describe unprecedented situations. The shipping authorities, it appears, invented it, as they invented a large number besides in the course of their career, for their own private convenience. It disregarded the designations on maps, for the gateway to the area was at Freetown in Sierra Leone on the west coast of Africa, and the area itself embraced all the territories that a ship must pass that proceeds thence, via the Cape of Good Hope, to Suez, Port Said, Alexandria, Aden, Basra, Bombay, Calcutta or (until the Japanese captured it) Rangoon. Australia and New Zealand were for most purposes also included within it. It did not correspond to any ethnographical divisions, for it was inhabited by peoples of many different origins, colours and languages, nor to any peace-time pat-

¹ In fact (see Appendix XXXVIII, p. 247) Egypt's imports, including many vitally necessary imports, had fallen by a larger proportion than the United Kingdom's.

Indian Ocean Area, Slavery Territories within the jurisdiction of The Middle East Supply Centre and Protocol, Source of Supply of Principal Bulk Commodities (other than Oil) required in the Area in the Period of Crisis (December 1941 to June 1942)

Legend:
 - - - - - report
 - - - - - information available
 - - - - - Slavery Territory
 - - - - - Area of Supply
 - - - - - Source of Supply
 - - - - - Oil & Fuel
 - - - - - Other



tern of economic relations, for in the territories within it standards of living and ways of earning a living varied very greatly, and trade proceeded with many other parts of the world; the phrase had no place in the terminology of the military authorities, for though it expressed a strategic reality in the spring of 1942, when it was feared that the Japanese might join forces with the Axis, nevertheless this was a transitory situation. The military authorities made their plans in terms of a variety of separate commands—the Middle East Command, for example, the Persia and Iraq Command, the South-East Asia Command; only the shipping authorities were forced ultimately to think in terms of an entity that embraced them all and to which, as being the nearest convenient approximation to the truth, they attached the name 'Indian Ocean area'.

The Indian Ocean area was thus an arbitrarily-created war-time entity, whose various territories had to start with only one fact in common; they bordered on the seas and oceans that formed after the closing of the Mediterranean the principal highways to the theatres of war in the Western Desert—the highway from the United Kingdom via the Cape, and the highway across the Indian Ocean itself from India, Australia and North America.

In the centre of the Indian Ocean area lay what came to be known as the Middle East, consisting of the territories that border on the Red Sea, Eastern Mediterranean and Persian Gulf. Of these, Egypt was the base for military operations in the Western Desert and lay along the water-ways that supplied the battle areas, that is, the Red Sea, and the Suez Canal at whose northern entrance were the only sizeable ports, Alexandria and Port Said, that the Middle East possessed, and that, after the closing of the Mediterranean, had to be approached from the south. All the other territories, situated equally on the lines of communication, had, if they were not members of the British Commonwealth, to be induced by force or persuasion to adopt an attitude friendly to the British cause.

This was only the extension of an age-old process, that had started in the eighteenth century with the growth of British power in India. But the strength of Great Britain, in relation to that of the dominant power on the continent of Europe, was weaker now than it had been then, and it was necessary to summon the forces of the New World to redress the balance of the old. The British troops and the civil populations in the Middle East had increasingly after the passing of the Lend-Lease Act to be supplied from North America, and with the Mediterranean closed to merchant ships they were more or less equidistant from there and from this country.

The Middle East became, in consequence, the centre of the Indian Ocean area and the meeting-place of war and peace. Supplies converged on it from the two great industrial powers still unsubdued

and hostile to the Axis, of which one was fighting but the other neutral. In its ports the British ships, sailing in from the Atlantic war-zone, the familiar blue, red and yellow funnels and bright coloured hulls of peace painted the war-time grey, mingled with the American ships, in their peace-time colours, which, in the summer of 1941 began to sail in from the Pacific with lend-lease cargoes for the British armies. The demands of war that arose within it for ships and port facilities and labour and commodities, increasingly disrupted the economic life of populations otherwise unaware of the convulsions in Europe, spreading confusion far beyond the scenes of battle among economies as yet uncontrolled.

In peace the sea-borne imports and exports of the Indian Ocean area were carried partly by ships belonging to nations in Europe and North America, of which a large proportion were United Kingdom registered ships, that sailed into the area from outside; partly by these same ships which, before they returned home, performed cross-voyages (that is voyages between two ports neither of which was the port on which the ships were based) within the area itself; partly by European ships, including United Kingdom registered ships, that were permanently employed in the area and never came home; partly by ships belonging to the countries within the area itself. This only happened, however, to a small extent, for most of these countries possessed few or no ships of their own and even Australia, the largest ship-owning nation amongst them, only owned 489,000 deadweight tons of ocean-going¹ dry-cargo shipping before the war. Similar arrangements had to continue throughout the war; nevertheless after the fall of France the amount of shipping available for carrying civil cargoes to and within the area constantly diminished and the proportions available for the various services constantly changed; for the oceans of the world know no frontiers, and what happens in any one affects what happens in the others. As the war increasingly disrupted the normal patterns of trade in Europe the repercussions spread into the Indian Ocean area—and beyond across the Pacific and the Atlantic to the Western Hemisphere.

All the territories in the area were largely agricultural territories, but even in peace in the greater part of the Middle East, and in several countries elsewhere in the area, only about enough, and sometimes less than enough, grain was grown to meet the local requirements, which for various reasons² the war increased. During the war many countries in the Indian Ocean area needed to import grain; they also needed, as in peace, to import fertilisers; Egypt and other places needed to import coal, and the presence of British

¹ i.e. of 1,600 gross tons and over.

² See Section (iv) below.

ships and armies greatly increased the demand. Grain, coal and fertilisers were the principal, though by no means the only, needs from overseas—the commodities whose deficiencies must have the most serious consequences, and whose transport presented the worst difficulties because of the large quantities in which they were consumed.

The territories which in war required imports of these commodities had in peace sometimes not needed them at all or had needed them in smaller quantities, and had sometimes procured them outside the area from sources that were far distant or, increasingly after the summer of 1940, occupied by the enemy. Yet, to a greater or less extent, all the commodities were to be found within the area itself. Australia, for example, was a large exporter of wheat, Burma (until she was conquered) a large, and Egypt a considerable exporter of rice; there were phosphates in Egypt that could contribute towards the needs of South Africa, Australia and New Zealand for fertilisers, though they were useless for Egypt's own purposes;¹ there were deposits of coal in South Africa and in Bengal.

These facts seem to point to clear conclusions. The military authorities had discovered at the end of 1940 that some of the equipment and supplies which the armies needed, but which could not be provided on the spot, could nevertheless be provided from other territories in the Indian Ocean area. They accordingly set up the Central Provision Office in India, to consider together all the demands that could not be met locally, and the Eastern Group Supply Council to consider the best sources of supply.² Similarly, or so it might appear, the trade of the Indian Ocean area in civil commodities needed to be reorganised so as to make the area as self-supporting as the shipping situation required.³

This apparently simple idea, however, involved assessing the needs, and determining their relative urgencies, estimating the resources, controlling the imports and exports, and, to a greater or less extent, rationing the consumption in all the territories of the area, containing hundreds of millions of people organised under governments that were in many cases both independent and highly inefficient by western standards. It was the sort of grandiose conception, easily comprehended in its broad outlines but producing immense complications in practice, that the heated imaginations in the Axis countries naturally embraced, but that did not so readily commend itself to British administrators, who mistrust vague phrases, who like to proceed step by step to clearly defined objectives,

¹ The fertilisers she needed were nitrates from Chile, see p. 230 below.

² See P.E.P. Broadsheet No. 195, 27th October 1942.

³ The shipping situation never required that it should be entirely self-sufficing. See p. 235 below.

and who, in any case, were overwhelmed in the early part of 1941 by more immediately pressing tasks.

For no time could have been less propitious for this sort of undertaking than the twelve months that followed the fall of France—a year of many set-backs when the enemy held the initiative and long-term plans were hard or impossible to make, and when the degree of American help was uncertain. For, in the nature of the case, trade in the Indian Ocean area could not be controlled without American co-operation, since the process of control would have to start with the ships, and besides the commercially operated American ships that in the summer began to sail to the Middle East with lend-lease cargoes, there were, in other parts of the area, other American ships subject to no control at all, and many Allied ships still trading free with American blessing.

The result—since in spite of the concourse of foreign ships in the area there was nevertheless less tonnage there on commercial services than in peace, and greatly less in the Middle East—was that freights soared, inessential cargoes often found transport to the exclusion of the more essential, the contrasts between riches and poverty became more glaring even than usual, and the British found themselves increasingly threatened with the need to come to the rescue if the shortages should become too great to be endured and should issue in civil disturbances that might shatter British prestige and impede the prosecution of the war. For some time, however, these problems, though increasingly disturbing, were not the most pressing problems. The first task was to get the troops and their equipment to the battle areas in ships that, because of the thousands of miles of ocean to be traversed, had to be withdrawn in portentous numbers from other services, through ports never designed for such contingencies, and by means of highly inadequate roads and railway systems. The consequences to the civil populations along the great ocean highways had for many months to be left to chance.

(ii)

The Ports

The inconveniences of the Indian Ocean area as a place to fight in were very great and went on growing. The troubles started, both in time and place, at Freetown. Before the fall of France, Freetown had been the point from which ships homeward bound from the Cape and beyond had sailed in convoy.¹ But at this time, before the

¹ These were the S.L. (Homeward) convoys, started on 14th September 1939. The O.S. (Outward) convoys did not start till 27th July 1941.

war in the Middle East had started, and while the Mediterranean was still open, the number of ships using the route had only been small. Afterwards, apart from the tonnage employed within the Indian Ocean, and in the shuttle service between this country and North America,¹ the great majority of ships, whether sailing in convoy or independently and whatever their destinations, called at Freetown on the way out and home. In consequence, this hitherto inconsiderable place, in which in peace there were rarely more than one or two ships at a time, became after the summer of 1940 one of the most important convoy assembly points in the world.

It had been cast for the part because of its strategic position and its large natural harbour capable of accommodating 150 ships at a time. With Dakar in the control of Vichy France, it was the only port in West Africa that could serve the purpose, but nevertheless it served it to start with very badly. As the Director of Trade Division in the Admiralty put it on one occasion:

It would be difficult to find another port where so much was expected from such few facilities, there being no deep-water berths, no dry-dock, poor repair facilities, inadequate shore accommodation, insufficient European personnel, shortage of skilled labour, lack of building materials, inadequate stocks of food and a trying climate.

The Director of Trade Division, however, was evidently an exponent of the British art of understatement. His catalogue could, without exaggeration, have been very considerably extended.

Sierra Leone had the heaviest rainfall, it was said, of any British Colony, but there were no large reservoirs in Freetown, and in the dry season, which lasted from January to June, there was only enough water for the local population, swollen as it was by large numbers of troops and Service authorities. For, to add to the difficulties, all the British possessions in West Africa had to be defended against attack from the potentially hostile French territories that separated them one from another, and to serve various other military purposes; so that the ships arriving there included not only the ships in passage to and from the Indian Ocean area, and all the naval ships, but also ships carrying aeroplanes for the ferry service from Takoradi to the Middle East,² and the usual assortment of army cargoes that military bases required. This large concourse of ships—there was at least one occasion in 1941 when over fifty entered Freetown on a single day³—

¹ And after Pearl Harbour in the services between North America and the Middle East via the Pacific. See Chapter XIII below.

² These were shipped to Takoradi itself, and indeed each colony had to be supplied through its own ports, but the heaviest burden fell on Freetown, not only a military base, but a naval base and a base for the aircraft engaged in convoy protection. It was the only port in the area in which there were serious difficulties.

³ This was when W.S.12 and O.S.7, with fifty-four ships in all, arrived simultaneously on the 14th October.

required huge quantities of water even though everything possible was done to keep the requirements down; 1,700 tons a day was the average demand by the end of 1941, and it continued to grow as the convoys increased in size. There was water not far from the town, in the Charlotte Falls, but, or so it was maintained for some time, it was impossible to tap it, and when, finally, it was decided that a pipe-line could be constructed, the project took many months to complete. The pipe-line did not come into operation until January 1943, and, in the meanwhile, the necessary thousands of tons had to be supplied by other means.

The town is built on a hill, the land rises sharply from the water's edge and the country behind is mountainous. There is practically no flat area of foreshore and therefore little space in which to store coal. The coal required for the cargo-ships (which, unlike the oil-fired troopships were largely coal-burning) had to be stored afloat, and since for a long time there was great difficulty in providing mechanical coal hulks, it had to be delivered to the ships in canvas bags by native labour, whose vagaries drove the authorities concerned to distraction. Sometimes the cargo-ships that arrived in the outward-bound convoys, and only too frequently the homeward-bound ships that sailed in convoy from Freetown after voyages round the world, developed defects that had to be repaired; there were endless troubles with owners, and masters and crews; as enemy submarines, in the summer of 1941, moved south into the area, there were shipwrecked victims to be provided for; the amount of military cargo for delivery to the port continually increased; the facilities for dealing with it, and particularly, as usual, the transport required to carry it to its destination, proved increasingly inadequate; every sort of trouble, in fact, that can afflict sailors and ship-owners, descended on the unhappy, overworked authorities in this, as they said, 'the most soul- and energy-destroying place in the world', known to the merchant seamen who frequented it as 'Hitler's secret weapon'.

Nevertheless, if seen in perspective against the background of the expanding war-effort, the results of all the physical disabilities, intensified by an organisation that, to start with, was inadequate for its tasks, were not so serious as might be supposed from the lamentations that poured in to London from the people on the spot, weighed down by the accumulating and, as it seemed, unmanageable difficulties. In 1941—and afterwards—the convoys of troopships, the scarcest and most valuable class of ships in the fleet, got through, it would appear, without significant delays.¹ Their principal need, for water, was met, until 1943, partly by distilling-ships (although this expedient never yielded a large return), principally by sending out

¹ The writer bases this assertion on the fact that there were no serious complaints, as here obviously would have been if there had been any significant loss of time.

tankers, in spite of the increasingly urgent need to use them for their proper purpose, with water from this country. It is true that there were considerable inconveniences—water on the troopships had to be rationed—and a perpetual state of agitation, for it was essential to know how much was wanted before the convoys arrived and yet, in the early days, the requirements always turned out to have been underestimated; there was much argument and many narrow squeaks. When one of the troopships pumped by accident 540 tons of fresh water through her sanitary system and wasted them, it seemed a major misfortune. Nevertheless, the task was accomplished and the troopships sailed more or less to schedule.

The outward-bound cargo ships, on the other hand, that sailed independently from Freetown, were often delayed and so, equally, were the ships returning from the Indian Ocean area; on numerous occasions these missed the homeward-bound convoys for various reasons and, particularly, for lack of coal. When this happened they had to wait ten days until the next convoy sailed. But, as far as can be judged, the loss of carrying-capacity caused by these misadventures was not large. The ships discharging and loading in West Africa were often heavily delayed, but there were not many of them. All told, even when the crisis was at its worst, the troubles in Freetown cannot have affected the progress of military operations in the battle areas or have diminished significantly the amount of shipping available for other purposes;¹ and in the course of 1942, as the more urgent difficulties in other places were disposed of, and the lessons learned elsewhere were applied, the intractable problems were gradually brought under control by means of the appropriate organisation and, with American help, the requisite increase in facilities.

In 1941, however, progress was very slow, for bad though the conditions were for cargo-ships in Freetown there were other ports in which the troubles interfered more immediately with the prosecution

¹ The writer bases this assertion on the following (admittedly somewhat skimpy) evidence:

(i) Various statements made by the Ministry of War Transport Representative in Freetown about the numbers of ships that missed the S.L. convoys in January, February, May and 'early June' 1941. The figures for these months were respectively 5, 11, 8 and 8. If one were to take 8 as the average, and to assume a delay of 10 days, then 80 ship-days must have been lost a month, or 960 per annum. Assuming 2.5 months for the round voyage across the Atlantic and 1 ton of cargo per gross ton and an average ship of 5,000 g.t. this would be equivalent to the loss of 64,000 tons of imports into the United Kingdom per annum. In the case of the outward-bound ships sailing independently equal difficulties must have produced smaller delays since there were no convoys to catch.

(ii) The fact that the ships carrying cargo for West Africa were only about seven a month in the second half of 1941. Not all of these, however, can have gone to Freetown and the number was probably smaller in the first half of the year. But even if one were to assume that the monthly average throughout the year was seven and that all went to Freetown, and even if one were to assume further that each suffered ten days' delay (whereas in fact, though some suffered a longer delay, the average seem likely to have suffered less), the loss would be smaller than in (i) above.

of the war and which claimed the attention of the authorities first. The ships that in 1941 struggled through Freetown on their way to the Middle East, and encountered further, though at this time less intractable difficulties in South Africa, had, it emerged, only escaped out of the frying-pan into the fire.

There were indeed troubles sooner or later in every port along the historic routes in the Indian Ocean area, less dangerous than the famous military convoy routes which captured the public imagination—the routes to Malta and North Russia—but nevertheless more memorable in the annals of merchant ships because, until the conquest of North Africa, they formed the lungs, as it were, of all the British theatres of war, including Malta itself; because the amount of tonnage employed on them was vastly larger, and because the problems of organisation to which they gave rise were vastly more numerous and complicated. The difficulties reached the point of crisis in different places at different periods. In the late spring of 1941, just at the time when the shipping problems in the United Kingdom were being brought under control, and hopes of American help were still high, difficulties of such formidable dimensions broke out in the ports of the Red Sea and Eastern Mediterranean that it seemed as if they might put an end to the hopes of victory in the Western Desert.

The principal ports concerned—Alexandria and Port Said at the northern end of the Suez Canal, and Suez at its southern entrance—were not only the terminal points of the convoy routes that converged on the Middle East, and the sources of supply of the battle areas; they also had to handle the civil imports and exports of Egypt, and much of the imports of Syria, Cyprus, Turkey and Palestine which were delivered to Port Said for transshipment. Alexandria, much the largest and best equipped of the three, handled, in peace, a volume of dry-cargo tonnage that must, it seems, have been considerably smaller than that handled by Glasgow, and it was now the base of the Mediterranean fleet and its use by merchant ships restricted. Port Said was less than half its size, while in Suez, it was estimated in the spring of 1941, even with efficient management, only about forty ships could be discharged a month. None of these ports was equipped to deal with the kind of military cargoes that now began to arrive, and all of them, for this and other reasons, contracted much more serious forms of the war-time diseases from which the United Kingdom ports had suffered a little while before. For the cargoes were awkward cargoes, weighing anything up to seventy tons and despatched before the days when it became an established principle that ships destined for outlandish parts must be provided with derricks capable of getting the contents out of the holds or else serviced by crane-ships on arrival. The cargoes were stowed in inconvenient ways, or in ways

that did not suit the needs of the military authorities, who had often experienced many unforeseen vicissitudes between the dates of despatch and arrival and wanted in a hurry things that were at the bottom of the holds. The battle areas were a long way off and the roads and railways connecting them with the ports were highly inadequate, so that here as elsewhere the most intractable of the difficulties was inland clearance. The labour was unreliable and ran away when there were air-raids. The Egyptian authorities were unco-operative. The British authorities were at sixes and sevens and in any event some of the ships that arrived were foreign ships not under their control.

There were thus political complications that did not exist in the United Kingdom, the physical difficulties were more intractable, and the possibility of co-ordinating all the various necessary operations, on which the success of port-working depends, were more remote; so that whereas in the United Kingdom ports the difficulties had been overcome by the time the enemy attack started, in the Middle East this was not so. It was at a moment of mounting confusion, in January 1941, that the Germans began to mine the Canal, which was virtually undefended at the time.

After each raid the Canal had to be closed for mine-sweeping and through-traffic suspended. When this happened, some ships were marooned in consequence in the Mediterranean, making a target for the bombers, while others queued up outside Suez, in which it was impossible to discharge all the cargo.

The Canal was closed for the first twelve days of February and (apart from two days' interval) from the 9th to the 21st March.¹ After that there was a long respite, but it appears not to have served much purpose, for by this time all the arrangements had been plunged into a chaos from which the authorities were unable to rescue them before disaster descended again, and the Canal was closed, for a third and even longer period, on the 8th May.

It took some time before the seriousness of the difficulties was realised in London, but as, in the late spring, the dangers in this country began to diminish, there was time and need to see that they were gathering in the Middle East. At the end of April the Ministry sent out a prominent ship-owner to report on what was happening.

He reached Alexandria on the 4th May and found arrangements there which, as he said, were 'totally inadequate'. The military authorities, whose responsibility for their cargo started in theory when it was landed, were represented by Q (Movements) and Docks Group Army Organisation. The Ministry was represented by a Ministry of War Transport Representative and by the Sea Transport

¹ See Appendix XXXII, p. 241.

Officers—the members of an ancient organisation, which had originally been a part of the Admiralty but had been transferred to the merchant shipping authorities in 1917, and had remained with them ever afterwards, though in a somewhat anomalous position, since it owed allegiance to the Admiralty for the work it undertook on behalf of the Royal Navy, and to the Ministry for its work on behalf of the other two Services.

Broadly speaking, at this time the Sea Transport Officers in the Middle East—and in the other theatres of war—were responsible for the discharge of ships carrying equipment for the Army and the Royal Air Force, while the Ministry of War Transport Representative was responsible for ships with other kinds of cargo. In fact, however, many of the ships that arrived in the Middle East carried a mixture of cargoes of each type, and in any case all ships sailed away on commercial services (generally to fetch imports for this country, as will appear presently, from other territories in the Indian Ocean area or from South America); so that under whatever auspices they arrived, they departed under the auspices of the Ministry of War Transport Representative. In practice, therefore, it was not easy to draw the line between the functions of the Ministry of War Transport Representative and the principal Sea Transport Officer and, indeed, all the boundaries were in dispute between the various organisations, none of which was capable of administering the empire to which it laid claim.

The Ministry of War Transport Representative was fighting a heroic battle, but he was an old gentleman of seventy, and to help him shoulder his large and growing burden of work (for by the end of the spring of 1941 about 100 ships a month were arriving in the Middle East from all the four quarters of the globe) he had only one assistant and a shorthand-typist. His headquarters were at Alexandria and telephonic communication with the other ports was 'totally inadequate'.

Sea Transport had a larger organisation but, in the opinion of the visiting ship-owner, a relatively less efficient one, for it was recruited in the upper ranks from former naval officers insufficiently familiar with merchant ships, and, in the lower ones, from former Merchant Navy officers whose chief qualification for their task was often that no other service had claimed them. 'Their methods of handling cargoes', the visiting ship-owner said, 'have in many cases been completely wrong.' Harassed, inexpert, and anxious to assert their authority in relation to the Ministry of War Transport Representative, they had, it appears, been unable to maintain it in relation to the military authorities who, though they had enlisted many competent stevedores in their docks groups, had no idea how ports should be managed.

Later it proved possible to plan everything ahead so that cargoes for the immediate use of the battle areas came out in the required order.¹ The most elaborate estimates, however—of needs, of ships' capacities, of port facilities, and of the amounts that could be moved by road, rail and inland waterways—were needed to achieve this result. Without them more patience was necessary, if haste were not to defeat its own object, than the military authorities were willing to display. What they wanted they felt, until the ship-owners took their education in hand, they must have immediately, so that if there were items of military equipment that they urgently needed, or even, indeed, needed with only moderate urgency, they insisted, as far as was possible, on their being taken out first, whatever might happen as a result to the other things in the ships. The ship-owners in the Ministry of War Transport invented a word for this practice, to which the military mind everywhere seems naturally impelled by an instinct which only the strongest pressure can curb. They called it 'selective discharge'. It was apt, they knew, to mean death and damnation, and this, the visiting ship-owner discovered, was what it had come to mean in Suez. 'I believe', he said, 'I am right in stating that in one instance . . . to obtain 3,500 to 4,000 tons (that is about half the cargo of a single ship) discharge took place on sixty-one ships at the same time.' The cargo discarded during this process was then hurled into lighters (for most of the ships in Suez had to be discharged overside) 'to the detriment of the cargo and the waste of lighter-capacity'. From the lighters it was 'thrown out on to the quay' without any attempt at proper stacking, until the moment came when all the quay-space was filled with objects impossible to remove (for apart from the confusion in which they had been assembled there was not the transport to clear such an accumulation), all the lighters were full, and 117 ships were waiting outside Suez through which only about half a shipload could be moved a day. As this extraordinary state of affairs revealed itself to the visiting ship-owner's outraged eyes, he concluded that it was 'the most appalling muddle I have ever seen in any port'.

When his report reached London—and in the interval between collecting his material and writing it up he had done much himself, it seems, to bring order out of the chaos—it was considered by the Director-General of the Ministry and various of the ship-owners in conclave. They concluded that there could be no question of doing away with the Sea Transport Organisation and of entrusting the supervision of merchant ships in the theatres of war (or for that matter in the ports of this country) to a single authority; for the Sea Transport Organisation not only fulfilled in a variety of ways a

¹ See Chapter XVIII.

necessary function as a liaison with the Services; it had a long-established tradition fortified, if insufficiently, since the beginning of the war. As the ship-owners themselves pointed out—and they were the people whose instincts its present behaviour principally affronted—it had already acquired a great deal of specialised experience in handling and planning for the shipments of military cargoes of a kind never dealt with in peace. What was necessary, it seemed, was not to abolish it, but to reduce the scope of its activities¹ and to strengthen its personnel, both at headquarters and abroad, with more and better qualified people from the shipping industry; it was also necessary to strengthen the organisation of the Ministry of War Transport Representative; but, above all, it was necessary to ensure that all the various authorities concerned with the operation of the ports—the Service authorities, the local authorities, the two authorities representing the Ministry—should work together in order and harmony.

By now the Ministry had a considerable experience of this kind of problem which had existed in the United Kingdom in a form in many respects different but yet in broad outline the same. The conditions in all the ports in an area had to be considered together; they had to be considered in relation to the problems of inland transport and to the needs not only for military but also for civil supplies which the ports might otherwise be unable to receive or the roads and railways to distribute; there must be a single centre of authority, fulfilling, among other things, the kind of functions fulfilled by the Diversion Room in London, and organisations in the various ports capable of making the necessary decisions on the spot.

The means of meeting these needs were worked out during the summer of 1941. In the circumstances, it appeared, they could only be met, in the traditional British fashion, by a hierarchy of committees, tedious and time-consuming though these seemed to the Americans later associated with them, on which all the interests concerned were represented.

It was decided that the presiding genius—the chairman of the War Transport (Middle East) Committee, on which, among others, sat representatives of the Commander-in-Chief Mediterranean and of G.H.Q. Middle East, should be the Ministry of War Transport Representative. He must, it was clear, be a person 'of high capacity and great commercial experience', who by virtue of these qualities, for he could have no powers of compulsion, would ensure that all the innumerable considerations, that must be taken into account if

¹ It was decided that henceforth 'the discharge of mechanical transport and maintenance ships in the Middle East should be transferred to commercial agencies as soon as practicable leaving Sea Transport Organisation to deal with troopships, hospital ships and operational ships'.

ships were to be efficiently employed, were given their proper weight; that proper regard was paid to the requirements of the Services, and yet not so much as unduly to interfere with the furtherance of the other ends to be pursued.

The shipping industry possessed a number of people of this calibre, and one was found now for the Middle East. He was the first of the Ministry's distinguished viceroys appointed under the new arrangements to a theatre of war abroad and there were others, notably in North America, who fulfilled analogous functions in the principal areas of supply. These people were all civilians, a testimony to the vital importance of civil interests and civil skills and to the principles governing the conduct of total war of which (if the term is understood to mean the harmonising of the civil and military war-efforts) this country became the principal exponent. Men of strong character and proved ability, masters of their craft and good at getting on with all sorts and conditions of people as the exercise of the craft required, they administered the Ministry's empire overseas almost invariably with conspicuous success.

Admittedly, even after the new arrangements had been introduced in the Middle East in the summer of 1941, much still remained to be done. The improvements in the Sea Transport Organisation, it turned out, did not go far enough; moreover, no amount of organisation could overcome the fact that, as things were, it would be impossible to supply the battle areas without the use of Alexandria and Port Said, which could not be reached if the Canal were closed, and even if it were not closed might be cut off by the enemy's advance. It seemed, in consequence, necessary to increase the capacity of the ports in and to the south of the Canal, and this work was set in train in the latter part of 1941. As always in such cases, the projected extensions had all to be considered in relation to each other, and all the authorities concerned had to collaborate in the task of estimating what was required. The new arrangements, however, made this collaboration possible, and the increased port and transit facilities when they became available, and operated as they were with full knowledge of all the related needs, ultimately yielded huge returns.

In 1941, however, the development schemes were a necessary insurance against the future—for the burden on the ports continued to grow—but not an immediate need. The Canal was never closed after November 1941, and between the end of May and the beginning of November it was never closed for more than six days at a time, and only for as long as this on two occasions.¹ Nor in 1941 did the enemy otherwise seriously interfere with the working of Alexandria and Port Said. Partly for these reasons, and partly because of

¹ See Appendix XXXII, p. 241.

the administrative changes, the crisis in the Middle East ports was over by the beginning of the autumn.

When it had been at its height it had seemed as if it might dispose of the shipping shortage, since no purpose could be served by sending to the Middle East ships with cargo that could not be unloaded, or with troops whose equipment could not be delivered to them. As, however, the crisis gradually diminished, the shipping problems, which it had never, in fact, reached the point of alleviating (for the Ministry of War Transport refused to decrease the tonnage on the route, maintaining that conditions might improve between the times of despatch and arrival) emerged as the major issue.¹ How were the British to find enough troopships to carry the troops across the 13,000 miles of ocean that separated this country from the Middle East while maintaining the other necessary trooping services at the same time?

(iii)

The Troopships and the W.S. Convoys

How much cargo-shipping is needed to supply an army depends, among other things, on how large the army is, but the size of the armies in a theatre of war abroad may be determined by the numbers of men it is possible to transport there. Before, in other words, there can be a need for cargo-ships for military purposes, a need for troopships must first have been satisfied, for the one depends upon the other though not in a constant proportion.

Before Pearl Harbour, and indeed for some time afterwards, it was always possible, although with increasing difficulty, to find enough cargo-ships to carry the stores, equipment and weapons for the troops in the Indian Ocean area, except when these things were so urgently needed that only the fastest cargo-ships would do. On such occasions, admittedly, there were the greatest difficulties, for ships of this kind were exceedingly scarce, but the difficulties were of a type that forethought proved able to overcome; for it took a great deal of time to reach the Middle East in the best of circumstances; and in general, or so it came to be discovered, it did not greatly matter to a theatre commander whether many of his supplies arrived a month or so earlier or later, and together with or separately from the troops for which they were destined, provided he planned

¹ Because of the urgency of the need it was held that ships' time must if necessary be sacrificed, and that the Ministry 'should have a constant stream of tonnage arranged, holding particular ships as necessary between Durban and Mombasa, so that they can move up in rotation as favourable opportunities occur'.

accordingly; and once this principle had been accepted, the supply of cargo-ships proved elastic for a long time. If the armies needed more, other people had to have less, and of the Ministry of War Transport's innumerable customers most, it was always emerging, could do with less than had at first been supposed. There were, however, no such simple means of increasing the supply of the passenger-ships that could be used to carry troops, and it was on them particularly that the fate of the war appeared to hang between, roughly speaking, the middle of 1941 and the middle of 1942.

After the fall of France, when the shortage of escort vessels became acute and the dangers of attack on ships at sea increased greatly, the Admiralty first demanded and then insisted that, with a few exceptions, all ships in military convoys on the North and South Atlantic should be capable of maintaining a speed of fifteen knots.¹ Those destined for the Indian Ocean area had also to be able to carry enough bunkers, water and other provisions to enable them to get to Freetown without replenishment. Of the (roughly speaking) 3,000 deep-sea ships, other than tankers, in the British-controlled fleet in the spring of 1941, there were very few that could carry a substantial number of passengers and were capable of these feats; moreover large, fine ships of the kind required are slow and complicated to build; they cannot be mass-produced like ordinary cargo-carrying tramps; it proved impracticable to build any in this country during the war, and none were built in substantial numbers even in the United States before 1943.²

While, therefore, British troopships were instruments of war as essential as, say, guns or tanks or naval vessels, unlike other instruments of war their number could not be increased by new construction, though it could be, and was, diminished as a result of enemy attack and for other reasons. At the beginning of the war the Navy had commissioned forty-one passenger-cargo liners to serve as armed merchant cruisers (many of which were later sunk) with accommodation, at the standard reached by the autumn of 1942, for over 100,000 persons; six large troopships were sunk during the Norwegian campaign and the evacuation from France, besides others on other occasions before the end of the summer of 1940;³ and the help the British received from the ships of the conquered

¹ This requirement was not actually enforced by the Admiralty until September 1941. The Admiralty then allowed three ships in each convoy to have a speed of fourteen knots, this being (see Appendix XXXV, p. 244) the usual speed for W.S. convoys. When the speed of a ship is mentioned in this narrative what is meant, unless otherwise stated, is the maximum economical speed, i.e. the maximum speed which the ship can maintain without a disproportionate increase in fuel consumption.

² The numbers of troops which could be accommodated in United States ships rose from 130,000 (President Roosevelt's estimate in 1942) to over 1 million by the middle of 1945.

³ See Appendix XXXVII, p. 246.

nations of Europe—which by the summer of 1942 accounted for approximately 470,000 gross tons or 20·4 per cent. of the total trooping fleet—did not make good these losses.

Before the fall of France the only troops that had moved overseas in large numbers had been moved across the Channel, a voyage that can be performed in a matter of hours and in ships that could not be sent to the Indian Ocean area. In these circumstances, the demand for large troopships was extremely small by comparison with what it later became. It was indeed not nearly large enough to employ all the British passenger accommodation, and most of the passenger-cargo liners, that later formed the mainstay of the trooping fleet, were used exclusively for carrying cargo. This state of affairs, however, came abruptly to an end when the Mediterranean was closed, when the war started in the Middle East, and when the battle areas were no longer 20 miles across the sea, but 13,000.

The first troops to make the voyage from this country round the Cape sailed in June 1940. The convoy code was W.S., after the initials of the Prime Minister, whose decision it was to reinforce Egypt from this country at the time of her greatest danger. W.S.1 was the first of a long and famous series of convoys that sailed on an average once a month, with occasional supplements, for the next three years, carrying troops principally for Egypt, and later for India and the Far East, but also depositing and picking them up at many intermediate points.

At the same time that the British began to reinforce the Middle East from this country other troops were moving there from other areas. Between August and December 1940 approximately 50,000 sailed from Australasia and India, as compared with approximately 77,000 from this country. But in the course of 1941 these proportions changed, as the United Kingdom's contribution rose. The W.S. convoys thus increasingly became the principal military convoys, carrying the largest of the streams of men that converged on the Middle East—though in a pattern much more complicated than these simple statements suggest—south-eastwards from this country across the South Atlantic and up the Red Sea, north-westwards from Australia and India across the Indian Ocean and from Aden to Suez.

But while the British Commonwealth thus mustered its resources to attack the enemy on the periphery of his empire, it had also to guard its lines of communications by establishing and maintaining bases scattered about the oceans of the world; and for this and other reasons it had constantly to move troops and civilians about within its own confines. The British occupied Iceland in the summer of 1940 and maintained it until the Americans relieved them of some of the responsibility in May 1941; West Africa had to be reinforced

after France fell for fear that the Axis forces might move into Casablanca or Dakar, and thence attack the W.S. convoys, and the cargo-ships, on military or commercial services, bound for Suez or areas east of Suez, and sailing unescorted from Freetown. In this country, where space and safety were hard to find, it was impossible to train air-crews in sufficient numbers. They had to be sent to Canada and other Commonwealth countries, and later to the United States, and brought home when their training was finished. These instances could be multiplied indefinitely; they serve to illustrate the demand for passenger accommodation that must arise when an empire scattered over four continents attempts to mobilise and co-ordinate its resources for attack on an enemy that dominates one.

Moreover, as each new major demand arose, and as the size of existing commitments grew, the minor demands grew also. As the scale, for example, of the fighting increased so did the numbers of prisoners of war that had to be removed from the battle areas; as the British took control over fresh territories in the Middle East, not only had more men to be moved there from the United Kingdom and from South Africa, India and Australia; more had also to be moved between the component parts of the Middle East itself—between Iraq and Persia and Egypt, as well as between all these territories and the African colonies.

These demands grew gradually. Throughout 1940 and 1941 they were put forward not, as in later days, within the framework of a general plan agreed beforehand with the shipping authorities, but piecemeal, as the emergencies of the moment dictated. Amid all the confusions and uncertainties that existed in the summer of 1940, when the first W.S. convoy sailed, no one could tell which would be the crucial shortages. It was impossible to estimate how much the tonnage engaged in importing into the United Kingdom would bring in, how much could pass inwards and outwards through the ports, what types and quantities of imports would be most urgently needed. In these circumstances there could be no long-term planning.

The broad lines of military strategy were thus drawn without the means of estimating whether or not the necessary ships were likely to be available. Such estimates could not be made because no one could forecast the strength of the enemy's attacks on shipping and on the United Kingdom ports, and because the very nature of the problems involved in supplying the Middle East was largely unknown and was obscured by other problems.

In the autumn of 1940, when the rate of sinkings began to rise and carrying-capacity to fall alarmingly and when, at the same time, the ports in the United Kingdom were approaching saturation point, it was the shortage of imports that dominated everyone's thinking. The Chiefs of Staff, for example, in a paper on future strategy

written in September 1940, expressed the belief that shortages of ships or port-capacity might limit the build-up of the armed forces in this country; they did not foresee shortages of port-capacity in the theatres of war abroad, or that lack of ships might limit the transport overseas of such forces as the labour and materials in the United Kingdom would suffice to equip. They assumed that the 'construction of merchant shipping must be related to the programmes of the three Services'; they overlooked the fact that troopships might prove the bottleneck, and that ships with a speed that the Atlantic military convoys came to require could not be constructed in less than eighteen months, even if they could be constructed at all except at the price of diminishing the output of the naval vessels which were required to escort them, and without which they could not be used, and of merchant ships for which the need must grow *pari passu* with the growth in trooping-capacity.

The problem in the autumn of 1940 appeared to be whether or not the British could endure the loss of imports into this country that must result if more passenger-cargo liners were withdrawn from the trade routes and converted to trooping, and if more cargo-ships were taken at the same time to supply the troops they carried. 'If operations in the Middle East were to be on a large scale', the Minister of Shipping said to the First Lord of the Admiralty at the end of September, 'it might be necessary to review the whole question of the practicability of any such operations.'

The Prime Minister, however, thought otherwise. The demand for troops for the Western Desert continued to grow, and new major commitments were continually added in 1941—Greece in the early spring, Iraq in April, Syria in May, Persia in August.

As one after another these demands emerged the Ministry of Shipping (which in May became the Ministry of War Transport) was asked to estimate the cost of meeting them in terms of the loss of imports to this country. Except for deciding that troopships with refrigerated space should continue to return home with cargoes of meat (though from the Plate and not from Australia), at a cost, compared with sending them home empty, of 22,000 fewer men carried to the Middle East in the course of a year, the Cabinet always decided to pay the price.

The price, however, that it was possible to pay never seemed high enough. Troopships had been short from the start. Even in the autumn of 1940 no W.S. convoy sailed with all the personnel the Services wished to embark. At the very beginning the familiar pattern of argument between the users and suppliers of ships emerged; the Chiefs of Staff stated their demands and the Ministry of Shipping the prospective supply; the Chiefs of Staff said that the supply was insufficient, the Ministry that the demands must be cut. Until the

early spring of 1941 it was usually possible to reach agreement with supply a little higher and demands a little lower than had been the case at first, so that the Services, though they received less than they had originally demanded, received sufficient to meet what they admitted to be their minimum essential needs. This state of affairs, however, did not last long.

The method of equating supply and demand by means of committees where the suppliers and claimants are represented, and where each is prepared to compromise, is a method that will only work effectively if it is applied at all the levels at which planning is necessary—from the top, where the broad lines of strategy, whether civil or military, are determined, to the bottom where it is decided who or what shall be embarked in which ships. But in 1940 and 1941 it would seem that it was only at the lower levels that any attempt was made to match the demand for troopships to the likely available resources. The discussions between the shipping and military authorities in general appear only to have started when the areas to be reinforced and the scale of the necessary reinforcements had already been decided. But since only the shipping authorities knew, or if they did not know immediately could discover, how many ships were employed in the various services, a demand for troop movements on a particular route was inevitably made in ignorance of its effects on other routes, and out of relation to the needs of the Services for passenger-ships for other purposes. For passenger-ships were needed to train men for combined operations; and sometimes the Services demanded that some of them should be held in readiness in case the operations should be suddenly required. But they never were required in 1941, and on at least one occasion the Services apparently forgot that they had ever asked that the ships should be held.¹

Only too frequently the demands for troopships and their attendant cargo-ships came in at a moment's notice when the suitable ships might be a thousand miles away; the demands changed substantially at short intervals; only too frequently the shipping authorities found themselves faced with requirements of apparently the utmost urgency which could only be met—if they could be met at all—at the cost

¹ On the 20th December 1940, for example, it was noted that 'eight ships are still being held after a lapse of three or four months, against the contingency of certain special moves having to be undertaken at short notice. Two of these . . . are at Freetown and are probably now so foul that they would be unable to move at a speed which would enable them to sail in convoy'. The holding of ships for special operations was a perpetual bone of contention throughout the second half of 1941. The Minister of War Transport, for example, gave a list on the 15th July of ships being held for this purpose saying that 'he is not, of course, in a position to assess the relative importance of these special operations weighed against other considerations'; he estimated, however, that the result of holding the ships was 'equivalent to the carriage to the Middle East of 3,600 personnel a month and 12,000 tons of supplies, or the import into the United Kingdom of 18,000 tons of cargo'.

of violent disturbances and incalculable consequences. 'Nothing', the Director-General observed, 'could be more dislocating to our attempts to fulfil an import programme, and have some reasonable regard to the demands of the export trade.' Nor were civil programmes the only sufferers.

As time went on it became increasingly apparent that the Services were embarking on projects for which existing troopships or escorts might not suffice, that they were failing to consider their various projected moves in conjunction, and that sooner or later a day of reckoning must dawn when some essential undertaking would have to be abandoned. The Ministry of Shipping urged the military planners to consider the relative merits of their various projects; it frequently set before them such facts as seemed immediately relevant—that, for example, there could only be more troopships for, W.S.7, or 8, or 9, at the expense of fewer on the North Atlantic, or by putting on to the W.S. route ships held in readiness for special operations.

But these were only *ad hoc* judgments. Though the Ministry knew the position and characteristics of every ship allocated to the Services it circulated no returns and produced no estimates of troopship-capacity before 1942.¹ No doubt in the circumstances it must have seemed that such estimates would not serve much purpose, for how many troops a ship can carry in a given period is determined, among other things, principally by the routes on which she is required to sail, and the requirements were constantly changing. There existed, in other words, that vicious circle that always emerged in these early days whenever there was a drastic change in the shipping situation; demands could not be formulated in a reasonable manner without some knowledge of carrying-capacity; but carrying-capacity, which is almost infinitely elastic, cannot be measured without some knowledge of demand. Neither side, therefore, could see the whole picture and both sides lived from hand to mouth—the Ministry seizing ships to satisfy the Services at the cost of much inconvenience and accommodation wasted; the Services embarking the most urgently needed personnel at the cost of leaving behind those that could temporarily—but only temporarily—be dispensed with.

This manner of living was to some extent inevitable. A nation on the defensive cannot plan in the orderly manner appropriate when it possesses the initiative. In times of great emergency, when everything is uncertain, it is not possible to do things in a methodical way. But if they are done otherwise there are sudden crises.

The crisis over the troopships broke in the summer of 1941 and proved more intractable than any of the many crises the shipping authorities had hitherto had to face.

¹ Estimates of troopship-capacity were first got out in February 1942 and produced retrospectively from October 1941.

At the beginning of July the Chiefs of Staff estimated that the minimum number of men for drafts and ancillary units that must be despatched from this country to the Middle East, India and Malaya over the next two months in W.S.10 and W.S.11 was 75,000. In previous months, they pointed out, these categories of troops had had to make way for operational and administrative units; now, however, 'a situation has been reached when failure to provide these replacements on a large scale may have serious repercussions upon the fighting and administrative efficiency of units in the Middle East . . .'; and to these 75,000 had to be added the requirements of the Air Force (15,000) and of the Navy (2,500), making a total of 92,500.¹

But when allowance had been made for the ships required to move a Canadian division to this country, the capacity of W.S.10 and W.S.11 could not, it appeared, exceed something in the neighbourhood of 54,000 to 60,000.

The gap between supply and demand which these figures revealed was too large to be bridged by the normal bargaining processes. 'It has for some time been clear', the Ministry of War Transport observed at the beginning of July, 'that our limited resources of personnel shipping must restrict overseas troop-movements. . . . Even allowing for drastic measures' (particularly sending ships home without commercial cargo to save time) 'our personnel shipping will not provide an effective flow of more than 35,000 a month from the United Kingdom. . . .'

For some time before this, the passenger-cargo liners had been in process of withdrawal from civil employment and of conversion to trooping; they had been supplemented by all the ships capable of carrying troops that the British had requisitioned, chartered or taken in prize from the conquered countries; the Navy agreed to release nine of the passenger-ships which it had commissioned at the start of the war to serve as armed merchant cruisers.

The greater part, though not all, of the fruits of these measures had been reaped by the autumn of 1941. In October—the first date for which comprehensive figures for trooping-capacity exist—every suitable ship available to the British was, or was shortly about to be, engaged in trooping; the losses since the fall of France had been very small;² yet the total accommodation provided by the trooping fleet sufficed only for just over a quarter of a million persons,³ a number something less than one-third as large as is moved—over distances to be reckoned in tens of miles—every day to London in suburban trains.

¹ This was excluding the 18th Division referred to on p. 224 below.

² See Appendix XXXVII, p. 246.

³ See Appendix XXXIII, p. 242.

Since the autumn of 1940 the British had been appealing to the United States for fast troopships. The British Ambassador in Washington, the British Supply Council in North America, the British Merchant Shipping Mission after it was set up in March 1941, had sponsored the appeals in turn. At first they appealed for help in the future, and asked the Americans to enlarge their building programme; then they appealed for ships at once. At the same time the Admiralty was appealing for fast merchant ships capable of conversion to auxiliary aircraft carriers.

In response the Americans increased their building programme and made provision in it for more fast ships; they handed over several to the Admiralty at once;¹ but in the summer of 1941 this appeared, for the time being, to represent the limit of their generosity. In the immediate present there seemed no hope of supplementing the trooping fleet with American ships. The Ministry of War Transport, in consequence, concluded that there was only one thing to be done: 'We must', it said, 'cut our coat according to our cloth'.

The Prime Minister, however, who later became one of the principal exponents of this thesis was not at that time in the mood to agree with it. In spite of the deficiencies in existing formations, he insisted that two more divisions should be sent to the Middle East.

I could not tell [he wrote later] what would happen in the impending Desert battle, nor how the Russian front in the Caucasus would hold. There was always, besides, the menace of Japan, with all its potential peril to Australia and New Zealand. I wished to have two more British divisions moving eastwards. If these could be rounding the Cape about the end of the year we should have something substantial in hand for unknowable contingencies. . . .²

Let me [he wrote on the 22nd August] have a scheme prepared by Monday night for sending two more complete infantry divisions to the Middle East at the earliest possible moment. Let me know what shipping will be required. . . . When these figures have been supplied I will ask President Roosevelt for the loan of this shipping for this particular purpose and I daresay I can get it.

The Prime Minister supposed that the particular purpose was more likely to fire the American imagination than the purposes of the Chiefs of Staff or than the appeals in general terms made hitherto. His judgment proved right. The United States lent the British six troop transports. So many complications, however, arose over the terms of the loan that it was considerably delayed. Only one of the divisions for which the Prime Minister had demanded transport sailed before Pearl Harbour, and it had to go first to North America in British ships (that came back with a Canadian division) because

¹ The Admiralty stated in November that they had procured six.

² See W. S. Churchill, *Second World War*, Vol. III, p. 435.

the President felt that it would be politically undesirable to send American ships into British waters. It left Halifax in the American ships in W.S.12X on the 10th November, bound for the Middle East, but it was still at sea at the time of Pearl Harbour and was in consequence diverted first to Bombay and then to Singapore.

(iv)

The Civil Demands and the Cross Trades

As in the course of 1941, the difficulties in the ports in the Middle East were brought under control and more and more troops were despatched, more and more military stores and equipment were also needed, and less and less shipping in consequence became available for civilian services all over the world, including the services that supplied the civil populations in the Indian Ocean area.

From the beginning of the war the trade of the Indian Ocean area had been increasingly disrupted, but usually only to a small and never to a serious extent before the Mediterranean was closed. Thereafter, many territories were to be menaced by shortages portending disaster not only to themselves but also to the British forces overseas and so, possibly, to the United Kingdom.

The first of these alarming possibilities had emerged in the autumn of 1940 in the shape of a coal crisis in Egypt. In peace, Egypt had imported about 1·3 million tons of coal, of which about 1 million tons had come from the United Kingdom and the greater part of the rest from Germany and Poland. Even before the fall of France, Egypt had, in consequence, found herself in difficulties, for the German and Polish supplies were cut off and the British had little coal to spare. In the first quarter of 1940 Egypt had received only just over 50 per cent., and in the second quarter only about 33 per cent. of her normal imports; by July she had stocks for only about three months and between June and August Britain sent her practically no coal at all. But the Egyptian State Railways were the single largest consumer of coal in Egypt, and the British armies needed their services. It was clear that provisions would have to be made to provide the Egyptians with coal and, moreover, that their claim was only one among many. All along the W.S. route there were sudden demands—in Freetown, Malta, Palestine, Port Said, Suez and Aden—places where before the closing of the Mediterranean there had either, as in Freetown, been little need, or, as in the others, needs which had largely been met from Europe. New sources of supply—in India and South Africa—had to be suddenly tapped, a fleet of ships had to be collected to operate in the shuttle services

between them and the Middle East, and unforeseen difficulties were to emerge in the process: in South Africa, for example, the railways were increasingly unable to carry the coal that was produced, so that the provision of adequate supplies came to depend on providing more locomotives and rolling-stock; the ships in the shuttle services were taken from trades elsewhere in the Indian Ocean area with unfortunate consequences, as will appear presently, to the territories from whose service they were removed; gradually the need for coal in the theatres of war and along the highways leading to them began to have repercussions all round the world.

But while these problems were only in their infancy, and everyone was much too much preoccupied with the many other urgent tasks to consider their ultimate implications, the Italians attacked Greece and it immediately emerged that she, too, had many urgent needs for civil as well as military supplies—needs, primarily, for coal and wheat which, particularly since they had to be met at a moment's notice, conflicted with the needs of her neighbours. Of all the claimants for coal, it appeared in November 1940, only Malta and the Sudan had stocks for more than two months; if wheat were to be shipped to Greece from India, the nearest sources of supply, then, since the amount available for export there was limited, Turkey, who had been promised it, and whom at this time it seemed particularly urgent to impress and conciliate, would have to do without.

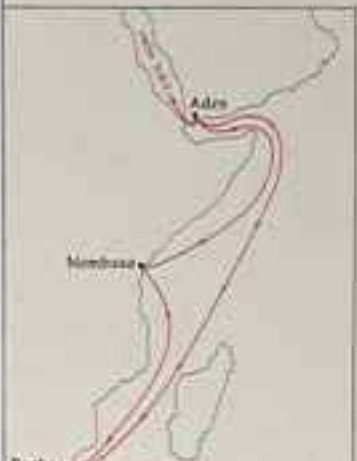
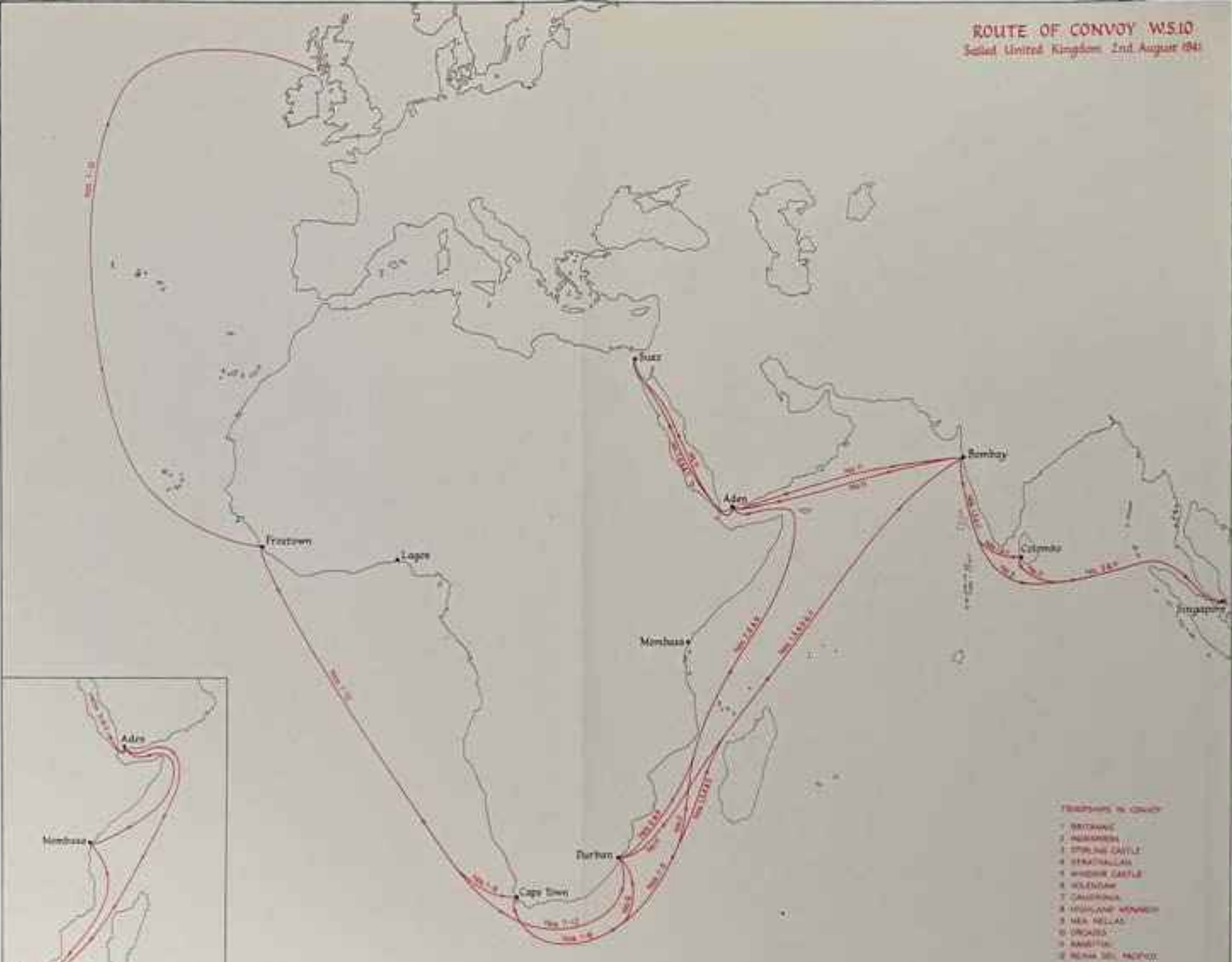
So it went on. One unexpected and apparently impossible demand followed upon another from many different places within the Indian Ocean area, but principally from the territories bordering on the Red Sea and Eastern Mediterranean that were in or vital to the battle areas—from Greece, from Turkey who was benevolently neutral and could not be given cause to repent of the fact, from Egypt, also neutral, but the base for British military operations in the Western Desert, from Malta on whose maintenance as an air and submarine base British power in the area depended.

Since the autumn of 1940 it had been growing increasingly plain that all these territories' demands for civil imports could not continue to be dealt with piecemeal, but must be considered and met on the basis of some plan. This was seen not only by the British civil authorities on the spot and in the United Kingdom, but also by the military authorities whose own regional organisation only catered for the needs of the Forces,¹ and who realised that they could not prosecute the war if the civil economies behind the lines were to disintegrate into chaos. It was, however, the shipping authorities, more familiar than anyone else with the problems, and more immediately affected by them, who devised the plan that was finally adopted.²

¹ See p. 205 above.

² See forthcoming publication by E. M. Lloyd, *Food & inflation in the Middle East, 1940-1945*.

ROUTE OF CONVOY WS.10
 Sailed United Kingdom 2nd August 1941



- SHIPS IN CONVOY**
- 1 BRITANNIC
 - 2 HINDARUN
 - 3 STUBBS CASTLE
 - 4 STRATHALLAN
 - 5 WHORSE CASTLE
 - 6 WOLSELEY
 - 7 CAULFIELD
 - 8 HIGHLAND WARRIOR
 - 9 MEX. NELLAS
 - 10 ORCADES
 - 11 SANDFORD
 - 12 ROMA DEL NORD

What they suggested was the establishment of an organisation in Cairo to consider all the interrelated matters that would have to be settled locally if the sea-borne trade of the Middle East territories were to be conducted at the minimum cost in ships and the maximum benefit to the territories themselves. Their suggestions were accepted. They were given the responsibility of setting the organisation up, of providing it with staff and of paying its expenses. It was they who gave it its name—the Middle East Supply Centre.

The Middle East Supply Centre, one of the most ambitious and successful of the British war-time experiments, that time was to show might with advantage have been imitated elsewhere in the Indian Ocean area, and that formed the prototype of other organisations set up later in the war in other parts of the world,¹ held its first meeting in April 1941. The functions assigned to it were to economise in the use of ships by all the various and in general terms now familiar means of doing this—by considering all the resources and all the requirements together; by reducing the demand for inessential commodities; by stimulating the production and ensuring a proper distribution of the essential ones; by drawing up lists of the imports required from overseas—that is, by devising the shipping programmes without which the Ministry of War Transport could not arrange for the necessary ships to be available at the right times and places.

The territories within purview of the Centre were, at the start, Egypt, the Sudan, Palestine, Transjordan, Malta, Cyprus, Turkey, Greece, Yugoslavia, Ethiopia and Eritrea. Shortly afterwards Greece and Yugoslavia were lost to the enemy and Turkey was excluded, but there were many newcomers; Aden, Syria and the Lebanon in 1941; Iraq, Persia and Saudi Arabia in March 1942; French Somaliland in December 1942; Cyrenaica and Tripolitania in February 1943.²

The Centre had thus to discharge its duties in territories of which some, though a diminishing number, were independent states, of which others had recently lost their independence as a result of British occupation, of which others again had been captured from the enemy or taken over from the French, of which a few were under British rule or control, but of which all were military bases and for a long time in or near the battle areas.

Nevertheless in spite of this state of affairs the Centre was neither an appendage of the British military organisation nor a civil government with powers of the usual kind. In these respects it was the true child of its parent, the Ministry of War Transport, which always believed that even in theatres of war civil matters should not be put

¹ Notably in North and West Africa after the conquest of these territories. The experience gained by the Middle East Supply Centre was also useful to U.N.R.R.A.

² See E. M. Lloyd, *op. cit.*

under the control of the military and that when possible it is always better to persuade than to compel.

Though for the sake of convenience the Centre was given a military façade and made responsible to the Commander-in-Chief, Middle East, it was a separate, civilian body, analogous in structure to a British civil government department. Though the Governments in the various territories might have been compelled or persuaded to surrender to it the authority necessary to enforce its policies, and though there were those who thought that this would be the proper course, in London it was held to be politically inexpedient and also, as the shipping authorities pointed out, unnecessary. For in the spring of 1941 by far the greater part of the ships entering the ports in the Middle East were under British control, and nearly all the others were American ships carrying, principally, lend-lease cargoes on British account; and in 1942, when the United States entered the war, American officials joined the Centre and the control over ships became complete. In these circumstances, an increasingly small number of commodities, and finally none at all, could enter or leave the area except in British or American ships whose space was at the disposal of the British and American Governments.

The Centre, in consequence, though denied the usual kind of authority at the disposal of governments, was endowed at birth with a powerful means of enforcing its wishes. The territories for which it was responsible and the matters which it sought to control continually grew after the summer of 1941. As it was said in London at the end of 1942: 'Except for Soviet Russia, the Middle East Supply Centre's area is now the largest continuous area in the world with a central economic policy and administration'.¹ Its increasingly comprehensive instructions, however, and the increasing number of experts it sent out to the various territories to help execute them, were only listened to because otherwise it would have withheld supplies—indeed would have been prevented by the authorities in London from delivering them; for its ability to persuade the Ministry of War Transport to give it the necessary shipping space depended on its success in inducing the Middle East territories to do what they could to help themselves.

In the spring of 1941 the British New Order was thus inaugurated in the Middle East. It was to the British interest that it should be created, and it was only because the British were at war, and fighting in the area, that it had become necessary at all. In these respects it was the counterpart of the German New Order in Europe, and indeed the parallel could be pushed further; for just as the Germans appear to have supposed that the civilised world in general, and sometimes even the peoples on whom their New Order was imposed,

¹ P.E.P. Broadsheet, No. 195, 27th October 1942.

would benefit from its introduction, so the British (though not always, it appears, the Americans who were associated with them)¹ thought the same in their sphere of influence. Each nation proceeded in accordance with its ideals and after its own fashion—the Germans, inspired by a belief in the *Herrenvolk*, with the Gestapo, the concentration camps and the gas chambers; the British, inspired, whatever their party politics, by a belief in ‘social justice’, with all the paraphernalia of commodity controls, statistics and import programmes designed to ensure, as far as was practicable, an even distribution of the basic necessities. For whatever the advantages which the achievement of this ideal might bring to the war-effort, and however matters might appear from time to time in London where the practical difficulties of meeting the demands were felt, the British on the spot always believed that the pursuit of the ideal had a value in itself. As the Minister of State in the Middle East put it in an address to the Middle East Supply Centre at the beginning of May 1943 when, wrongly as it turned out, it was supposed that the period of stringency was over and that shipping would become increasingly plentiful (and he spoke only to a British and American audience and not for purposes of local propaganda):

I should like to emphasise what seems to me the emphatic need for the continuance of economic planning in the Middle East . . . for in this as in many other matters our interests—I am speaking primarily of the British and American Governments—are, I believe, identical with those of the Governments and peoples of the Middle East themselves . . . here in Cairo we are thinking more and more of the positive side of the Centre's work. We think of it as a channel through which the British and American Governments can and will furnish common services and guidance . . . to plan the maintenance, on a war-time basis, of essential food supplies, public services and facilities, to mobilise the economic resources of the Middle East to the best mutual advantage. . . . In almost every country the big problem today is that of trying to secure a fair distribution of available supplies among all sections of the community in the interests of contentment and stability.

It was, however, principally the poor, the uneducated and the inarticulate whom these arrangements were designed to benefit; at the best they seemed of dubious value to the rich, the powerful and the ambitious. The attempt to pursue the same objectives earlier in the war had encountered great difficulties in the United Kingdom, even though the objectives were universally recognised there as essential in war-time. The difficulties were infinitely greater in the Middle East, where different views prevailed, and where, for many other reasons besides, conditions were much less favourable.

¹ See Royal Institute of International Affairs, *The Middle East in War*, Part II (X); *The Middle East Supply Centre*, by Guy Hunter.

In peace Egypt's principal imports had amounted to an average of just over 3 million tons of commodities a year, including coal.¹ In 1940 they were only just over 1 million tons, and, as always happens in such circumstances in uncontrolled economies, the cuts had fallen in an arbitrary way, regardless of essential needs. Since freights were soaring and the burden of the increased costs of transport fell most heavily on the cheap and bulky commodities, it was these which had suffered, relatively as well as absolutely, the largest decline, while supplies of luxury goods had often remained at the peace-time level or had even increased. This was the state of affairs to which the British intended to put a stop. The luxuries must be curtailed, and the essential needs estimated and provided for, at the minimum cost in ships.

Even, however, before there had been time for the Centre to make any progress with its task of distinguishing in detail between essentials and inessentials, certain things were clear. Egypt had a vital need for at least two imported commodities: coal and nitrates. She could greatly reduce her need for coal by converting her railways to use oil, of which there was a plentiful supply near to hand, and under the guidance of the Middle East Supply Centre the work was begun in 1941. There was, however, no local substitute for nitrates, and without them the yield of her crops must greatly diminish. In peace her normal imports of fertilisers, of which practically all were nitrates, had been nearly 600,000 tons a year;² in 1940 she had only received just over 350,000 tons,³ and in 1941, unless the British Government were to intervene, it was clear that she must receive vastly less, for the only country where the nitrates were to be had was Chile, nearly as far from the Middle East as even the United Kingdom and the United States themselves. It was an obvious measure of insurance to send nitrates to Egypt. It was clear that somehow or other, and as soon as possible, the shipping services would have to be so organised as to allow the Egyptians enough nitrates to maintain the yields of their crops of wheat, of maize (the principal food of the fellahin) and of rice—not only consumed at home but also exported to Ceylon and other territories in the Indian Ocean area. It was also clear that the distribution of the nitrates which were provided would have to be controlled so as to diminish—indeed as it turned out to eliminate altogether—the proportion allocated to cotton; for it was desirable to reduce the amount of cotton produced so as to increase the acreage under grain. If these things could be done, it seemed, then Egypt would not only remain self-sufficing in grain, as she had been for some time; she would be

¹ See Appendix XXXVIII, p. 247.

² See Appendix XXXVIII.

³ *Ibid.*

able to produce an export surplus sufficient to meet any deficits that the stresses and strains of war might cause elsewhere in the area; so that not only she herself, but all the territories within the purview of the Middle East Supply Centre, would be able, collectively, to feed themselves. The shipping authorities were convinced that this should not be difficult since in peace, if considered collectively, they had had a small surplus.¹

Unfortunately, however, this happy prospect was more distant and the tasks of the Middle East Supply Centre were harder to discharge than the shipping authorities had supposed. Before the Middle East Supply Centre had appeared on the scene there had been a long period of growing dislocation when imports had diminished and British purchases increased, and when the remedy for the consequent rise in prices—increased taxation—had not been applied because, apart from the difficulty of applying it, the governments, with no war to wage, had not seen the need. The results had been inflation, unevenly distributed hardship, and an increase in anti-social ways of behaving that were hard to diminish let alone to overcome. And then in the summer of 1941, so contrary are the ways of nature as well as of man, there were unprecedentedly bad harvests in most of the territories. The Middle East Supply Centre had thus no sooner entered upon its duties than there emerged the threat of famine.

In time of war famine is always a danger in the Middle and Far East. There could be no legitimate comparison between conditions in the United Kingdom and in the primitive communities for which the Middle East Supply Centre had to provide, where the methods of agriculture in many territories had changed very little since the days of the Roman Empire, where large numbers of people, in almost all the territories, even at the best of times, were living on the margin of subsistence, and where, outside the British colonies, there were none of the prerequisites of the controls which had made it possible in this country after the fall of France to ensure, in spite of the diminishing imports, that everyone had enough to eat. Admittedly it was easier to gain this assurance in the United Kingdom than in other western countries with comparable traditions, because a higher proportion of its food comes from abroad, and a smaller proportion has to be collected from the farms; nevertheless the achievement

¹ The question of whether or not the Middle East might properly be said to have been self-sufficing before the war was always a bone of contention between the Middle East Supply Centre and the Ministry of War Transport. The Ministry of War Transport constantly asserted that the area had been self-sufficing. This judgment was presumably based on the fact that though some of the territories had deficits others had small surpluses, and if it were overlooked that many different kinds of grain were produced, and were not always interchangeable, the total of the surpluses was somewhat larger than the total of the deficits. There were, however, a number of cogent arguments on the other side, particularly that, in the circumstances described on page 232 below, nothing was harder than to get a territory with a small and precarious surplus to bestow it on a neighbouring territory for which it had, perhaps, never previously entertained friendly feelings.

would not have been possible had it not been that in the United Kingdom there was a literate and obedient population, an efficient, energetic and uncorrupt administration, and a determination to win the war and to mobilise everyone for the purpose.

In general in the Middle East these traditions and attitudes of mind were wholly or largely absent. Most of the territories had been caught up against their will in the struggle between the great Powers; their illiterate peasant populations were unamenable to control; their ruling classes lacked the traditions necessary to discharge the kind of duties the war had imposed on their counterparts in the West; their administrations were inadequate in numbers and training and separate one from another with no wish to combine for the common weal.

In these circumstances nothing is more likely than that a small deficit—and the deficits that resulted from the harvest failures in 1941 appear not to have been large in relation to the numbers of mouths to be fed—should be transformed into an enormous, artificially created shortage sufficient to cause hundreds of thousands to starve to death. Hundreds of thousands had indeed starved to death in the 1914–18 war when the Germans had been in control in the area¹ and this created an additional difficulty, for the fact was remembered—by peasants who immediately began to hoard from fear of scarcity, as well as because the rise in prices, combined with the shortage of consumer goods, made selling seem less necessary and less attractive than usual; by merchants who, with the likelihood of rising prices, saw the prospect of large fortunes and immediately began to buy; by all the well-to-do consumers who wished to ensure themselves against disaster and also bought as much as they could afford. For these reasons the progress to starvation in the Middle East, if once embarked on, resembles the progress of a snowball that gathers force as it rolls.

This fact had been noted by Gibbon, nearly two hundred years earlier, in describing events in the reign of Julian the Apostate who ruled from A.D. 361 to 363 :

the strongest prejudice [he wrote] was entertained against the character of an apostate, the enemy and successor of a prince who had engaged the affections of a very numerous sect; and the removal of St. Babylas excited an implacable opposition to the person of Julian. His subjects complained with superstitious indignation that famine had pursued the emperor's steps from Constantinople to Antioch, and the discontent of a hungry people was exasperated by the injudicious attempt to relieve their distress. The inclemency of the season had affected the harvests of Syria; and the price of bread in the markets of

¹ According to an article in *The Times* of 4th February 1942, 300,000 starved to death in Syria and Lebanon.

Antioch had naturally risen in proportion to the scarcity of corn. But the fair and reasonable proportion was soon violated by the rapacious arts of monopoly. In this unequal contest, in which the produce of the land is claimed by one party, as his exclusive property; is used by another, as a lucrative object of trade; and is required by a third, for the daily and necessary support of life; all the profits of the intermediate agents are accumulated on the head of the defenceless consumers. The hardships of their situation were exaggerated and increased by their own impatience and anxiety; and the apprehension of a scarcity gradually produced the appearances of a famine. When the luxurious citizens of Antioch complained of the high price of poultry and fish, Julian publicly declared that a frugal city ought to be satisfied with a regular supply of wine, oil and bread; but he acknowledged that it was the duty of a sovereign to provide for the subsistence of his people. With this salutary view, the emperor ventured on a very dangerous and doubtful step of fixing by legal authority the value of corn. He enacted that, in a time of scarcity, it should be sold at a price which had seldom been known in the most plentiful years; and, that his own example might strengthen his laws, he sent into the market four hundred and twenty-two thousand modii, or measures, which were drawn by his order from the granaries of Hierapolis, of Chalcis, and even of Egypt. The consequences might have been foreseen and were soon felt. The imperial wheat was purchased by the rich merchants; the proprietors of land, or of corn, withheld from the city the accustomed supply; and the small quantities that appeared in the market were secretly sold at an advanced and illegal price.¹

Some of these unfortunate expedients were tried again in the Middle East in 1941² (and afterwards in India) and the results were much the same as they had been fifteen hundred years before. The only remedy, it appeared, until means could be found for the governments concerned to get control of the grain that left the fields and thus, by prohibiting private trade, to accumulate a supply locally for the benefit of the people, particularly in the towns, who could not provide for themselves, was imports, sufficient for this purpose, purchased centrally and distributed under the direction of the Middle East Supply Centre.³

In the summer of 1941 the Middle East Supply Centre began to collect information about the amounts required. Demands of dubious reliability that constantly increased as the crisis mounted and that

¹ C. Gibbon, *History of the Decline and Fall of the Roman Empire*, Bury's edition, Vol. II, Chapter 24, pp. 509-510.

² Notably the Minister of State in the Middle East conceived the idea of importing wheat into Syria and selling it at progressively decreasing prices in the hope that this might induce the hoarders to disgorge their stocks. Some of the wheat, however, was bought by the speculators who in general realised that the scheme would have to be abandoned sooner or later, as was indeed the case.

³ See Chapter XVI below.

took some time to sift, began to pour in from all the territories. By the end of the year the demands that it seemed impossible to deny amounted to nearly one million tons for the crop year July 1941 to June 1942.

So far, therefore, from an improvement in the shipping situation having resulted from the setting up of the Middle East Supply Centre it was—or so it seemed in the United Kingdom—the reverse that was happening. The accumulating results of local inefficiency and of preoccupation with other matters in London had combined to produce a shipping problem of formidable dimensions which, it was clear, must continue to get worse for some time before it could get better. For of the million tons of grain required before July 1942, only just over 300,000 had been shipped by the 31st December 1941.¹ Egypt needed 200,000 tons of nitrates a year for her grain crops, but she was only sent just over 100,000 in 1941.² The balance, it is true, could, it appeared, be provided from stocks, but this was an expedient that could not be repeated. More nitrates would have to be sent to the Middle East in 1942 than in 1941, besides much more grain and, at the same time, large quantities of other supplies; for while the essential demands grew, the demands for less essential cargoes, more difficult to assess and control, proved exceedingly hard to reduce.³ All told, nearly one million tons of civil supplies, other than coal, were shipped to the Middle East in the second half of 1941 in British ships,⁴ besides an unknown amount of luxury goods carried there in American ships despatched, from the early summer onwards, at an average rate of about fifteen a month,⁵ with a great deal of space, after the lend-lease supplies for the British armies had been put on board, which lack of adequate controls in the United States, as well as in the Middle East, made it impossible to use in a proper way. In London, in consequence, as the demands continued to grow which British ships would have to meet at the expense of British consumption, the sense of responsibility for the Middle East territories became mixed with the sense of outrage which the prudent always feel when they are required to make sacrifices they can ill afford for the benefit of the improvident, however unreasonable it may be to assume that the improvident could in fact behave otherwise than they do.

¹ See Appendix LVII, p. 353, below.

² See Appendix LVII below.

³ The reductions had to be effected by means of a system of import licences. The difficulties in the way of collecting the information required to serve as a basis for granting the licences, and in getting the governments concerned to agree to enforcing the system, were very great. In the end all requests for licences had to go through the Middle East Supply Centre which meant, as the Centre put it, that 'we had an executive control over the imports into each territory'.

⁴ See Appendix LVII below.

⁵ See Chapter X below.

The sacrifices, however, were not so great as might appear, for economies in the use of ships were continually being devised to mitigate them. The ships that sailed from this country with equipment for the British armies loaded at the same time such civil cargoes—coal, for example, when it was available—as could be exported; for the principal items of military cargo were vehicles which, as long as they were shipped on wheels, as they largely were at this time, left a great deal of empty space. As the year wore on more vehicles were sent from the United States and in American ships, but the British continually urged the United States Government to put pressure on its ship-owners to fill their unused space with essential commodities instead of with the luxury cargoes at higher freights which they preferred. Admittedly the results left much to be desired. Luxuries continued to go to the Middle East, adding to the clutter in the ports (until the British authorities removed them to a dump in the desert¹), wasting shipping space and undermining the Middle East Supply Centre's authority which rested on the ability to control what was imported. Nevertheless considerable progress was made. Nitrates, particularly, were shipped from Chile to the west coast of the United States, railed across the country, and sent to the Red Sea ports in American ships carrying military cargo. As a result of expedients such as these, the cost to the United Kingdom of providing the Middle East with civil supplies diminished, for the supplies were increasingly sent in ships that must have sailed to the area in any event.

There was thus established a principle (impossible, it is true, to enforce completely while the United States was still neutral) that was maintained throughout the war and applied, *mutatis mutandis*, in many other places. All the necessary civil supplies that the military cargo-ships could carry were put into them; the balance was sent from the nearest sources by British ships in the cross trades—by the ships, for example, that carried nitrates from Chile, or grain from India and Australia.

The balance, however, was considerable in 1941, and it was for this reason among others that the various proposals to withdraw British ships from the cross trades did not have any appreciable results. It was never possible to diminish the British tonnage in these trades significantly (for the American project, conceived in the summer of 1941, to take over the British services had virtually no success²). As the year wore on the British tonnage in the cross trades had, on the contrary, to be increased. It had amounted to roughly 3.1 million deadweight tons on the 31st December 1940; it amounted

¹ This was the famous Suez dump. In February 1942 the Ministry of War Transport Representative reported that the dump contained 41,000 tons of miscellaneous luxury cargoes mainly shipped in United States ships.

² See p. 237, footnote 2, below.

to roughly 3.8 millions on the 31st December 1941;¹ and the more there was of it the smaller the amount available for bringing imports to this country. The British ships that carried civil supplies, other than coal, along the cross routes to the Red Sea and Persian Gulf in the second half of 1941 could, had they not been thus employed, have brought over three-quarters of a million tons of imports to the United Kingdom.²

The United Kingdom went without the imports but other Commonwealth territories, too, paid a price in order that the populations and armies in the Middle East might be supplied; for it would not have been possible to supply them, while providing for this country's own diminished needs, except by taking ships out of other cross trades, not obviously contributing to a military purpose, that served, particularly, South Africa, India, Australia and New Zealand.

The task would not have been possible, either, except by sending few or no ships to these countries to bring imports for the United Kingdom except such as had to go to the Indian Ocean area in any event with military cargo; for this was another principle governing the allocation of tonnage that was evolved after France fell: just as the interest of economy required that the military cargo-ships should carry civil supplies to the Middle East on the outward voyage, so it also required that they should bring imports from the Indian Ocean area on their way home; for though all the territories in the area where there were useful commodities to be had were much farther off from the United Kingdom than North and South America, at this time capable of meeting nearly all the needs, they were nevertheless much closer than any place in the Western Hemisphere to a ship that had got as far as Suez; and so while the Ministry of War Transport used as many ships as it could spare from the military programmes, and from what were held to be the essential civilian services in the cross trades, to bring imports to the United Kingdom along the shorter routes, it fetched as many necessary imports from the Indian Ocean area as the military cargo-ships could carry but (apart from a few ships fetching meat from Australia) no more. In consequence, the noose began to close round South Africa, India, Australia and New Zealand in the later part of 1941, as it had begun to close round the Middle East after France fell. There were fewer ships

¹ It is possible, though it seems unlikely, that a small part of this increase is to be attributed to British ships sailing from North America to the Indian Ocean area with military cargo.

² See Appendix XXXIX. Curiously enough (or perhaps not so curiously for there was no general statistical analysis of how the tonnage in the cross trades was employed in detail, and no one made the kind of calculations that became usual later and that the writer has attempted in Appendix XXXIX) it was not the very heavy cost of supplying the Middle East along the cross routes that was complained about, but the relatively insignificant cost of supplying it when, in moments of crisis, and because the programming was inadequate, more space had unexpectedly to be provided in the military cargo-ships sailing from North America.

coming to these countries from outside the area than in peace, and of the ships inside the area, including such as could not be removed from it because, like the old crocks in the coal shuttle, they were too slow and dilapidated to be used elsewhere, fewer were available for their use.

Admittedly even by the end of 1941 the rope was still slack. Ships were not nearly as scarce elsewhere in the Indian Ocean area as in the Middle East; for the Middle East was a theatre of war, and in its ports there were dangers, delays and other inconveniences sufficient to drive away any ship not directed there by her government. Elsewhere in the area, on the other hand, the ports were still safe and commodious, and for this and other reasons there was here a ship-owner's paradise; for of the British ships that would have gone there in peace many were now sunk or on war service; the foreign ships belonging to the enemy had been driven off the seas by the British blockade, and of the other foreign ships that would have liked to go there, many had been chartered by Britain and were braving the perils of the Atlantic or at the bottom of it. In consequence, as the supply diminished the freights rose and a fortunate minority reaped the harvest. Free Norwegian and Dutch ships sailed in in large numbers;¹ American ships had evidently done the same of their owners' free will, before it occurred to the United States Government to further the project, and to propose that the remaining British ships in the cross trades should be removed to the danger-zones and replaced by American.² On the periphery of the Indian Ocean area, therefore, where the ship-owners' meat was the customers' poison, the shipping situation became increasingly uncomfortable in 1941. How soon would discomfort turn to danger? This question became gradually more urgent, but no one knew the answer.

For a considerable time after France fell it had not even seemed necessary to ask the question, since the territories principally concerned were in peace largely exporters of raw materials and importers of manufactured goods. As a result—because their exports were much bulkier than their imports—when the continent of Europe ceased to take their produce, and the United Kingdom took

¹ See Appendix XL, p. 249.

² See p. 192, Chapter VIII above. As it turned out the Americans had not the resources to put the proposal into effect. It was originally proposed that the Americans might replace the services of seventeen British cargo-ships, of roughly 176,000 deadweight tons, employed in the cross trades, and of two passenger-ships. In the event, besides the two passenger-ships, only seven cargo-ships, of 40,000 deadweight tons, were replaced. The negotiations raised many difficulties, which were not settled until the end of the summer of 1941. By that time the Americans were short of ships to meet their needs at home. They had no sooner replaced the British ships withdrawn from the cross trades for war service than they found that they had to start taking back the replacements. Those that were not removed before Pearl Harbour were removed afterwards. In any case a number were Danish ships, requisitioned by the United States Government, that had no better, indeed it might seem a worse claim to the safe trades than had British ships. (See Chapter X below.)

much less than usual, it was not the lack of imports but their crops that could not find a market that threatened to disrupt their economies. But the British Government never allocated shipping for the purpose of carrying export cargoes. The commodities imported into this country were selected because they were needed, not because their suppliers wished to dispose of them, and this principle was applied in every area of which the British came to control the trade. The export surpluses of the Commonwealth territories overseas, therefore, did not constitute a shipping problem, though they were, nevertheless, a problem for the British Government; and the British Government was prepared, if there were no alternative, to purchase some crops in the British and French colonies which its ships could not carry and to give financial help to Colonial territories that reduced their production of commodities that could not be sold. Sometimes as a result of measures of this kind, sometimes because, as in India, defence expenditure increased purchasing power and more was consumed at home, largely because demand grew in the Middle East and in North America, the problem of export surpluses was, although with difficulty, overcome. Even before this happened, however, the Commonwealth territories on the periphery of the Indian Ocean area began to find themselves running short of essential imports and to appeal to the United Kingdom for help.

It was the old familiar problem again, but in a form much more intractable even than in the Middle East; for experience had shown, first in this country and then there, that if essential—and only essential—imports were to be provided, then there must be commodity controls, rationing, import programmes, control of the use of shipping space and some authority capable of weighing up the various needs against each other. These tasks were, however, impossible to discharge as long as the free ships still plied their trade—although their freedom was increasingly diminished as the British and the Americans co-operated to control the freights they charged and the cargoes they carried—and as long as the claimants were separate and (except in the case of India) independent nations, more or less remote from danger, holding in consequence ideas about what was or was not essential very different from those that prevailed in the war-zones and, since their economies were all uncontrolled, in fact incapable of producing any precise estimate of their needs at all.

If, the Ministry of War Transport reflected, the United Kingdom Government were to ask these countries for import programmes they would no doubt gratefully respond; but the demands that would emerge would be, to the way of thinking in the United Kingdom, unnecessarily extravagant while the United Kingdom, nevertheless, might seem to be under the obligation to meet them. It was, it appeared, better not to ask, but to wait upon events, withdrawing

ships up to the limit that seemed permissible to the liner-owners in the Ministry, and the Ministry of War Transport representatives on the spot, who were familiar with the trades, and that the governments concerned were prepared to tolerate.

This was indeed the sort of prescription which His Majesty's Government was accustomed to apply in difficulties of this kind: to keep a level head; never to use the available means of coercion until coercion seemed the only possible policy; never to exaggerate (indeed sometimes to understate) the dangers; never to meet trouble half-way; in fact (to the mystification and annoyance of the academically minded) to 'muddle through'. As the Deputy Director-General of the Ministry of War Transport observed in June 1941, casually letting fall a phrase of revolutionary significance: 'we may come to a world import programme instead of the present United Kingdom and Middle East import programmes; but that time is not yet'.

No one, however, could have denied that muddling through had its risks and some began increasingly to wonder whether they were not too large. In India, as the prospects of Japan's entering the war increased, the supplies of rice from Burma, on which the populations in Bengal and Southern India depended, were put in jeopardy. It would have been wise to build up stocks. No one, however, understood the part played by rice imports in the Indian economy or knew whether ships had been taken from the Indian coast, for the coal shuttle and other purposes in the Middle East, in quantities too large for present, let alone future safety. There were no means, it was said in the Ministry of War Transport, in July 1941, 'of judging what are the essential needs of the Indian coasting trade, or even how the present needs compare with pre-war needs. The figures show, however, that there has been a substantial contraction in the tonnage available'.

In South Africa, a considerable exporter of maize, and in Australia, the principal granary of the Indian Ocean area, imports of fertilisers were falling heavily. In peace Australia and New Zealand drew their supplies from close at hand—from the phosphates produced in Nauru and Ocean Island in the Pacific. At the end of 1940, however, two German raiders, the *Orion* and the *Komet*, appeared upon the scene, sank several of the ships belonging or on charter to the Phosphate Commission which controlled the trade and, on the 27th December, bombarded Nauru. The great loading cantilever which could convey phosphate from giant storage bins direct into a ship's hold at the rate of 1,000 tons an hour, was extensively damaged and exports from the island were in consequence reduced from about one million tons a year to just over 150,000 tons in 1941. There were alternative sources of supply—in Christmas Island in the Indian

Ocean, in Makatea in the Tuamotu Archipelago, and in mines on the shores of the Red Sea but these mines (which lay on one of the main Indian Ocean highways so that their products could be carried at no tonnage cost in the ships returning from the Middle East) did not come into operation until the end of 1941; Makatea was a very long way off, and, for one reason or another, Australia's imports of phosphates in 1941 seem only to have been about half, or less than half, of her normal peace-time imports.¹ South Africa did not do greatly better,² for in peace she drew her supplies principally from the Netherlands and Morocco, and in the eighteen months after France fell, apart from a small amount from the Red Sea, she became dependent on Florida, whence the freight rates per ton in free foreign ships had risen, by March 1941, to nearly six times the cost of the phosphates themselves.

Thus the dangers that had emerged in the Middle East at the beginning of 1941 were already even before Pearl Harbour beginning to threaten the other territories in the Indian Ocean area. The causes—the fall in the effective supply of world shipping and the disruption of the normal patterns of trade—were broadly the same in both cases, and so were the likely consequences: a decline in production in the grain-growing areas, and starvation in the areas, particularly India, which normally produced less than enough, or only just about enough, to feed themselves, and where only small shortages, or even the threat of them, might mean, as in the Middle East, catastrophe on an enormous scale.

These dangers were indeed being intensified in the remoter parts of the area by the measures that were being taken to avert them in the centre. They were not, admittedly, imminent dangers before Pearl Harbour; for all that anyone could see to the contrary by that time they were still a long way off—much farther off than those which threatened existence in the United Kingdom and in the Middle East; but by the end of 1941, when there were so many needs still unprogrammed and so many difficulties in the way of allocating ships in the proper proportions among the huge and growing number of claimants; when any large and unexpected demand must, if met, disrupt all the other services, and when the distances to be traversed were so vast that it might be physically impossible to meet a call for help in less than three or four months, there was no safety anywhere outside the Western Hemisphere.

¹ See *Overseas Trade Bulletins*, Nos. 34-43, Commonwealth Bureau of Census and Statistics, Canberra. The average amount of rock phosphate imported into Australia in the years 1936-37 to 1938-39 (the year ending on the 30th June) was, roughly, 749,000 tons. Imports in 1940-41 were roughly 375,000 tons and in 1941-42 311,000 tons.

² The Union imported both rock phosphate and superphosphate, though in different proportions at different times. Allowing a ratio of 100 rock phosphate to 170 superphosphate, the Union's imports, comparing the 1936-38 average and 1941 fell by about 30 per cent. See *Annual Statements of Trade and Shipping of Union of South Africa*.

APPENDIX XXXII

Periods in 1941 when the Suez Canal was closed to through traffic

<i>Date closed</i>	<i>Date reopened to through traffic</i>	<i>Number of days closed</i>
30th January	13th February	14
18th February	10th March	20
11th March	22nd March	11
8th May	23rd May	15
24th May	30th May	6
10th July	16th July	6
6th September	12th September	6
7th October	9th October	2
4th November	6th November	2

The above figures refer only to through traffic. Some sections of the canal were generally open earlier.

Source: Table compiled by the author from data in the Ministry of War Transport

APPENDIX XXXIII

*Tonnage employed in trooping (including tonnage under repair) and trooping-capacity:
1st October 1941 to 27th March 1944*

	(1) W.S.		(2) INDIAN OCEAN		(3) 'MONSTERS'		(4) MISCELLANEOUS		(5) TOTAL IN SERVICE	
	Gross tonnage '000 tons	Personnel capacity	Gross tonnage '000 tons	Personnel capacity	Gross tonnage '000 tons	Personnel capacity	Gross tonnage '000 tons	Personnel capacity	Gross tonnage '000 tons	Personnel capacity
1st October 1941	1,240	155,512	426	63,538	325	28,163	97	13,051	2,088	260,264
23rd March 1942	1,341	168,883	412	67,039	325	28,186	97	13,190	2,175	277,298
20th October 1942	1,451	256,712	427	69,483	325	42,562	77	13,904	2,280	382,661
14th July 1943	1,270	227,007	341	59,647	325	48,028	35	5,758	1,971	340,440
1st December 1943	1,280	232,454	317	55,880	325	51,275	55	10,189	1,977	349,798
14th January 1944	1,291	234,551	313	55,879	325	51,275	47	8,386	1,976	350,091
27th March 1944	1,328	244,036	312	53,732	325	55,223	32	5,042	1,987	358,033

Source: The figures in this table, with one exception noted below, come from the returns kept by Sea Transport Division. For the sake of clarity the data for 14th July 1943 and the following dates have been rearranged in respect of columns 1 and 3. In the Sea Transport returns three ships, the *Andes*, the *Empress of Scotland* and the *Pasteur* appear in column 1 until (and including) 20th October 1942, and afterwards in column 3. In this table they have been kept throughout in column 1. The table represents neither a class of ship nor a service, but sometimes one, sometimes the other, and sometimes both. Thus category 3 ('Monsters') represents a class of ship, category 4 (Miscellaneous) a service, category 2 (Indian Ocean) both a class and a service, category 1 (W.S.) a class and two services (W.S. and North Atlantic) until August 1943 when, with the cessation of the W.S. convoys, it becomes simply a class. It is inferred that tonnage under repair is included in these figures because the returns have no category for ships repairing. The figures, however, do not include ships in process of conversion.

APPENDIX XXXIV

Number of personnel carried per 1,000 gross tons

Date	W.S.	Indian Ocean	'Monsters'	Miscellaneous	Total in service
1941					
1st October . . .	125.4	149.2	86.7	134.5	124.6
1942					
23rd March . . .	125.9	162.7	86.7	136.0	127.5
20th October . . .	176.9	162.7	131.0	180.6	167.8
1943					
14th July . . .	178.7	174.9	147.8	164.5	172.7
1st December . . .	181.6	176.3	157.8	185.3	176.9
1944					
14th January . . .	181.7	178.5	157.8	178.4	177.2
27th March . . .	183.8	172.2	169.9	157.6	180.2

Source: Appendix XXXIII above

APPENDIX XXXV

*Total personnel embarked from the United Kingdom in W.S. convoys (including civilians and ships' crews)
August 1941 to the beginning of the North African Campaign*

Convoy number	Date of sailing from United Kingdom	Number of ships sailing from United Kingdom	Gross tonnage of troopships	Speed of slowest ship	Personnel embarked	Number of M.T. ships
	1941					
W.S.10 . . .	2nd August . . .	18	252,500	13	30,452 (30,857)	5
W.S.10X . . .	16th August . . .	6	96,300	14	10,004 (10,004)	3
W.S.11 . . .	30th August . . .	18	159,400	13	24,430 (24,445)	8
W.S.12 . . .	30th September . . .	20	248,700	14	32,673 (33,003)	5
W.S.12Z . . .	12th November . . .	15	204,500	14	27,787 (21,935)	5
W.S.12X . . .	10th November . . .	6	No British ships	15	19,534 (19,534)	—
	sailed from Halifax					
W.S.14 . . .	8th December . . .	27	279,800	14	38,148 (38,357)	11
	1942					
W.S.15 . . .	11th January . . .	22	282,800	14	37,841 (38,089)	7
W.S.16 . . .	16th January . . .	19	234,000	14	45,114 (45,339)	5
W.S.17 . . .	23rd March . . .	30	351,700	14	59,231‡ (58,916)	8
W.S.18 . . .	15th April . . .	20	274,600	14	44,953‡ (45,179)	5
W.S.19 . . .	10th May . . .	16	235,100*	15	41,491‡ (41,541)	3
W.S.19W . . .	22nd May . . .	1	81,200 ('Q.M.')		9,502 (9,539)	—
W.S.19P . . .	31st May . . .	23	317,200†	14	60,295‡ (60,618)	4
W.S.19Y . . .	17th June . . .	1	83,700 ('Q.E.')		10,718 (10,757)	—
W.S.20 . . .	21st June . . .	20	297,000	14	54,386 (52,677)	2
W.S.21P . . .	17th July . . .	5	105,200	17	19,284 (19,379)	—
W.S.21 . . .	29th July . . .	12	155,600	14	28,290 (30,753)	2
W.S.22 . . .	28th August . . .	18	302,700	14	50,770 (50,849)	1
W.S.23 . . .	4th October . . .	4	72,100		? (11,771)	—
W.S.24 . . .	29th October . . .	7	118,300	14	18,213 (18,327)	—

Notes: * Includes two United States ships of a total of 14,000 gross tons carrying 3,041 troops.

† Includes five United States ships of a total of 36,500 gross tons carrying 9,195 troops.

‡ A total of 1,902 carried in H.M. ships in convoys W.S. 17, 18, 19 and 19P.

Source: The information given above has been taken from the sailing telegram in the Ministry of War Transport file for each convoy. It has been checked against the comparable information provided by the War Office. The figures of troops embarked which have been derived from these two sources agree substantially but not completely. The War Office figures are given in brackets. The information is not complete enough to make it possible to start the series before August 1941, although the first W.S. convoy sailed in the summer of 1940.

APPENDIX XXXVI

Numbers and destinations of troops carried in W.S. ships¹

	Sept.-Dec. 1941	Jan.-Mar. 1942	April-June 1942	July-Sept. 1942	Oct.-Dec. 1942
West Africa	3,144	1,154	6,189	4,015	6,762
South Africa	2,468	2,729	4,277	1,214	3,925
Southern Rhodesia	114	101	819	1,139	715
East Africa	216	968	4,803	3,736	1,763
Madagascar	—	6,116	1,944	12	418
Mauritius	—	—	—	19	1
Aden	354	129	32	471	37
Persia and Iraq	23,266	5,029	4,848	18,767	8,289
Teheran	—	—	—	1	—
Middle East	45,580	59,279	125,340	48,002	23,498
Malta	—	2	4	4	—
India	22,012	50,449	67,822	21,758	16,099
Ceylon	710	2,612	2,112	607	354
Burma	307	89	1	—	—
Malaya	14,444	—	—	—	—
Hong Kong	13	—	—	—	—
N.E.I.	—	7,658	—	—	—
Australia	13	21	887	41	50
New Zealand	9	31	35	13	15
Force 121	—	—	—	575	—
Falklands	—	—	—	9	—

¹ Many of the personnel shown above, and, particularly, those shown as landed in South Africa, were later carried on elsewhere in other ships and convoys.

Source: War Office

APPENDIX XXXVII

*Troopships lost from all causes, 3rd September 1939 to
30th June 1943*

	<i>Gross tons</i>
3rd September 1939 to 31st May 1940	25,739
Fall of France to end of 1940	143,066
Calendar year 1941	42,643
Calendar year 1942	290,527
First half 1943	55,893
	557,868

Source: Ministry of War Transport

APPENDIX XXXVIII

Egypt's principal imports, 1936-38 average, 1940 and 1941

Tons weight

Commodities	1936-38 average	1940	1941
Tea and tea substitutes	7,380	6,455	6,595
Sugar (mainly for refining)	60,116	67,191	14,648
Coffee (not roasted)	7,978	7,051	7,794
Tobacco leaves and tobacc	5,949	5,597	6,407
Fertilisers	576,033	356,000	95,000
Coal	1,385,000	450,000	429,000
Kerosene	294,278	182,901	173,349
Diesel fuel, mazout and solar oils	240,147	143,233	173,409
Benzine	30,086	27,680	129,176
Wood for building	240,521	76,142	10,073
Cement	41,233	..*	..*
Iron and steel, bars	79,279	19,370	8,363
Iron and steel, sheets	40,081	..*	..*
Iron tubes, pipes and joints	23,854	9,757	3,723
Wool fabrics	1,845	832	839
Cotton piece goods, heavy	10,161	} 7,557	7,508
Cotton piece goods, light	10,329		
Silk fabrics	1,068	110†	42†
Sacks, jute	22,069	19,421	18,333
TOTAL	3,077,407	1,023,297	989,259

Source: Statistical Handbook of Middle East Countries (Jewish Agency for Palestine, Economic Research Institute) Jerusalem, 1945. Table No. 31, p. 69, except for imports of fertilisers in 1940 and 1941, obtained from Ministry of War Transport

* No information available.

† Excluding artificial silk.

APPENDIX XXXIX

Loss of imports to United Kingdom as a result of the shipment of civil supplies to the Middle East in cross trades other than from North America, July to December 1941

	<i>Tons</i>	<i>Gross tonnage in continuous employment</i>
<i>India</i>		
Average amount carried a month	27,510	
Round-voyage time = 2 months		
Therefore, amount of gross tonnage required in continuous employment		55,020
<i>Australasia</i>		
Average amount carried a month	26,282	
Round-voyage time = 3 months		
Therefore, amount of gross tonnage required in continuous employment		78,846
<i>South America</i>		
Average amount carried a month	26,525	
Round-voyage time = 6 months		
Therefore, amount of gross tonnage required in continuous employment		159,150
<i>Netherlands East Indies</i>		
Average amount carried a month	12,883	
Round-voyage time = say 3 months		
Therefore, amount of gross tonnage required in continuous employment		38,649
		331,665

Assuming 4·8 round voyages per annum (or 2·4 in six months) on the North Atlantic (the figure generally used in 1941) 331·7 thousand gross tons could have brought in roughly 796,000 tons of imports in the second half of 1941.

The above figures may represent an underestimate, the writer having omitted shipments from South and East Africa because these services may have been combined with others.

APPENDIX XL

Entrances and clearances of overseas shipping on commercial services, with cargo and in ballast,¹ Commonwealth of Australia

(Years ending 30th June)

Thousand tons

Nationality	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44
<i>British</i>						
Australian	331	333	229	188	191	278
Canadian	20	..*	1	7	17	80
New Zealand	563	428	293	158	146	145
United Kingdom	3,744	3,402	2,450	2,279	1,281	1,338
Others	229	216	188	145	174	104
<i>Total British</i>	4,887	4,379	3,171	2,777	1,810	1,946
<i>Foreign</i>						
Danish	55	61	..*	..*	..*	..*
Dutch	291	402	468	578	247	271
French	108	89	82	76	7	9
German	141	25	..*	..*	..*	..*
Italian	68	67	..*	..*	..*	..*
Japanese	330	329	270	14	..*	..*
Norwegian	325	634	729	765	600	470
Swedish	124	89	46	92	114	80
U.S.A.	175	261	401	756	943	1,483
Others	207	129	211	116	104	225
<i>Total Foreign</i>	1,824	1,087	2,208	2,397	2,014	2,538
GRAND TOTAL	6,711	6,466	5,379	5,174	3,824	4,484

Source: Official Year Book of the Commonwealth of Australia, 1944-45

¹ i.e. these figures exclude ships with troops, army equipment, munitions and stores, so that the war-time and peace-time figures are comparable.

* Figures not available.

CHAPTER X

THE SHIPPING SITUATION BEFORE AND AFTER PEARL HARBOUR

IN SPITE OF the hazards and difficulties the year 1941 turned out much better than anyone had imagined possible at the beginning. By the time of Pearl Harbour all the demands held to be essential were either being fulfilled or—in the case of the troopships—seemed within sight of fulfilment. Admittedly standards of what appeared essential to both the civil and military authorities had often, indeed usually, been greatly reduced in the course of the year, and, even so, had only been maintained by the narrowest margins; nevertheless, by the beginning of December the most urgently needed formations had gone, or with the help of the American troopships in British service seemed about to go, to the Indian Ocean area; if their weapons and equipment were inadequate this was because of failures of design, and of production in the United Kingdom or in the United States, and not for lack of ships; there was enough coal in the Middle East, enough other supplies there for the moment, and notwithstanding all the tonnage employed in these various services the United Kingdom had received a volume of imports considerably larger than that forecast in April. Imports in the calendar year of 1941 were 30·5 million tons, not 28·5 millions as had been feared, and taught by experience the purchasing departments had put nearly 1½ million tons to reserve.¹ This happy state of affairs had been made possible partly because management had so far been skilful enough to foresee and provide for the needs in time; partly because a temporary victory had been scored over the submarines with the result that net losses were smaller than had been expected;² partly because of American help³ for which no allowance had been made when, in April, it had been held that the British would only be able to import 28·5 million tons.

It is impossible to say precisely what American help amounted to

¹ See Appendix XXXI, p. 201.

² This is an oversimplification, for though it is true that net losses were considerably overestimated, the amount of tonnage under repair was under-estimated and so also was the amount of tonnage in the cross trades; so that the gain to the United Kingdom import programme was considerably smaller than it would have been if net losses had been the only factor that changed.

³ See Appendix XLI, p. 264.

in 1941, for neither at this nor at any other time did the British ever attempt to estimate how far it had contributed to meeting their needs. To have done so, they evidently felt, would have served no purpose except to bargain—indeed, because of the difficulties in the way of making accurate assessments, to wrangle—with the Americans. But the British were rarely, and certainly not in 1941, in a position to bargain, still less to wrangle; nor did they wish to do either. It was best, they appear to have supposed, to tell the Americans what they needed; to take, gratefully, what the Americans gave them, and if what they were given were so little as to put their vital projects in jeopardy, to appeal again on the basis of their immediate requirements. As a result the only records they ever kept (and they kept even these less systematically in 1941 than in later years) were, with one or two exceptions,¹ records of the numbers of American ships that sailed at different dates to different destinations with lend-lease cargoes for British use—records, therefore, that took no account of the facts that some routes were much longer, or more dangerous, than others, that the ships were not always of the same size, did not always carry only British cargoes, and on their homeward voyages often served purely American purposes. If all these complications are allowed for—as far as the inadequate data permit—it seems that American help cannot have been equivalent to more than about 2 million tons of imports in 1941; by another, and a more proper, method of calculation it was equivalent to a good deal less.² For many difficulties had made it impossible for the Americans to satisfy the hopes they had raised. There had, for example, been the Russians to help; it had taken a long time to overcome the legal obstacles in the way of requisitioning the foreign ships in American ports, and still longer to get them to sea, for many of them had been damaged by their crews; and even when they were got to sea the Americans had felt that they could not part with them, and when they had lent the British their services had done so on the same terms as if they had been American ships, so that the return was smaller than if they had been transferred to the British flag. The Norwegian owners in America had discovered various cogent reasons against chartering more free ships, even though the Americans agreed to pay the hire in dollars, so that the British received fewer than they had expected; even the projected exchanges in the cross trades had, as has been shown, largely failed to take place.

All this was disappointing although in spite of it the British had managed by their own efforts to do much better than they had supposed they would. Nevertheless, before Pearl Harbour it seemed

¹ See Chapter XVIII, p. 394 below.

² See Appendix XLI, p. 264.

that there would be compensations in 1942 for the unfulfilled hopes of 1941; for it was expected that in 1942 about 7 million deadweight tons of dry-cargo merchant ships would be built in the United States, of which a large proportion would be lent to Britain, and that the British themselves would build about $1\frac{1}{2}$ million deadweight tons in the United Kingdom and Canada. Meanwhile, losses in the British-controlled dry-cargo fleet in the second half of 1941 had only been at an annual rate of about 2.8 million deadweight tons.

British and American new building together would, it therefore seemed, greatly exceed losses in 1942, and indeed Sir Arthur Salter went so far as to assert that by the beginning of December 1941: 'The shipping problem as it had been posed nine months before had been solved'. The assertion, however, was perhaps more optimistic than the circumstances warranted; for even if all the new American ships had been handed over to Britain, which could not in fact have been supposed, and even if losses had not increased, which again would have been a dubious assumption, the British as a result would only have had a net gain of about 3 million deadweight tons in service on an average throughout the year,¹ and meanwhile it was to be expected that military demands would increase. In view of all the hazards of war, and of Anglo-American relations, it can have been by no means certain, even before Pearl Harbour, that the shipping situation would improve in 1942.

And if it did not—indeed perhaps in any case—planning in 1942 would have to be more precise and reliable than it had been in 1941; for in war good planning and resources are to a large extent alternatives, the more there is of the one the smaller being the need for the other; and it was the problems of planning at the end of 1941 that seemed the most formidable problems. For the kind of difficulties that had occurred in this country in the early days of the war were now increasingly coming to demand settlement in a large part of the rest of the world; and just as in this country it had been found that to impose controls over some commodities, and some categories of ships, merely created shortages among other commodities and other categories of ships until complete control seemed the only safe course, so this experience was now beginning to repeat itself on a scale

¹ Losses in the second half of 1941 were at a rate of roughly 1 per cent. per month, or at an annual rate of 12 per cent. Assuming that the British received 8.5 million deadweight tons of new ships in 1942, and that losses in 1942 had been at the same rate as in the second half of 1941, then the net gains, in terms of tonnage in continuous employment on an average throughout the year, would have been half the new building minus 6 per cent. for losses, minus half the losses on the fleet (21.3 million deadweight tons) at 31st December 1941, i.e. $4.25 - 0.25 - 1.3 =$ say 3.0. The loss in imports would have been slightly smaller than this figure suggests because the ships represented by the 7 million tons of new building would, on their first voyage with imports, only have had to cross the North Atlantic once, instead of twice as would have been the case if they had been built in this country.

hitherto known only to the imaginations of the authors of *Brave New World* and other similar works of fiction.

All through the year, as has been shown, the needs whose fulfilment could not be left to chance but that had to be precisely estimated and met within a given period of time, had continued to grow. The more there were of them, and the more they had to be met from a variety of foreign sources of supply, the more complicated the problems of planning to meet them became. In the largest area of supply, the United States, the Ministry's *alter ego*, the British Ministry of War Transport, New York, had to arrange for huge quantities of cargo to be moved to the ports from all over the country; it had to see that the right types and quantities were ready when the ships were due to load; it had to distribute the cargoes among the ships not only with a view to the proper use of the ships' space, but also with a view to the problems of discharge and distribution in a large number of different territories at the receiving end. It had to perform all these operations in a foreign land; it had to make them conform to policies laid down in London, and yet order them in such a way that if the needs suddenly changed, or the factories could not deliver the goods in time, the necessary adjustments could be made without disaster. Already by the summer of 1941 the task of co-ordinating all these and the many other operations that had to be co-ordinated was beginning to seem unmanageable. It was then suddenly increased by the need, jointly accepted by the British and the Americans, to help the Russians.

No theatre of war in the world was more difficult to supply from overseas than Russia; no nation in need of help can ever have been so unwilling to recognise the limitations imposed not only by the other urgent claims on resources but by geography and the nature of sea transport; no Government can ever have more obstinately insisted on the impossible than did the Russian.

Until the ports in the Persian Gulf and the overland route through Persia could be developed—and though the task was begun in the autumn of 1941 it was some time before the returns were significant—the only way of supplying Russia, except for the trickle that flowed through Vladivostock until the Japanese entered the war, was by means of her northern ports of Murmansk and in the Gulf of Archangel. But none of these ports was equipped to receive military cargo. Shore cranes and other mechanical appliances were rare; there were no heavy lift cranes; the railway communications were inadequate; the quays were sometimes not even rail connected, and the ports in the Gulf of Archangel were ice-bound from the end of November to the end of May. Admittedly the Russians, who preferred them as a channel of supply to Murmansk, which was only thirty miles from the front in the early autumn of 1941, maintained

that they could be kept open by ice-breakers; but of the eight to ten ice-breakers which they said that they could supply, they only succeeded in supplying two, of which one, the *Stalin*, was hit by a bomb on the 15th January 1942, with the result that five British ships were frozen in for the rest of the winter.

A variety of obstacles must therefore for some time have prevented the delivery of a large volume of supplies to Russia. The British and American ships that arrived there in the autumn of 1941 and the early months of 1942, though less than half what the Russians demanded, were all that could be worked. Nevertheless, in spite of this, and at a time when it was taking six weeks to discharge from an American ship a single piece of machinery weighing sixty-eight tons—for the only way of getting it out was to raise it alternately at either end by means of a thirty-five-ton crane, while sixty truck-loads of timber were jammed beneath it—Stalin was asserting that the British 'could without risk land in Archangel twenty-five to thirty divisions. . .'.¹ As the Prime Minister said: 'it seemed hopeless to argue with a man thinking in terms of such utter unreality'.²

Admittedly, equally formidable port and transit difficulties were overcome in other places; admittedly the Russians, to whom human life is cheap, could mobilise labour on an enormous scale to perform tasks which elsewhere would have seemed impossible without machines; admittedly they sometimes achieved extraordinary feats by these means. Nevertheless such means alone could never have sufficed to enable port and transit systems in theatres of war to meet the calls on them, and there did not seem much hope of the exact and elaborate planning, and the intimate and harmonious co-operation between all the parties concerned, which were also necessary. The matter, however, was not put to much test, for in the spring of 1942, when the Germans began to attack the Russian convoys with aircraft, surface ships and submarines based on Norway, so that the voyage of each convoy was turned into a major naval operation, the limit to what could be sent to Russia was set by the number of available escort vessels and the strength of the available covering forces.

As a result of the shortage of escorts, and also because the military and other supplies had to come in increasingly larger proportions from the United States and were sent in American ships, relatively very few British merchant ships were called upon to sail in the North Russian convoys. The average was about seven a month in the last five months of 1941³ and about six a month throughout 1942. Only

¹ See W. S. Churchill, *Second World War*, Vol. III, p. 411.

² *Ibid.*

³ See Appendix XLII, p. 265. These figures exclude tankers which are, however, given separately in Appendix XLII.

about forty-five sailed in the whole of 1943, when the need for naval ships for military operations in North Africa and the Mediterranean caused the service to be suspended, and not many more sailed in 1944.¹

Yet all the same, even though the Russian demands made only small inroads into the British Merchant Navy—though sizeable inroads in 1942 into the United Kingdom's diminishing imports—they presented the most formidable planning problems. It was not only that many necessities—coal, ships' stores, ballast, and even fresh water for the return voyage—had to be supplied because the Russians could not or would not supply them; the ships used on the North Russian route had to be extensively altered for their tasks. Propellers of bronze or cast iron could not be used for they were liable to snap or buckle in the ice; hulls had to be stiffened to withstand the pressure of the ice; adequate heating had to be provided; so had heavy lift derricks. Ships thus altered were the only ships that could be sent to Russia. Even at the times they were not needed there they could not be sent far afield in case they should be needed again. The limitations thus imposed on the mobility of some of Britain's best and newest ships, together with all the other difficulties, and the extreme urgency of doing all that could be done to supply the Russians, added another heavy load to the constantly increasing burden of administrative difficulties.

'It has become imperative', the Division concerned were instructed at the beginning of December 1941, 'that we should have before us at all times an up-to-date statement giving the best possible estimate of the disposition and availability of our tonnage month by month . . . and of the demands, military and civil, which are likely to be made upon it.' The Division principally concerned, however, replied, in effect, that it regretted that it could not altogether comply with these instructions,² for the numbers of ships and trades which the British controlled was so bewilderingly large and yet so incomplete, and the information relating to them was so enormous, and growing at such a pace, and yet so full of gaps, that neither demand nor supply could be precisely estimated.

By the end of 1941, even among the professional civil servants, accustomed from long experience of intractable problems and

¹ See Appendix XLII, p. 265.

² The head of the Division wrote on the 19th December 1941: 'We have carried on so far without complete fulfilment of the task allotted to [us] . . . but this has been in circumstances which permitted considerable flexibility and in which . . . we were able to meet sudden new demands without completely wrecking our normal programmes. Times and conditions are changing however, and the tonnage situation is becoming more stringent while the demands are constantly expanding not only in quantity but in the areas in which the tonnage may be required . . . we have to produce estimates of tonnage expected to be available in all the areas of the world'.

impossible questions to taking things calmly, there were some who began to feel perturbed by all these difficulties; and in the shipping community in the Ministry there were here and there harassed and impatient spirits, still somewhat unused to the ways of His Majesty's Government and given, it was thought, to exaggerating, who openly expressed alarm. 'I consider', one of them wrote at the beginning of September, 'that we are rapidly losing control of the general tonnage situation. . . . I no longer feel capable under the present system of truthfully saying that I know what is going on and what the position is, and I go so far as to say that I doubt if anyone really has a complete picture. . . .'

No one indeed had. The picture, it might have been claimed, was in process of construction; the simile, however, would not have been altogether apt. The task of the Ministry might more properly have been compared to that of a spider engaged in weaving a gigantic web of controls across the face of the world. Since the beginning of the war it had continuously been making progress, but often, it seemed, not fast enough, and when, in December 1941, the web was still a long way from completion, and the spider in consequence still somewhat precariously established, the Japanese struck at Pearl Harbour and immediately destroyed much of its elaborate structure.

Within a matter of months the Japanese conquered a large part of South-East Asia; by March their fleet dominated not only the western Pacific but, for a time, the Indian Ocean also; they threatened India and Australia; they might, it was feared, shortly threaten the Middle East. For a while all the Indian Ocean area, from the Cape to Australia, lived in the lengthening shadow of their conquests.

In all the territories immediately menaced there arose an urgent need for troops and weapons. Large additional numbers of troops were required in India; the Australians demanded the return of two of their divisions from the Middle East; to accede to the request would involve sending men out from this country to replace them at a time when the armies in the Middle East had to be increased to meet a new German offensive. Madagascar, 'the key', as Field-Marshal Smuts said, 'to the safety of the Indian Ocean', had to be seized from Vichy France and occupied in case 'it may play the same important part in endangering our security that Indo-China has played in Vichy and Japanese hands'.¹ In so far as it should prove possible to achieve all these objects (though it may well be supposed that the tasks were impossible, for the British had been short of troopships even before Pearl Harbour, and even with American help which was now withdrawn²) the result would be an increase in the

¹ See W. S. Churchill, *Second World War*, Vol. IV, p. 198.

² See Chapter XI below.

demands for cargo-ships to carry military supplies and equipment. More cargo-ships for military purposes, however, mean fewer cargo-ships for other purposes. Even if there were to be no more to the matter than this (and supposing it should prove possible to raise the numbers of men that British troopships could carry) the increased demands for military cargo-ships would disrupt all the other services.

In war, however, the effects of victory are cumulative, and misfortunes come to the vanquished not in single spies but in battalions. In March the Bay of Bengal had to be closed to merchant ships and the British temporarily lost the use of the great port of Calcutta. The ships that would ordinarily have been repaired there had to go either to Bombay or to South Africa, whither at the same time Dutch and other merchant ships were hurrying for safety from the Netherlands East Indies. In South Africa, moreover, there were also many naval ships, deprived of their bases in Singapore and Ceylon, that were in need of repairs.

Confusion on the grand scale thus descended on the principal ports in the Indian Ocean area, except in the Middle East where the reorganisation undertaken in 1941, and the gradual and orderly increase in facilities, made it possible to distribute the growing volume of military supplies—for, as will be shown presently, the troopships rose to the occasion and men arrived in the Middle East in constantly increasing numbers throughout the first half of 1942. It even proved possible to continue with the task in the late summer of 1942, when Rommel's advance prohibited for a short time the shipment of overseas supplies through Alexandria, and greatly restricted the use of Port Said. For in the Middle East a most ingeniously contrived system was now working. In the Canal, and in Suez and the neighbourhood, ports had been constructed and developed; the same thing had been done for what were known as the 'back door entrances', in the south at Safaga and Port Sudan and, for the use of Palestine and Syria, at the northern end of the Gulf of Aqaba.² All the old and the new ports in the Red Sea, the Canal and the eastern Mediterranean could not be used at once, even if there were no interference from the enemy, for the traffic along the roads, railways and inland waterways could not in such circumstances have kept pace with the amounts discharged from the ships. The various groups of ports were to a considerable extent alternatives. If Alexandria or Port Said were wholly or partly out of action, then some or all of what they would have normally received could be

² It was estimated that the cargo-handling capacity of the ports in the Canal and in the Red Sea as far south as Safaga (i.e. excluding Port Sudan) had been increased from the pre-war figure of 54,000 tons weight a month to 594,000 tons weight a month by the end of 1942. Since military cargo was mainly measurement cargo the increase was presumably greater even than these figures suggest.

sent through the ports in the Canal and in the Suez group, and if these proved insufficient, recourse could be had to the 'back doors' behind which, if necessary, cargo could be dumped until transport became available. The position was surveyed every morning in Cairo by all the authorities concerned, meeting under the chairmanship of the Ministry of War Transport Representative. They had in front of them a report on the working of every port on the previous day and lists of all the approaching ships which converged on the area from the United Kingdom, North America, India, Africa and Australia. They also had lists of the cargoes in every ship; they knew the capacities of all the roads, railways and inland waterways along which the cargoes had to pass to their destinations. In total the supplies to be distributed did not exceed the capacity of the systems to distribute them for they had been ordered in advance with this question in mind; in detail, since many of the facilities could be switched about, and since the ships could be directed to the most convenient places, there was room for a great deal of manœuvring. By all these intricate and yet flexible arrangements the build-up for Alamein was achieved not only without any of the confusion that had occurred in the early days, but even without any significant loss of ships' time.

In India and South Africa, on the other hand, where hitherto the need had seemed less urgent, the war-time organisation that saved the day, first in this country and then in the Middle East, had not been introduced before Pearl Harbour. As the Ministry of War Transport, reflecting on its accumulated experience, observed at the end of 1941:

It seems . . . clear that effective improvement in the control of ports is bound up with the establishment of a really live Ministry of War Transport Organisation . . . and especially with its appropriate articulation, so that responsible people with capacity and power to act are established at the main ports, subject, of course, to the final authority of our principal representative. . . .

It had, however, proved extremely difficult to institute a system of this sort even in the United Kingdom. Where it could only be instituted by means of negotiations with independent governments, or by substituting British officials brought in from outside for nationals of the country concerned, it was virtually impossible to institute except when the alternative was imminent disaster. For it involved enforcing a huge number of controls, not only over the operations of docks, road-traffic and railways, but often over production, imports, exports and domestic distribution, all of which affect and are affected by the way in which the system of transport works. But governments are naturally unwilling to impose these

controls, as the British themselves had been in the nineteen-thirties, unless the need seems clear, and how were they to be convinced of the need soon enough, when it arose from the interaction of so many causes, so hard to explain, that it largely defied the arts of persuasion? The only hope was a Ministry of War Transport Representative of sufficient tact and ability, with the expert knowledge that alone in such circumstances commands respect. People of this sort are, however, scarce, and it may seem foolish to employ them in places where their qualities will only find scope in the event of troubles that have not yet arisen and may never arise; and it is difficult to appoint them over the heads of authorities who are perfectly adequate in quiet times but are unlikely to be so in an emergency.

This dilemma presented itself on many occasions. It had begun to present itself in India at the end of 1941 where difficulties were already being experienced though not on a large scale. When disaster descended in the spring of 1942, and the ports on the west coast were suddenly flooded with ships flying from the enemy, the necessary remedies took some time to apply. In the interval ships were delayed unnecessarily and carrying-capacity wasted, although not, it would seem, to a significant extent as far as ocean-going ships were concerned.¹ In South Africa, on the other hand, where the appropriate organisation was harder to set up, for the Union was a self-governing Dominion, and where the physical difficulties were more acute and prolonged, it was another story.

Since the closing of the Mediterranean ocean-going ships of every kind had been streaming eastwards round the Cape in constantly increasing numbers. All of them needed stores and water when they got there, large numbers needed coal for bunkers, and 60 per cent., it was estimated, were in need of repair; in addition, there were the cargo-ships coming in the reverse direction from the Indian Ocean, to fetch export cargoes of coal, sugar, oilseeds and other commodities for the Middle East and to deliver phosphates to the Union. All these ships—as well as the ships of the Royal Navy—made their claims on the Union's ports. Such a state of affairs had never been seen or imagined before. There were not enough dry-docks, not enough skilled labour, not enough railway wagons; not enough, indeed, of most of the necessary facilities and provisions, and as the shortages increased so did the sources of confusion.

The Government of the Union did its utmost, as everyone agreed, but it was unfamiliar with the kind of remedies it was necessary to apply, and it laboured under great difficulties; for though it was

¹ The delays to the class of ships that could not be removed from the Indian Ocean area seem likely to have been worse, and if this were so they must indirectly have affected the general shipping situation by causing heavier calls to be made on ships in the cross trades.

fully aware of the issues at stake the population in general was not. As the British Mission reported that went out to investigate in the autumn of 1942: 'No one visiting South Africa for the first time from the United Kingdom . . . where men and women are consciously fighting for existence, where days, hours and even minutes are precious, can fail to be struck with the general absence of that sense of urgency so dominant at home'.

Even during the second half of 1941 there had been serious difficulties. The Commander-in-Chief South Atlantic had reported in October that 'it is nothing unusual to have twenty to twenty-five ships anchored outside Durban, and a dozen in Table Bay, awaiting berths'. This state of affairs involved a loss of imports into this country at a rate of about half a million tons a year.

On every other occasion of this sort the British Government immediately took drastic action; in South Africa, however, some combination of causes—the impossibility, no doubt, of dictating to the Union authorities, the distance that separated South Africa from the scenes of battle, and the fact that no military issues were involved (for the ships for the battle areas appear to have been given priority so that the inhabitants of the United Kingdom were the principal sufferers from the loss of carrying-capacity) evidently had a stultifying effect. The attempts to increase the supply of dry-docks, the most urgently needed facility, presented admittedly great difficulties, for docks of this sort take so long to build that it seemed that they well might not be finished (as indeed proved to be the case after the work was started) until the war was over. Nevertheless the decision to build was taken in the end, though not until between one and two years after the need had first seemed acute;¹ the appropriate port and transit organisation was not introduced until 1943 when, with the reopening of Calcutta and the decline in sailings to the Indian Ocean area at the end of 1942, the physical burdens had already greatly diminished; no outstanding personality, such as was found for the Middle East, and later for other vital port areas, was sent to represent the Ministry's interests while the crisis was at its height.² As a result, difficulties which in the best of circumstances must have been formidable enough reached proportions in the early summer of 1942 that were never equalled anywhere else. During the months of May and June, seventy-eight ocean-going ships on an average were lying idle in and outside South African ports, and throughout the first nine months of the year the average was about

¹ The decision to build a large graving dock at Capetown was taken in the spring of 1942; in September 1942 it was decided to build another at East London.

² As the new incumbent put it when the organisation was set up: '... we are tackling problems which have either been avoided in the past or the surface just skimmed . . . we are all busy doing things which ought to have been done two or three years ago'.

forty.¹ This must have deprived the United Kingdom of imports at a rate of a million tons a year, and in fact the loss must have been much heavier, for these figures take no account of the time wasted by ships that were serviced or repaired unduly slowly.

Pearl Harbour, in fact, spread a confusion round the Indian Ocean area comparable to that which had occurred in the West after the German conquests in 1940. Vital supplies of raw materials were lost permanently or for a time—rubber, oil, the rice from Burma which sustained the economies of the rice-eating populations in eastern and southern India, in Ceylon and in East Africa; phosphates from Christmas Island and the Pacific on which Australia and New Zealand largely depended; the coal from Bengal which helped to supply the ships, railways and industries in the Middle East and which could not be shipped from Calcutta when the Bay of Bengal was closed.

For many months to come in consequence, because some important commodities were no longer available and others were too far off to be transported in sufficient quantities, because the shipping shortage became increasingly acute and the problems of planning increasingly difficult, starvation and the breakdown of essential services hung over many lands in the Indian Ocean area now exposed, as the United Kingdom had been in the summer of 1940, to the hazardous, impenetrable future of countries living within reach of a victorious enemy. Except in the Middle East where by this time the struggles of the Middle East Supply Centre to estimate needs and to determine priorities were beginning to bear fruit, none of these territories was better and many were much worse prepared than the British had been after France fell, to undertake the task of maintaining life and war-production with greatly diminished supplies; for in general in the Indian Ocean area governments were less strong, and in many cases peoples were less educated, disciplined and united, so that the requisite controls were more difficult to impose if they could be imposed at all, and essential civilian needs in consequence were harder and sometimes impossible to estimate.

Nevertheless, the British Government was now forced to assume the responsibility for maintaining the economies of all these territories, as it had earlier been forced to assume a similar responsibility in the Middle East; for after Pearl Harbour there were no governments left in the Indian Ocean area that were in a position to determine themselves how their sea-borne trade should be conducted.

The Japanese had destroyed the ship-owners' paradise which was now a theatre of war, and with it the principal reason by which

¹ These figures have been collected from the reports of the Ministry of War Transport Representative.

hitherto the owners of the free ships had justified their freedom; the Dutch empire in the East Indies had disappeared; the United States was in the war and was as much (though not as resolutely) concerned as were the British that no ships should be employed except on essential services. There was therefore no cause why all the remaining free Dutch and Norwegian ships should not come on charter to the British or to the Americans, and in the end a compromise was reached by which the British chartered them all while allowing the Americans the use of some of them. Since, in consequence, the British and the Americans thus came to control all the world's shipping that sailed the seas apart from what belonged to Japan (for the ships in the possession of the Germans and their European satellites did not in general dare to venture outside coastal waters) the task of supplying the free peoples with the necessities of life and war was squarely placed on their shoulders, and a world import programme, envisaged as a remote need in the middle of 1941, became in 1942 an immediate necessity.

To meet it, the British and the Americans divided the free world up between them. The western half, as will be explained in more detail presently,¹ became the United States' responsibility, the eastern half Britain's. It was a spectacular decision, unparalleled in the world's history, but with so many needs unknown and apparently unknowable, with all the shipping services in confusion, and in face of the overriding claims of the Fighting Services for the transport of troops and equipment, it was not clear how much meaning could be attached to it.

At the beginning of 1942 there would not have been room for elaborate planning even if the institutions and techniques that were later evolved to plan the shipping services of the world had been in existence. Fighting for their lives against enemies everywhere on the offensive, the British had to respond to each emergency as it arose. The most they could hope was that they would have sufficient knowledge of how ships were employed, and of the many and constantly changing demands on them, to use them in the most profitable way, and that, if this were done, there would be enough to avert disaster.

In many ways there were more grounds for confidence that this might be so than there had been after France fell, for in spite of the defects in the machinery of control it was nevertheless much better than it had been then. All the same, in the face of the growing dangers the confidence could not be great. The results of the Japanese victories had been not only to increase the demands on the British merchant fleet and to diminish its carrying-capacity; it had

¹ See Chapter XII below.

also deprived the British of the expected increase in American help. At the same time the strain on British naval forces increased, not only because of the predicament in the Indian Ocean, but because the Americans, themselves now exposed to submarine attack along their eastern seaboard, needed naval help from Britain after they had been prevailed upon to introduce the convoy system. Escort vessels for the trade convoys therefore became fewer at the time when the output of submarines was approaching its peak. Long-range air escort also diminished. It had not yet been generally accepted that the most effective way of disposing of the submarines was to attack them by sea and air as they approached their prey; in 1942, while some escort vessels and aircraft were still being employed to hunt them out in places where they were extremely hard to find, and to bomb, without much effect, the bases and centres of production in Germany, as well as civilian targets, they entered upon the period of their greatest success. British losses in the first quarter of 1942 were double what they had been in the last quarter of 1941, and they went on rising throughout the year. For the first time in the war the British-controlled merchant fleet began steadily to diminish.¹ 'Shipping', the Prime Minister said, in writing afterwards of this period, 'was at once the stranglehold and sole foundation of our war strategy.'² In Washington, Sir Arthur Salter wrote on the 1st January 1942 that a state of affairs was developing which had never occurred before either in this war or the last; 'The risk', he said, 'that the inadequacy of sea transport would set a limit to the scale of the Allied war-effort (always present as a threat in both wars) is now becoming an actuality', and this was at one of the most crucial moments of the war when the chances of victory seemed more doubtful than at any time since the summer of 1940.

¹ See Appendix VIII, p. 69.

² See W. S. Churchill, *Second World War*, Vol. IV, p. 176.

APPENDIX XLI

American help to British programmes in 1941

It was estimated in a memorandum written on the 3rd December 1941 that at that date the British had about $1\frac{1}{2}$ million deadweight tons of American and American-controlled dry-cargo ships in their service or allocated to them, including the Norwegian ships for which the United States paid the hire in dollars and which accounted for 238,000 deadweight tons. (The five troop transports, being naval ships, were excluded.)

This total of $1\frac{1}{2}$ million deadweight tons, however, had only been reached gradually. The average amount in service throughout the seven months since the beginning of May 1941, when the first ships sailed, was much less.

The only significant item was accounted for by the ships on the Middle East run, which since May had been provided at an average rate of fifteen a month.

Assuming that an average ship was 7,000 gross tons and 10,000 deadweight tons, and that the round voyage took $6\frac{1}{2}$ months, this was equivalent to an average of 650,000 gross tons in continuous employment, or about 2 million tons of imports in the period May to December.

On the other hand, had these ships been fully in British service, instead of merely provided to carry lend-lease cargoes on the outward voyage, they would have brought in about 840,000 tons of imports in the last month of 1941 and the first six months of 1942. Since the British did not get these imports, it would be more correct to say that the value of the ships to them was equivalent not to 2 but to little more than 1 million tons of imports.

APPENDIX XLII

Sailings of British ships to North Russia, August 1941 to June 1945¹ (excluding rescue ships and one ice-breaker)

Date	Dry-cargo	Tankers ²	Total
<i>1941</i>			
August-September .	11	1	12
October-December .	26	3	29
<i>Total 1941</i>	37	4	41
<i>1942</i>			
January-March .	27	4	31
April-June . . .	27	2	29
July-September .	10	1	11
October-December .	9	4	13
<i>Total 1942</i>	73	11	84
<i>1943</i>			
January-March .	15	2	17
April-June . . .	—	—	—
July-September .	—	—	—
October-December .	30	4	34
<i>Total 1943</i>	45	6	51
<i>1944</i>			
January-March . .	20	7	27
April-June . . .	—	—	—
July-September .	14	6	20
October-December .	15	10	25
<i>Total 1944</i>	49	23	72
<i>1945</i>			
January-March .	8	6	14
April-June . . .	4	5	9
<i>Total 1945</i>	12	11	23
TOTAL 1941-45 .	216	55	271

Source: Admiralty

¹ The ships shown above all flew the British flag and were manned by British crews though not all were British owned. There may have been some foreign ships under British control that sailed in the Russian convoys, but if this is so they can only have been very few.

² Excluding tankers for use of escort vessels.

PART IV

From Pearl Harbour to the
Defeat of the Submarines

CHAPTER XI

THE TROOPSHIPS, JANUARY TO JUNE 1942

THE FIRST TASK, on whose accomplishment the fate of the war turned more immediately at this time than on anything else, was to provide (while maintaining the necessary minimum of services across the North Atlantic) enough troopships to meet the need for reinforcements in the Indian Ocean area.

'Three main problems', the Chiefs of Staff stated at the beginning of 1942, 'confront us in the immediate future:

(a) The stabilisation of the situation in the Far East,

(b) The security of the Middle East,

(c) The security of India and the Indian Ocean bases, the safety of which is none the less important because they are not the scene of active operations.¹ The achievement of these objectives required a movement of troops not only vastly larger than British ships, supplemented to a small extent by United States ships, had been able to accomplish in 1941, but larger even than they had been asked to accomplish. In the last five months of 1941 the average monthly rate of movement on the W.S. route had been roughly 36,000 men.¹ Over the year as a whole it had been at the rate of 29,000. If, the Chiefs of Staff estimated at the beginning of 1942, disaster were to be averted in the Eastern theatres, the monthly rate of movement, without any help from the United States, must rise to something over 70,000.

In February 1942 it seemed that this task could not possibly be accomplished. Because of the shortage of troopships 'We may', the Chiefs of Staff concluded, 'have to choose between incurring great risks in the Middle East or Far East . . . we shall be unable to provide the forces to meet a full-scale attack in both. . . . Yet the Far East and the Middle East are essentially inter-dependent. The loss of one would imperil the other . . . '.

In these circumstances it seemed out of the question to move—as was contemplated after Pearl Harbour—large American forces to the United Kingdom in preparation for the assault on the Continent, and to serve meantime as a deterrent to invasion while the British sent their more seasoned troops overseas; there could be no invasion of North Africa, let alone any of the minor operations that were

¹ See Appendix XXXV, p. 244 above.

being considered. At all costs it was necessary to prevent a collapse in the Western Desert and the possibility that a junction between the Germans and the Japanese might be accomplished through the Persian Gulf.¹

If even these defensive objectives were to be achieved, though indeed at first they seemed impossible, it could only be by one of two means or by both together. Either more men would have to be carried in existing ships, or what the Prime Minister once described as the 'operative fertility of our shipping'² and what in this narrative is called carrying-capacity, would have to be increased in other ways, so that a given amount of tonnage, with a given accommodation, would produce a larger return.

More men were in fact carried in each ship. When the Prime Minister went to America after Pearl Harbour he discovered that the Americans were less generous than the British in the accommodation they allowed, and he gave orders that the British should imitate them. By a stroke of the pen Britain's potential trooping-capacity was increased at the beginning of 1942 by a proportion estimated at first at about one-fifth and then at about one-third. The necessary conversions, however, could only be undertaken gradually. They had yielded scarcely any results by the end of the first quarter of 1942, and even if they had been completed by that time the results would have been much too small. The carrying-capacity of the fleet, therefore, had to be increased in other ways as well.

This matter had been under consideration for a long time. Even in the early days it had been seen that with the principal theatre of war in the Middle East, and with the distribution of the Commonwealth territories what it was, shuttle services—voyages from A to B and back again—which are the easiest kind of services to organise, were out of the question, and that the numbers of troops and other passengers that could be sent to the various theatres of war, and elsewhere where they were needed, must turn largely on the extent to which the various services could be dovetailed in together. Thus, even in the early days, for example, the ships that carried troops to Iceland would, when necessary, proceed thence to Canada and come home with trained air-crews; the ships that carried troops outwards on the W.S. route would on occasions come home via Halifax and New York with Service personnel or civilians from North America. The map facing page 226 illustrates the extent to which these principles were already in operation at the earliest date, August 1941, at which it is possible to trace the round voyages of the troop-

¹ See Eisenhower, *Crusade in Europe*, p. 32.

² See Appendix II, p. 18 above.

ships employed on the W.S. route. It can be seen how, at this date, one ship met many different needs in the course of a voyage, part of it on military and part on civil account, that might take her round three-quarters or the whole of the world. Even at this date it seems clear that troopships were employed, in spite of all the shortcomings, with much greater economy than could have been achieved by a nation that lacked shipping experience, or the tradition of co-operation (albeit at this time imperfectly developed) between the civilian and Service authorities, or that did not vest the control of ships in a civilian department.

Nevertheless, in August 1941 much still remained to be done, for to put into practice all the principles which, if applied, could increase carrying-capacity, required much skill and experience. The Ministry of War Transport kept a file for each convoy. Merely to trace a W.S. convoy's history from the date when its composition first reached the point of detailed discussion to the date when it left this country is a considerable task; for even in this, the earliest stage of its career, the complications were immense. To decide what personnel should be embarked when there was never enough room for all it was desired to dispatch; to organise their movement to the ports and their embarkation; and finally to get the convoy and its escorts out to sea, involved the co-operation of a multitude of authorities and committees ranging from the Chiefs of Staff downwards; and even when at last the convoy sailed, several days late, no doubt, because a ship that should have been included failed to arrive in time, or was damaged in port by a bomb, or suffered some other misfortune, a hundred hazards lay ahead and much of the planning still remained to be translated into action. For the voyage had still to be accomplished, with innumerable difficulties in each of the overburdened ports of call along the W.S. route, the itinerary and the cargoes of every homeward-bound ship had to be separately planned (for nearly all the ships came home without escorts and by many different routes) and the whole operation had to proceed as far as possible to a schedule in order to make it possible to estimate the capacity of subsequent convoys; for the ships that sailed in, say, W.S.7 had to be used again for W.S.11 or 12.

Since, as a result of the experiences of 1940, the troop convoys were very heavily escorted (at the cost of letting the trade convoys go short) the dangers from enemy attack were—until the North African campaign—in the event among the least of the dangers that threatened to reduce the numbers of troops moved. The principal danger was that miscalculations in the many matters that had to be taken into account (of which those mentioned above are only important examples and by no means a complete list), and failure to co-ordinate so large a number of different operations, might result

in delays, and in carrying-capacity wasted for other reasons, on a scale proportionately large. 'I doubt', the Director-General of the Ministry of War Transport wrote after the war, 'whether anyone who was not directly concerned could fully realise the strain thrown upon our resources in filling the Libyan desert with supplies—and not once only—and in enabling the armies at last to fight a victorious campaign.' The task, in so far as it fell to the troopships to discharge it, was in the event only accomplished as a result of a period of trial and error followed by a period in which a spur to efficiency was supplied by the imminence of disaster.

It was a task to whose accomplishment both the users and suppliers of ships had to contribute. It required that the Services should co-operate with the shipping authorities at the highest level to a greater extent than they had done hitherto, since strategy could not profitably be formulated except in relation to shipping resources; it required that the military authorities should estimate their demands for personnel movements for considerable periods ahead, since ships take time to move about the world; it required that demands should be graded in order of priority, since sufficient ships did not exist to meet all at once.

At the beginning of 1942, when the need for troop-movements was both larger and more immediately urgent than it had been in 1941, the planners of strategy were weaned from the haphazard, spendthrift practices they had pursued earlier, though they continued to pursue them for some time in the matter of cargo-ships. They surveyed all their needs in conjunction; they produced a programme for the following six months from which they did not afterwards substantially depart, and they decided which needs were the most urgent. As a result all claims were not given an equal weight, leaving the devil to take the hindmost,¹ but were responded to in different degrees at different dates in accordance with needs foreseen sufficiently far in advance for it to be possible to move ships into a position to meet them. Thus the movements from the Middle East to India, Australia and the Far East reached their peak in the first quarter of 1942; the movement from this country to the Indian Ocean area reached its peak in the second quarter, and the North Atlantic movement in the third. Tonnage, in other words, was switched about from area to area, notwithstanding the fact that certain ships could only be employed in certain oceans and that a considerable time had to elapse before even the fastest ships could be moved from one ocean to another.

There was thus achieved that mobility of resources which is the peculiar advantage conferred by sea-power on those who can use it

¹ See Appendix XXXV, p. 244.

with sufficient skill; and the achievement was possible not only because the military planners took shipping problems more into account than they had done in 1941, but because the Ministry of War Transport, forewarned of what to expect, was able to develop and perfect its techniques.

The troopships were gradually sorted out—the process had started long before Pearl Harbour, but was not completed until afterwards—into categories appropriate to the various routes, so that the best use could be made of their range and speed. They fell into three main classes: first the ships of the W.S. class which have often been mentioned. These were mainly passenger-cargo liners, of an average size of between 17,000 and 18,000 gross tons, with a speed of fifteen knots and over. They accounted for by far the largest block of tonnage, and supplied the W.S. route, and the North Atlantic until the large movements of United States troops started; secondly, there were the ships of the Indian Ocean class—ships, that is, with a speed of less than fifteen knots which prohibited their use on the submarine-infested Atlantic routes; finally, there were the ships always known, officially if irreverently, as the 'Monsters'.

These great liners, all of them over 35,000 gross tons and some much larger still, and all with a speed of over twenty knots, were six in number. Like the rest of the merchant fleet during the war they were a polyglot collection, though the greater part, as well as the management, was British. One—the *Ile de France*, of 43,450 gross tons—was a French ship requisitioned in 1940; one—the *Nieuw Amsterdam*, of 36,287 gross tons—was on charter from the Dutch; the others came from the fleet of the Cunard-White Star—the *Queen Elizabeth*, of 83,675 gross tons; the *Queen Mary*, of 81,235 gross tons; the *Aquitania*, of 44,786 gross tons, and the *Mauretania*, of 35,739 gross tons.

'Ou', the Prime Minister once asked the French on a famous occasion, '*est la masse de manœuvre?*'¹ In the tactics of troopship operations it was provided after Pearl Harbour by the 'Monsters', and particularly by the two 'Queens'. These were the largest merchant ships in the world, each costing as much to build as a battleship, with a speed of about 28½ knots. A testimony to the initiative and risk-running mentality of a great shipping company (though the objects in peace of good-humoured contempt on the part of the big owners of cargo-liners), they provided after Pearl Harbour a mobile reserve which could not have been provided in any other way; for at a time when the need for escorts was as acute as the need for troopships, their high speed made it possible to sail them unescorted on the Atlantic.

In the last half of 1941 most of the 'Monsters' were employed in

¹ W. S. Churchill, *Second World War*, Vol. II, p. 42.

moving Australians to the Middle East. At this time it was held that these valuable ships could not be risked on the Atlantic even though here was the great shortage, and the tonnage in the Indian Ocean was, by the standards of 1942, greatly in excess of the need.

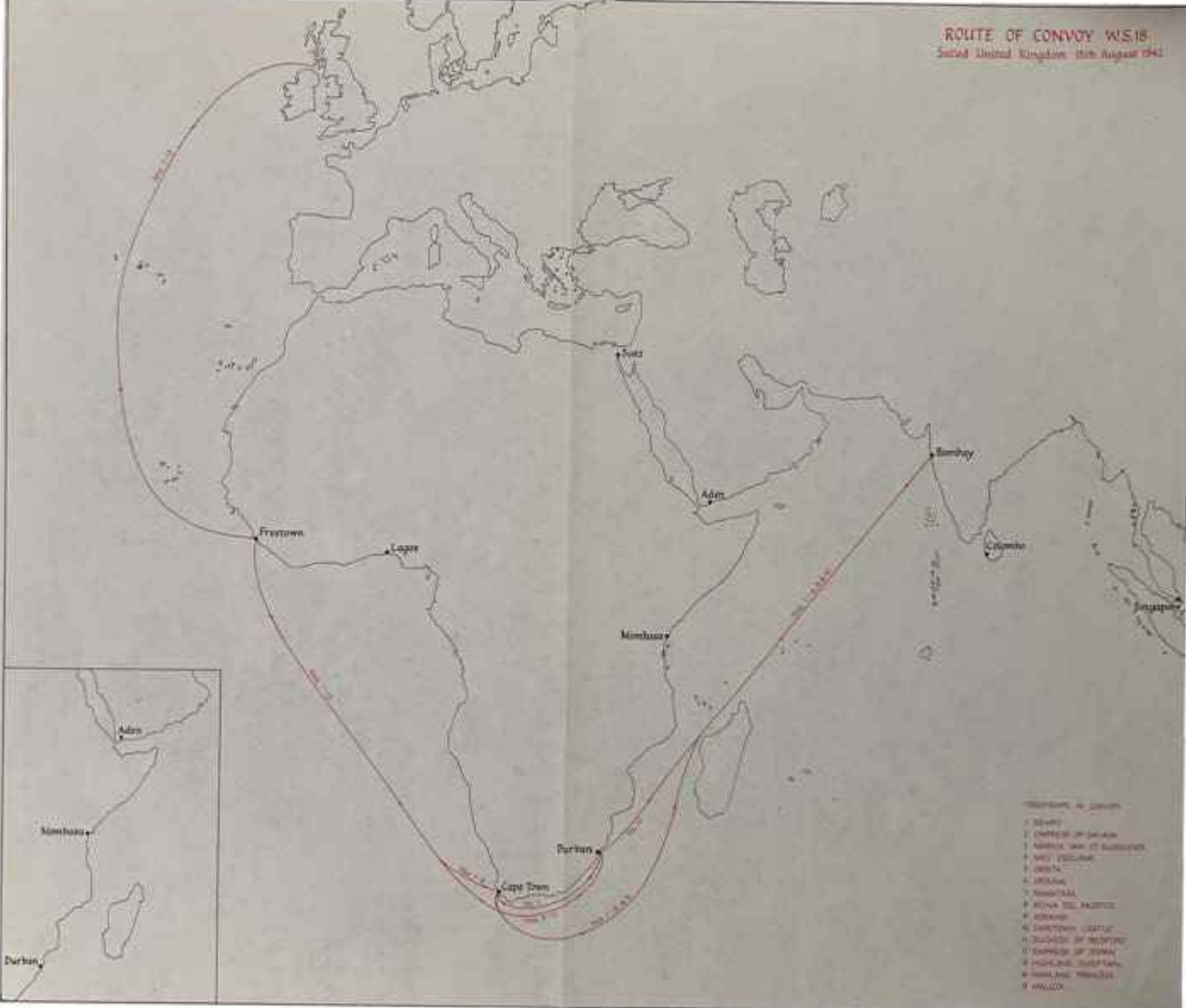
But after Pearl Harbour risks had to be taken that would never have been contemplated before. The 'Queens' and the other 'Monsters' were moved about from area to area as circumstances required. The routes on which they were employed are set out in Appendix XLIV. It will be seen that in 1942 the *Queen Elizabeth* made one voyage from the United States to Australia with American troops, that she then made one voyage on the W.S. route, and that thereafter she was engaged in bringing American troops to this country. The pattern of the *Queen Mary's* voyages was more or less the same.

Before Pearl Harbour, when shipping was relatively plentiful in the Indian Ocean, the 'Queens' had each accommodated about 6,000; at the beginning of 1942 this figure was raised to 10,500; in June 1942, at the request of the Americans, whose troops they were then carrying, it was raised again—to approximately 15,000. 'My own feeling', the Prime Minister had said, when these huge numbers were first proposed, 'is that this extreme risk should not be run except for operational purposes.' The master of the *Queen Elizabeth*, after the experience of one voyage with 15,000 on board, complained that when the ship heeled he had observed 'an unusual and disconcerting' motion, that had not been apparent when only 11,000 were carried. He attributed it 'to the concerted movement of my large human cargo'. 'It was not', he said, 'possible to get the men to lie down for perhaps several days at a time, and, unlike cargo which would stay put, they would move with the ship.' He added that 'a roll of eighteen degrees in a ship of this great beam would feel like a roll of thirty degrees to someone unaccustomed to the sea'. Nevertheless, in spite of these, and other, inconveniences, and the knowledge that if the ship were to sink many of the men on board must infallibly be drowned,¹ the decision to carry 15,000 was upheld, though with the qualification that it should not be enforced in the winter months or anywhere except on the short North Atlantic crossing.

The employment of the 'Monsters' as a mobile reserve and the rise in the numbers carried both by them and by the other troopships were the most spectacular of the means by which the carrying-capacity of the trooping fleet was increased. But these measures, relatively easy to conceive and to execute, account, as appears in more

¹ The 'Queens', like other troopships, could not provide lifeboat accommodation for all on board, as the cargo-ships did. They did, however, provide life-jackets, and buoyancy apparatus for everyone. The particular danger, when such large numbers were carried, was from 'confusion in the event of fire and flooding'.

ROUTE OF CONVOY W.S.18
 Sailed United Kingdom 18th August 1941



- MEMBERS OF CONVOY
- 1. SHIP
 - 2. COMMANDER OF SHIP
 - 3. ADDRESS AND OFFICER'S NAME
 - 4. SHIP'S NUMBER
 - 5. SHIP'S NAME
 - 6. SHIP'S TYPE
 - 7. SHIP'S TONNAGE
 - 8. SHIP'S REGISTRATION
 - 9. SHIP'S HOME PORT
 - 10. SHIP'S HOME ADDRESS
 - 11. SHIP'S HOME TELEPHONE
 - 12. SHIP'S HOME TELEGRAM
 - 13. SHIP'S HOME TELETYPE
 - 14. SHIP'S HOME RADIO
 - 15. SHIP'S HOME TELEVISION
 - 16. SHIP'S HOME TELEPHONE
 - 17. SHIP'S HOME TELEGRAM
 - 18. SHIP'S HOME TELETYPE
 - 19. SHIP'S HOME RADIO
 - 20. SHIP'S HOME TELEVISION

detail in Appendix XLV, for only the smaller part of the achievements. For the rest these were due to the perfecting of many different techniques, developed by many different authorities—by the Army, which was responsible for arranging the embarkation and disembarkation of the troops; by the Admiralty, which was responsible for the convoy arrangements; and, particularly, by the Divisions in the Ministry of War Transport that planned the voyages. It was decided that no W.S. ships with troops for the Middle East should proceed further than Durban; the men whom they deposited in South Africa were then picked up and carried to their destinations in troopships based in the Indian Ocean area, which were not suitable for the Atlantic voyage; so that in this way the qualifications of all the available ships were used to the best advantage.

The results were indeed astonishing. As the figures in Appendix XXXV show, the average number of men moved a month in W.S. convoys had been 36,600 in the last five months of 1941; it was something over 65,000 in the months February to May 1942; and larger at the beginning of June than the Chiefs of Staff by that time held that they needed.¹

Nor was this increase on the W.S. route achieved at the cost of reducing other essential services. On the contrary, these other services also received more. In the first quarter of 1942 approximately 14,000 and in the second quarter approximately 42,000 American troops were moved across the North Atlantic to the United Kingdom, 60 per cent. of them in British and British-controlled ships;² in the first quarter of 1942 (though thereafter it slackened off) the monthly rate of movement between India and Australia and the Middle East was much larger than in the last half of 1941; there were also much larger movements between India and the Far East; and even all this was not the whole story.

When the United States suddenly found themselves at war, and more ill-prepared for it than even Britain had been, they, too, as has been shown, experienced an urgent need for troopships. Their passenger tonnage in peace was much smaller than the British; their great building capacity took time to develop; they lacked the experience in managing ships that the British had acquired in over two years of war and many generations as the greatest ship-owning nation of the world; and the necessary administrative methods and disciplines were alien to their traditions and temperament. In 1941 they had lent the British troopships, and though in 1942 they continued to lend a few, the British had to lend them many more

¹ It was said on the 15th June 1942, 'The steps taken to increase the capacity of personnel shipping . . . have been so effective that [assuming no change in demand or in the major factors that determined the supply of tonnage and its carrying-capacity] there will be an excess in W.S. personnel shipping-capacity for the last half of 1942 of 60,000'.

² See Appendix XLVI, p. 283.

Not only did British ships bring over a high proportion of the American troops that came to this country; in the first quarter of 1942 they also carried 16,500 Americans from the United States to the Far East.

The British-controlled trooping fleet performed these extraordinary feats without any increase in the number of troopships or convoys.¹ It did so at a time when the need was most urgent and could not be denied, as it might have been afterwards, in anticipation of more resources later. Here, as in many other cases, it was the arts of management, the result of inherited skill in commerce and government, and of a will that could move mountains, that saved the day. Thereafter, though there were many times when it seemed doubtful if the troopships would be sufficient, they always proved so in the event, and there was never again cause for serious alarm. In the spring of 1942, however, as on other occasions, the shipping authorities by solving one difficulty created another; for the greatly increased numbers of men sent to the Indian Ocean area required a greatly increased volume of cargo-shipping to supply them.

¹ More convoys, even without more ships, would have increased the troop-lift considerably, for though it was difficult to find ships with a speed of fifteen knots, many of the ships which could meet this requirement could meet it with a large margin. A considerable number of W.S. ships were capable of seventeen, eighteen or nineteen knots, and even of higher speeds, which, as things were, were wasted, because the speed of the convoy is the speed of the slowest ship. The ideal was always to have both fast and slow convoys, but it was an ideal which could not be realised for lack of escorts.

APPENDIX XLIII

Principal troop movements in convoys other than W.S. convoys, last quarter 1941 to third quarter 1942¹

- (i) North Atlantic movements.
- (ii) Movements between the Middle East, India, Australia and Far East.
- (iii) Movements between India, Australia and Far East.

(i)

North Atlantic troop movements

<i>Date</i>	<i>Westbound from United Kingdom to:</i>			<i>Eastbound to United Kingdom from:</i>		
	<i>United</i>			<i>United</i>		
	<i>Iceland</i>	<i>States</i>	<i>Canada</i>	<i>Canada</i>	<i>States</i>	<i>Iceland</i>
1941						
Oct.-Dec.	. 16,124	—	9,859	37,799	—	6,985
1942						
Jan.-Mar.	. 7,607	10,913	2,838	5,269	27,268	10,471
April-June	. 4,209	6,056	4,017	—	60,394	10,606*
July-Sept.	. 2,049	9,904	—	13,884	59,347	5,895

* Includes 3,567 moved in three United States ships (A.T.14, April 1942). Also 1,908 moved in two United States ships (A.T.15, May 1942).

¹ The following tables have been compiled from the monthly progress reports of the Directorate of Movements. Two points, particularly, need comment. First, they only include movements to and from the major theatres of war. They exclude various minor movements (e.g. to Madagascar); all movements within a particular theatre (e.g. Iraq to Egypt and vice versa); all movements (particularly from South Africa to Egypt) of troops transhipped in the course of the voyage. Secondly it must be stressed that they are likely to contain considerable errors. The progress reports were compiled month by month from the data available at the time and, though they were adjusted later, it seems probable that the adjustments were incomplete. In one case—that of the W.S. convoys—it was possible to compare the figures in the progress reports with those in a variety of summaries (including two by the War Office) that accorded one with another. It emerged that the adjusted figures in the progress reports were considerably out. Nevertheless if, as it seems reasonable to assume, the figures in the progress reports are no more incorrect in other cases than in the case of W.S. convoys, these tables should provide, in spite of the probable inaccuracies, a useful guide to the scale of the various movements and their relative magnitude.

(ii)

Troop movements between the Middle East, India, Australia and Far East

Date	Westbound from:			Eastbound to:		
	Australia	Far East	India	India	Far East	Australia
1941 Oct.—Dec.	9,711	—	72,944 (55,470 for Iraq)	404	—	—
1942 Jan.—Mar.	—	—	40,020 (30,389 for Iraq)	40,720	5,812	56,172
April—June	—	—	29,674 (24,042 for Iraq)	8,194	—	3,453
July—Sept.	3,712	—	44,921 (30,862 for Iraq)	3,295 (1,457 for Iraq)	—	1,067

(iii)

Troop movements between India, Far East and Australia

Date	Eastbound:		Westbound:	
	India to Burma, Malaya and Far East	Australia and New Zealand to Burma, Malaya and Far East	Far East to Australia and New Zealand	Ceylon and Far East to India
1941 Oct.—Dec.	15,741	4,906	—	157
1942 Jan.—Mar.	79,445	3,378	4,315	4,836
April—June	5,958	1,062	—	—
July—Sept.	12,112	—	—	—

Source: War Office

APPENDIX XLIV

Voyages of the 'Monsters', second half of 1941 and calendar year of 1942

THE AQUITANIA

<i>Route</i>	<i>Service</i>
Malaya/Suez (arrived 13.5.41)	Australia/Middle East
Suez/Ceylon/Australia (arrived Fremantle 8.6.41)	Australia/Middle East
Australia/Suez (arrived 29.7.41)	Australia/Middle East
Suez/Ceylon/Australia (arrived Fremantle 16.8.41)	Australia/Middle East
Australia/Ceylon/Suez (arrived 18.10.41)	Australia/Middle East
Suez/India/Ceylon/Malaya/Australia (arrived Sydney 28.11.41)	Australia/Middle East
Australia/San Francisco (arrived 1.3.42)	United States/Far East
San Francisco/Honolulu (sailed Honolulu 20.3.42)	United States/Far East
Honolulu/San Francisco (arrived 24.3.42)	United States/Far East
San Francisco/Honolulu (arrived 5.4.42)	United States/Far East
Honolulu/New York (arrived 23.4.42)	United States/Far East
New York/United Kingdom (arrived 12.5.42)	North Atlantic
United Kingdom/Madagascar (arrived Diego Suarez 30.6.42)	
Madagascar/Aden/Suez (arrived 8.7.42)	
Suez/Madagascar (arrived Diego Suarez 18.7.42)	
Madagascar/Capetown/United States (arrived Boston 14.8.42)	
United States/Capetown/Aden/Suez (arrived 31.10.42)	
Suez/Australia/New Zealand (arrived Wellington 27.11.42)	
New Zealand/Australia/Suez (arrived 5.1.43)	Australia/Middle East

THE ILE DE FRANCE

<i>Route</i>	<i>Service</i>
Australia/Ceylon/Suez (arrived 13.5.41)	Australia/Middle East
Suez/Durban (arrived 3.6.41)	Durban/Suez shuttle
Durban/Suez (arrived 20.6.41)	Durban/Suez shuttle
(remained in this shuttle for the rest of 1941)	
Durban/Aden/Suez (arrived 27.1.42)	Middle East/India
Suez/Bombay (arrived 6.2.42)	Middle East/India
Bombay/Aden/Suez (arrived 28.2.42)	Middle East/India
Suez/Bombay (arrived 10.3.42)	Middle East/India
Bombay/Durban/Suez (arrived 19.4.42)	Middle East/India
Suez/Durban/Bombay (arrived 20.5.42)	Middle East/India
Bombay/Durban/Suez (arrived 24.6.42)	Middle East/India
Suez/Durban (arrived 7.7.42)	Durban/Suez shuttle
Durban/Suez (arrived 29.7.42)	Durban/Suez shuttle
Suez/Durban/Port Elizabeth/Durban (arrived 19.10.42)	Durban/Suez shuttle
Durban/Australia/New Zealand (arrived Auckland 8.11.42)	
New Zealand/Pearl Harbour (arrived 18.11.42)	
Pearl Harbour/United States (arrived San Francisco 24.11.42)	United States/Far East
United States/New Zealand (arrived Wellington 10.1.43)	United States/Far East

THE MAURETANIA

<i>Route</i>	<i>Service</i>
New Zealand/Australia/Ceylon/Suez (arrived 13.5.42)	Australia/Middle East
Suez/Durban (arrived 1.6.41)	Durban/Suez shuttle
(remained in this shuttle for the rest of the year and until 28.1.42)	

THE MAURETANIA—Cont.

Route	Service
Suez/Bombay (arrived 6.2.42)	Middle East/India
Bombay/Aden/Suez (arrived 24.2.42)	Middle East/India
Suez/Bombay (arrived 6.3.42)	Middle East/India
Bombay/Durban/Suez (arrived 2.4.42)	Middle East/India
Suez/Durban/Capetown/Bombay (arrived 10.5.42)	Middle East/India
Bombay/Durban/Aden/Suez (arrived 4.6.42)	Middle East/India
Suez/Durban/Rio/United States (arrived Newport News 16.9.42)	
United States/Durban/Suez (arrived 12.11.42)	
Suez/Ceylon/Australia/New Zealand (arrived Wellington 23.12.42)	
New Zealand/United States (arrived San Francisco 7.1.43)	

THE NIEUW AMSTERDAM

Route	Service
New Zealand/Australia/India/South Africa/Suez (arrived 20.6.41)	
Suez/Durban (arrived 7.7.41)	Durban/Suez shuttle
Durban/Suez (arrived 21.7.41)	
(remained in this shuttle for the rest of 1941)	
Durban/Aden/Suez (arrived 9.1.42)	Durban/Suez shuttle
Suez/Durban (arrived 21.1.42)	Durban/Suez shuttle
Durban/Aden/Suez (arrived 1.2.42)	Durban/Suez shuttle
Suez/Bombay (arrived 19.2.42)	Middle East/India
Bombay/Aden/Suez (sailed Suez 6.3.42)	Middle East/India
Suez/Aden/Ceylon (arrived 14.3.42)	Middle East/India
Ceylon/Durban (arrived 27.3.42)	Middle East/India
Durban/Capetown (arrived 1.5.42)	Suez/Durban/Capetown shuttle
Capetown/Suez (arrived 25.5.42)	Suez/Durban/Capetown shuttle
Suez/Durban (arrived 6.6.42)	Suez/Durban/Capetown shuttle
Durban/Capetown (arrived 10.6.42)	Suez/Durban/Capetown shuttle
Capetown/Durban (arrived 26.6.42)	Suez/Durban/Capetown shuttle
Durban/Suez (arrived 9.7.42)	Suez/Durban/Capetown shuttle
Suez/Durban/Madagascar/Capetown (arrived 18.8.42)	Suez/Durban/Capetown shuttle
Capetown/Durban/Suez (arrived 6.9.42)	Suez/Durban/Capetown shuttle
Suez/Durban/Capetown (arrived 1.10.42)	Suez/Durban/Capetown shuttle
Capetown/Suez (arrived 17.10.42)	Suez/Durban/Capetown shuttle
Suez/Durban/Madagascar (arrived Diego Suarez 11.11.42)	Suez/Durban/Capetown shuttle
Madagascar/Aden/Suez (arrived 21.11.42)	Suez/Durban/Capetown shuttle
Suez/Madagascar (arrived Diego Suarez 1.12.42)	Suez/Durban/Capetown shuttle
Madagascar/Durban/Suez (arrived 31.12.42)	Suez/Durban/Capetown shuttle

THE QUEEN ELIZABETH

Route	Service
Australia/Suez (arrived 6.5.41)	Australia/Middle East
Suez/Ceylon/Malaya/Australia (arrived Sydney 13.6.41)	Australia/Middle East
Australia/Suez (arrived 31.7.41)	Australia/Middle East
Suez/Australia (sailed Fremantle 18.8.41)	Australia/Middle East
Australia/Ceylon/Suez (arrived 26.9.41)	Australia/Middle East
Suez/Australia (arrived Sydney 15.10.41)	Australia/Middle East
Australia/Ceylon/Suez (arrived 24.11.41)	Australia/Middle East
Suez/Ceylon/Australia (arrived Sydney 15.12.41)	Australia/Middle East
Australia/United States (San Francisco)/Australia (arrived Sydney 6.4.42)	
Australia/Capetown/New York (via Rio) (sailed New York 4.6.42)	
New York/United Kingdom (arrived 9.6.42)	
United Kingdom/Suez (arrived 18.7.42)	W.S. Route
Suez/Capetown/New York (arrived 19.8.42)	W.S. Route
New York/United Kingdom (arrived 5.9.42)	

THE QUEEN ELIZABETH—Cont.

<i>Route</i>	<i>Service</i>
United Kingdom/New York (arrived 14.9.42)	North Atlantic
New York/United Kingdom (arrived 11.10.42)	North Atlantic
United Kingdom/Halifax (arrived 22.10.42)	North Atlantic
Halifax/United Kingdom (arrived 5.11.42)	North Atlantic
United Kingdom/New York (arrived 13.11.42)	North Atlantic
New York/United Kingdom (arrived 29.11.42)	North Atlantic
United Kingdom/Halifax (arrived 9.12.42)	North Atlantic
Halifax/United Kingdom (arrived 17.12.42)	North Atlantic
United Kingdom/New York (arrived 26.12.42)	North Atlantic

THE QUEEN MARY

<i>Route</i>	<i>Service</i>
Australia/Ceylon/Suez (arrived 6.5.41)	Australia/Middle East
Suez/Ceylon/Australia (arrived Fremantle 21.5.41)	Australia/Middle East
Australia/Ceylon/Suez (arrived 23.9.41)	Australia/Middle East
Suez/Australia (arrived Sydney 13.10.41)	Australia/Middle East
Australia/Ceylon/Suez (arrived 22.11.41)	Australia/Middle East
Suez/Capetown/New York (arrived 12.1.42)	New York/Middle East/Australia
New York/Capetown (arrived 14.3.42)	New York/Middle East/Australia
Capetown/Australia (arrived Sydney 28.3.42)	New York/Middle East/Australia
Australia/Capetown/New York (arrived 7.5.42)	New York/Middle East/Australia
New York/United Kingdom (arrived 16.5.42)	
United Kingdom/Capetown/Suez (arrived 22.6.42)	W.S. Route
Suez/Capetown/New York (arrived 21.7.42)	
New York/United Kingdom (arrived 7.8.42)	North Atlantic
(She then remained on the New York/United Kingdom shuttle till December 1942; on 23rd December 1942 she sailed from the United Kingdom to Freetown)	

Source: Tables compiled by the author from data in the Ministry of War Transport

APPENDIX XLV¹

Note on the causes of the increased rate of movement on the W.S. route, comparing the second half of 1941 and the first half of 1942

If one excludes the men carried in United States ships, the average number carried a month on the W.S. route was roughly 32,700 in the last five months of 1941, and roughly 58,550 in the first six months of 1942. There was thus an increase of roughly 25,850, or 79 per cent.

Of this increase of 25,850 a month, an average of 3,370 a month, or roughly 13 per cent., was carried in the 'Queens'; an average of 317 a month or about 1 per cent. was carried in H.M. ships. The W.S. ships carried on an average 22,163 more men a month in the first six months of 1942 than in the last five months of 1941 and this accounted for roughly 86 per cent. of the total increase.

Since there were virtually no more W.S. ships in 1942 than in 1941, and since the expedient of fast and slow convoys was ruled out, the feat can only have been possible by one of two means or by both together: by shortening round-voyage times or by carrying more men per 1,000 gross tons.

Both were done, and each reinforced the other. Nevertheless it is plain that, of the two, the shortening of round-voyage times made the larger contribution; for the average amount of tonnage per convoy rose from 206,900 gross tons in the last five months of 1941 to 277,400 gross tons in the first six months of 1942—an increase of roughly 34 per cent. The number carried per 1,000 gross tons is only ascertainable by assuming it to be x in the equation: the number of men carried in a given period is roughly equal to the number of convoys in the period multiplied by the average number of gross tons per convoy multiplied by the average number of men per gross ton. By this method of calculation it appears that comparing the last five months of 1941 and the first six months of 1942 the average increase in the numbers carried per 1,000 gross tons must have been about 29 per cent.

¹ See Appendix XXXV, p. 244 above.

APPENDIX XLVI

Arrivals of United States personnel in United Kingdom

<i>Date</i>	<i>Number of troops</i>
1942	
January-March . . .	13,698
April-June . . .	42,314
July-September . . .	131,850
October-December . . .	63,000
	<hr/>
	250,862

Source: Ministry of War Transport

CHAPTER XII

THE BEGINNINGS OF THE ANGLO-AMERICAN SHIPPING ALLIANCE

THE AMERICANS could not help the British to overcome their shortage of troopships; indeed, on balance they were heavily in the British debt; but where cargo-ships were concerned—the field where American mass-production could be most fruitful—it would, it was to be supposed, soon be another story. It was clear, however, that it could not be so immediately.

At the beginning of December 1941 the Americans were providing or were about to provide the British with about $1\frac{1}{2}$ million deadweight tons of shipping to carry lend-lease cargoes to the theatres of war;¹ many of their ships on commercial services were meeting the needs of the Commonwealth territories in the Eastern Hemisphere from which British ships had had to be withdrawn; their plans for new building, scheduled to yield about 7 million deadweight tons in 1942, had been undertaken primarily for British benefit and seemed likely to meet the needs. All these immediate or prospective advantages, however, were removed or put in jeopardy by Pearl Harbour, at the same time that the needs of the British armies began rapidly to increase and the British-controlled fleet to diminish.

This state of affairs posed extremely difficult problems, putting as severe a strain as can be imagined on the good relations between the two countries; for almost from the start the Americans built more dry-cargo ships than they lost, while the British meantime lost many more ships than they built; yet American net gains, which amounted to 1.2 million gross tons (say, nearly 2 million deadweight tons) in 1942,² did not suffice to meet their expanding needs.

These needs, in contradistinction to the British, were predominantly military, for in peace sea-borne imports play only an extremely small part in the economy of the United States, and during the war could be carried without difficulty in the American cargo-ships returning from the theatres of war. The needs of American civilians were therefore never jeopardised by the shipping shortage; the needs of the American armed forces, on the other hand, appeared to be in constant jeopardy throughout the greater part of the war.

¹ Sir Arthur Salter's estimate. See Appendix XLI, p. 264 above and footnote 1 to p. 291 below.

² See Appendix XLVII, p. 293.

When, therefore, the British appealed to the Americans for ships it was the Services who would principally suffer if the appeals were answered. This was a very different state of affairs from that which had existed before Pearl Harbour. As Sir Arthur Salter said: 'The issue throughout [1941] . . . was between our shipping needs and the extent to which the [United States] administration felt able to meet them at the expense of commercial and civilian interests'. In 1942 'the competition was no longer between British war needs and American peace needs, but between two sets of war needs'.

Had the position, however, been even as simple as this statement might suggest, relations would have been easier than they were in fact. It was indeed true—wholly as regards this country, sometimes less certainly abroad—that all the needs for ships expressed on behalf of the territories of the Commonwealth and the Middle East were war needs; for when civil supplies are scarce enough to imperil the capacity to work and fight, to provide them must be a military objective. This, however, is not how the matter was apt to appear on the other side of the Atlantic. There, even though throughout 1942 all the American ships carrying British cargoes were employed primarily on military services, the competition between British and American needs seemed usually to be between the civil needs of the Eastern Hemisphere and the military needs of the Western; for if civil needs in the Eastern Hemisphere could be reduced, as the Americans supposed, the demands for American ships to carry supplies to the armies in India and the Middle East would diminish.

This state of affairs, resulting inevitably from the different natures of the British and American economies and from the dependence of the Commonwealth territories on the services of British ships, raised peculiar difficulties, for military authorities in all countries are always apt to think that their demands should have priority over those of civilians. Even in the United Kingdom it was not always easy to convince the Chiefs of Staff that the immediate interests of the war itself might make this untrue. Nevertheless, because of the obvious importance to the United Kingdom of foreign trade, and because of the increasing precision with which all civil needs could be established, it was easier to convince the military authorities in this country than in the United States where, in any event, the civil needs in question were mainly those of foreign powers. Moreover, in the United Kingdom, even at the time when the Army's demands on shipping-space were not challenged, it was always possible to curb, though not wholly to subdue, the natural instincts of the Services to use resources extravagantly; for the British Government never allowed the Services to control the operations of the ships which carried their troops and supplies. In the United States, on the

other hand, the civil claims on ships were much smaller and less imperative, and for this and other reasons the power of the Services *vis-à-vis* the civil authorities was much greater.

Thus differences in material circumstances, as well as in habits of mind and administration, set obstacles in the way of the Anglo-American alliance as they set them in the way of all alliances. The Anglo-American alliance, however, possessed a combination of advantages unique in diplomatic history—not only the advantages, from which other allies have also benefited in the past, that spring from common beliefs and from a (more or less) common language, but, in addition, the intimate friendship between the heads of the two governments that could always in the end remove the worst difficulties, even though it could not always prevent them from arising nor immediately dispose of them.

The form which the alliance should take in shipping matters became a matter for discussion immediately after Pearl Harbour. From the start it was accepted that even though its purpose was to make the most profitable joint use of the ships of both nations, it could not be established on the basis of a single executive control. At the time the alliance was born, Sir Arthur Salter envisaged that there would be, as he put it, three pools of shipping; the first pool—which would be much the largest at the beginning, but would constantly diminish—would consist of British ships, and of ships on charter to the British Government, controlled by the Ministry of War Transport; the second pool would consist, similarly, of American ships controlled by the Americans; the third pool would consist of ships lent by the Americans to the British, or by the British to the Americans. This third pool would continually increase in size as the American merchant fleet expanded and the machinery for co-operation developed; as time went on, though the new arrangements would not supersede, they would increasingly trench upon the authority exercised by the two nations over the employment of their own ships.

It was, however, realised that many conditions, absent at the start, would have to be fulfilled before this vision could achieve substance; after the fashion of human institutions, the departments and other bodies responsible for bringing about Anglo-American co-operation in shipping matters could only learn their task gradually; nevertheless, to the British two conditions appeared essential to start with if the task were to have any chance of success. First it seemed that the Americans must establish, as the British themselves had done, a single centre of control over their merchant ships, and ensure that the controlling authorities were not the Service chiefs; for otherwise it would be hard to settle the conflicting claims of the various theatre commanders, and impossible to settle

the conflicts that must arise between the United States military needs on the one hand and the various needs of the British Commonwealth and the Middle East on the other. Secondly, it seemed necessary to set up machinery such, again, as was provided in the United Kingdom, for bringing together the related needs for ships of the various civil departments on the one hand and of the Service departments on the other. Admittedly, the statistical and other evidence that was laid before the various Cabinet committees which discharged this function in the United Kingdom could not automatically provide an answer to the problem of priorities; it could, however, greatly diminish the chances of arbitrary actions taken in ignorance of the likely consequences and liable therefore to lead to chaos.

The British had learned these lessons by a process of trial and error extending over two wars; they hoped that the Americans would profit from their experience; but they nevertheless realised that this is not a sort of apprenticeship to which people take kindly, and that in any event it ill behoves those in need of help to attempt to dictate to the givers how they should manage their affairs.

The organisation of merchant ships was discussed at the Washington war conference, held immediately after Pearl Harbour, and the attitude of the United States Chiefs of Staff at once became plain; they did not want the civilians to interfere. The President, however, was convinced by the British arguments; he decided that American merchant ships should be put under the control of a civil authority—the War Shipping Administration. By an Executive Order issued on the 7th February 1942 he directed that the War Shipping Administration should, with certain exceptions, be responsible for the 'operation, purchase, charter, requisition, and use of all ocean vessels under the flag or control of the United States', and for allocating them to 'the Army, Navy and other Federal departments and agencies, and the Governments of the United Nations'.¹

By these means there was provided—but on paper only, for as will appear presently the facts and the theory did not correspond—one of those domestic controls which were the *sine qua non* of effective international collaboration. The principles on which the collaboration itself should proceed, and the machinery for effecting it, had already been decided. They had been set out in a White Paper, issued in January 1942.²

¹ The exceptions were '(i) combatant vessels of the Army, Navy and Coast Guard; fleet auxiliaries of the Navy, and transports owned by the Army and Navy; and (ii) vessels engaged in coastwise, intercoastal, and inland transportation under the control of the Director of the Office of Defense Transportation'.

² *Agreements between the Prime Minister and the President of the United States of America*, Cmd. 6332.

In principle [it was stated here], the shipping resources of the two countries will be deemed to be pooled. The fullest information will be interchanged.

2. Owing to the military and physical facts of the situation around the British Isles, the entire movement of shipping now under the control of Great Britain will continue to be directed by the Ministry of War Transport.

3. Similarly, the appropriate authority in the United States will continue to direct the movements and allocations of United States shipping, or shipping of other Powers under United States control.

4. In order to adjust and concert in one harmonious policy the work of the British Ministry of War Transport and the shipping authorities of the United States Government, there will be established forthwith in Washington a Combined Shipping Adjustment Board consisting of a representative of the United States and a representative of the British Government who will represent and act under the instructions of the British Minister of War Transport.

5. A similar Adjustment Board will be set up in London consisting of the Minister of War Transport and a representative of the United States Government.

6. In both cases the executive power will be exercised by the appropriate shipping agency in Washington and by the Minister of War Transport in London.

These provisions were made more precise five months later when, in June, it was agreed that the United States should bear the main responsibility for estimating the requirements of the Western Hemisphere¹ and for providing the ships to meet them, while the British should be similarly responsible for all the other territories of the free world (excluding Russia, Iceland and the American Pacific possessions)² though accorded some help by American ships.

It will be plain that if these arrangements were to work, a great deal needed to be known both about the demands of the free world for shipping-space and about the employment of the free world's ships. This, too, had been realised from the start. Sir Arthur Salter had constantly pointed out that each side 'will need, in order to make suitable proposals, to know everything relevant about *all* requirements and *all* the ships of both . . . groups of countries'. It was, however, a formidable task to collect this information. The British could provide a great deal of what was required of them though their knowledge still had gaps. The Americans, on the other hand, for a long time could provide none at all.

Without this knowledge it was impossible for the Combined

¹ 'including Canada, the West Indies, the Caribbean and South America'.

² Russia was to be a joint, Iceland and the American Pacific possessions an American, responsibility. Nothing was said about Australia, and the responsibility for providing ships to meet her requirements (other than the requirements of the United States troops in her territory) remained in doubt for some time.

Board to work, as Sir Arthur Salter put it, as an 'integrated mechanism'. But it was not the lack of integration that was disturbing at this time; it was the virtual absence before the beginning of the North African campaign, and indeed for some time afterwards, of any effective mechanism at all for deciding between British and American claims.

To start with, the essential domestic controls in the United States were lacking. 'The basic question', Mr. Lewis Douglas told the Combined Shipping Adjustment Board in Washington on the 25th March 1942, was 'how priorities could be established in an orderly manner and in the light of an appreciation of all the consequences', but this was a question that proved hard to answer. In the summer of 1942 a variety of United States Government agencies were all competing for shipping-space; there was no machinery for co-ordinating their demands, and the pressures they exerted operated in arbitrary and unpredictable ways. Suddenly it would be decided that ships must be despatched to Russia in large numbers; suddenly it would emerge that shipments of bauxite from British Guiana to Canada (an American responsibility), on which the Canadian aircraft industry depended, had been cut by half; here an unheralded large demand, there, and as a result, an unforeseen emergency, were the order of the day.

The difficulties, however, created by the unco-ordinated demands of the civil authorities were insignificant compared with those created by the demands of the United States fighting services. 'The fact is', Sir Arthur Salter had written to Lord Leathers some months earlier, 'the United States War Department has resented the powers given to the War Shipping Administration in the Order of 9th February (*sic*) and is making them largely ineffective.' The military authorities, it appeared, were 'putting in demands for all the tonnage in sight, irrespective of whether they had immediate use for it, because they considered they would need it in the future'. The demands, which might be for a quarter of a million tons at a time, were peculiarly hard to resist, backed as they were not only by the authority of military commanders but often by the pressure of public opinion. As the matter was summarised to the British War Cabinet at the time of the first landings in North Africa: 'In the atmosphere that develops when a campaign like the Solomons is being fought, and the news of each day is attended with grave and growing anxiety, there is a natural disinclination on the part, not only of the Service directly concerned, but of the highest authorities, to deny anything that is asked', even though what was asked might, as the British and even the War Shipping Administration suspected, be a great deal more than with efficient management might have been necessary.

Thus it came about that, by the autumn of 1942, virtually all the United States ships taken since Pearl Harbour from civil employment, together with all the net gains from new building, had been appropriated by the United States Services. At this time it appears¹ that the United States Services owned or had chartered 5.8 million deadweight tons of shipping (or approximately 56 per cent. of the United States merchant fleet), and other American ships were also carrying cargoes for their account. As far as can be estimated (on the basis of the figures given in Appendix XLVIII) about 6 million deadweight tons² must at this time have been engaged, wholly or primarily, in meeting the needs of the United States Services. At the same date the amount of tonnage engaged wholly or primarily in meeting the needs of the British Services appears to have been, very approximately, about 8½ million deadweight tons.³ Yet a much higher proportion of the British than of the American ships in question was serving civil at the same time as military needs; the United States theatres of war were only about half as far from their main base as the British theatres, and the number of British troops to be supplied must have been considerably more than double the number of American.⁴

Admittedly, the difficulties with which the Americans had to contend at this time were very great. They had never, in the present century, been a great shipping nation; their administration was much less well suited than the British to devising and operating the necessary controls; they were not given the chance that the British had had of running in the machinery of allocation and control gradually. In these circumstances, the British shipping authorities in Washington were deeply grateful for the help they received. Nevertheless, the explanation of what was happening did not alter what happened. It had been decided to give the war in Europe priority over the war in the Pacific, but the bulk of American shipping was being used in the Pacific theatres.

Here, indeed, was the principal cause of all the difficulties. Except in terms of the broadest general principles there was no combined strategy in shipping matters; but there could be no limit to the insatiable appetite of the Pacific theatres, and no means of preventing them from absorbing all the net gains of American new building,

¹ See Appendix XLVIII, p. 294.

² This figure has been arrived at by adding to the 5.8 million deadweight tons under item 1 in Appendix XLVIII the figures in this Appendix for services to Alaska, Hawaii and Greenland.

³ See Appendix XLIX, p. 295.

⁴ As late as February 1943 the Ministry of War Transport assumed that it had twice as many troops overseas as the Americans. It must have had a much larger proportion in October 1942 though the claims for initial equipment (more extravagant in shipping-space than the claims for maintenance) are likely to have been larger.

until it could be decided which theatres of war were the most important, and how much should be allocated to each for both civil and military purposes; and this could not be done without centralised and detailed knowledge of how the American Services were employing the ships they controlled.

In the absence of this knowledge the excellent relations between the President and the Prime Minister were not of much immediate practical value, and the sympathy of the War Shipping Administration, on which Sir Arthur Salter frequently commented at this time, equally could do little good; for the War Shipping Administration had not sufficient shipping to give the British the help they needed, and could not estimate how much it would be able to give them in the future.

During the first half of 1942 it lent them, it seems, about as much dry-cargo tonnage as it had been lending them at the time of Pearl Harbour,¹ although it withdrew for war service many of the ships which, before then, had been trading free in the Indian Ocean area and carrying cargoes to and from Commonwealth territories. In the second half of 1942 the loan was a little, though only a little, larger than in the first half.² In the circumstances, the British Merchant Shipping Mission in Washington thought itself lucky to have obtained so much, but in London the state of affairs was disappointing, and it obscured the fact that the British did a great deal better in 1942 than they had done in 1941; for then they had had no American help before May and afterwards an amount that rose only gradually to the total reached by December. In 1942, on the other hand, they had the use, on an average throughout the twelve months, of some 1½ to 2 million deadweight tons that provided, roughly, some 25 per cent. of the sailings to the Indian Ocean area,³ that were equivalent to between something under 5 and something over 6 million tons of imports,⁴ and that augmented the British merchant fleet by between 7.5 and 10 per cent. These were substantial, indeed invaluable blessings; nevertheless, they were meagre if measured against the commitments of the two countries, and moreover they were extremely precarious. From day to day the British were beset by the anxiety that the loan might at any moment be reduced; they

¹ Sir Arthur Salter estimated that 'By the end of the year [1941] we had about 1½ million [deadweight] tons dry-cargo shipping in our service. We were fortunate [during the first half of 1942] in being able to retain in our service about 1 to ½ of a million [deadweight] tons of United States dry-cargo shipping. . . . ' If this were to read (as it seems it must have been meant to) '1 to 1½ million' it would accord roughly with the figures in Appendix XLVIII, p. 294, and with other figures the writer has seen, all of which yield different, though not widely differing answers.

² See Appendix LXII, p. 384.

³ See Appendix L, p. 296.

⁴ Assuming 4.8 round voyages per annum on the North Atlantic and that no allowance need be made for return cargoes from the Indian Ocean area.

knew that if this were to happen they would have no resources with which to fill the gaps; at a time when their own resources were diminishing and their commitments growing, the United States' mounting war-effort in the Pacific made it increasingly doubtful, not only whether the Americans could provide more help, but whether they would feel able to go on providing as much as hitherto.

APPENDIX XLVII

*British and United States net gains (+) or losses¹ (-)
1942 and 1943*

(Dry-cargo ships 1,600 gross tons and over)

Thousand gross tons

Date	British-controlled			United States-controlled		
	Gains	Losses	Net gain or loss	Gains	Losses	Net gain or loss
1942						
January-March	546	757	-211	300	296	+ 4
April-June	607	892	-285	909	587	+ 322
July-September	822	980	-158	1,387	490	+ 897
October-December	626	1,334	-708	1,727	287	+1,440
1943						
January-March	542	722	-180	2,147	419	+1,728
April-June	643	437	+206	2,855	213	+2,642
July-September	830	389	+441	2,650	215	+2,435
October-December	338	266	+ 72	2,571	155	+2,416

¹ All losses are on an occurrence basis.

Source: Ministry of War Transport

APPENDIX XLVIII

*Changes in employment of United States-controlled dry-cargo tonnage
and in the volume of tonnage allocated to the United States services
at 1st March 1942 and 10th October 1942¹*

	<i>Deadweight tons</i>		
	<i>1st March</i>	<i>10th October</i>	<i>Change</i>
1. <i>Allocated to United States Army and Navy</i>	2,805,000	5,804,000 +	2,999,000
2. <i>Expanded lend-lease services:</i>			
<i>Persian Gulf—British and Russian lend-lease</i>	142,000	551,000 +	409,000
<i>Red Sea—British lend-lease</i>	517,000	732,000 +	215,000
<i>North Russia—Russian lend-lease</i>	365,000	441,000 +	76,000
<i>South-west Pacific—Australian, New Zealand lend-lease</i>	195,000	262,000 +	67,000
<i>Total</i>	1,219,000	1,986,000 +	767,000
3. <i>Expanded essential import services:</i>			
<i>West Africa—essential imports to United States</i>	76,000	102,000 +	26,000
<i>Bauxite</i>	210,000	369,000 +	159,000
<i>Other</i>		18,000 +	18,000
<i>Total</i>	286,000	489,000 +	203,000
4. <i>Compressed lend-lease services:</i>			
<i>South and East Africa—2 per cent. lend-lease or South African Government purchase, balance essential civilian</i>	432,000	167,000 -	265,000
<i>India—90 per cent. lend-lease, balance essential civilian</i>	504,000	360,000 -	144,000
<i>United Kingdom—British lend-lease</i>	98,000	27,000 -	71,000
<i>Total</i>	1,034,000	554,000 -	480,000
5. <i>Compressed Western Hemisphere services:</i>			
<i>Coastwise—only coal to New England remaining</i>	488,000	282,000 -	206,000
<i>Pacific—to Alaska, Hawaii, Panama, etc., military and essential civilian</i>	273,000	138,000 -	135,000
<i>Atlantic—to Greenland, Iceland, Bermuda, Newfoundland, military and essential civilian</i>	196,000	40,000 -	156,000
<i>Caribbean—excluding bauxite</i>	485,000	344,000 -	141,000
<i>South America—colliers and ships to pick up essential imports</i>	549,000	259,000 -	290,000
<i>Total</i>	1,991,000	1,063,000 -	928,000
6. <i>Repairing and defensing</i>	845,000	486,000 -	359,000
7. <i>Total United States-controlled tonnage</i>	8,180,000	10,382,000 +	2,202,000

Source: Ministry of War Transport

¹ The above table was compiled by the War Shipping Administration for the personal use of the President. A copy was sent by Sir Arthur Salter to the Director-General of the Ministry of War Transport on the 29th October 1942. The table is headed 'Changes in Employment of W.S.A. controlled shipping'. It is reproduced above with certain alterations to allow for the tonnage, mentioned in the memorandum but not included in the table, 'transferred to the direct control of the Army and Navy through purchase or bareboat charter'.

APPENDIX XLIX

Approximate amount of dry-cargo tonnage employed (wholly or primarily) in the service of the British armed forces before the North African campaign¹

It is impossible to estimate how much shipping was engaged directly in British war services. This is so principally because the largest block of tonnage fulfilling Service needs (shown in (ii) below) also fulfilled other needs at the same time. For this reason the Ministry of War Transport refused for a long time to answer the question, although a way of answering it sufficiently good for most purposes was adopted later when the British shipping budgets were drawn up. The following analysis is an attempt to answer it for the date under discussion subject to the qualification that the figures in (ii), (iii) and (iv) below are only rough approximations.

	<i>Million deadweight tons</i>
(i) British tonnage allocated to the Services on a permanent or semi-permanent basis and having no importing value:	
(a) allocated to the Royal Navy ²	1.28
(b) allocated to the Army and R.A.F. ³	1.72
	3.0
(ii) British tonnage employed primarily in carrying military supplies to the Indian Ocean area, ⁴ say	3.6
(iii) Other military commitments, say something over	0.3
(iv) United States tonnage employed as at (ii), ⁵ say	1.7
Something over	8.6

¹ i.e. as nearly as can be estimated, before the process of taking up ships for the North African campaign started.

² At 3rd October 1942. Ships of all sizes.

³ At 3rd October 1942. Ships of all sizes.

⁴ This figure is arrived at on the following assumptions:

- (1) that the average ship was 8,000 deadweight tons;
- (2) that the round voyage took seven months (i.e. assuming that half the ships went round the Cape and half across the Pacific. See Chapter XIII below, footnote 2 to p. 303).
- (3) that the number of sailings a month was about sixty-five—the average for the three months July to September (see Appendix L, p. 296; after September the number declined, some of the ships in this service being taken for the North African campaign).

⁵ This figure is arrived at on the assumptions:

- (1) that the average United States ship was 10,000 deadweight tons;
- (2) that the average round-voyage time was the same as for British ships (whether this was so or not depends on how many ships sailed across the Pacific and how many round the Cape—the writer does not know and has therefore taken the average between the two figures—6.5 months for the Pacific voyage and 8 months for the voyage round the Cape;
- (3) that the average number of sailings a month was about twenty-three—the average for the months July to September.

APPENDIX L

Sailings of United States¹ and British-controlled dry-cargo ships to the Indian Ocean area in fulfilment of British programmes

296

Date	From North America to:								From United Kingdom to:				Grand totals							
	Middle East		Persian Gulf		India and Ceylon		Total		Middle East	Persian Gulf	India and Ceylon	Total	British ships	U.S. ships	British and U.S. ships					
	British ships	U.S. ships	British ships	U.S. ships	British ships	U.S. ships	British ships	U.S. ships								British ships only				
1942																				
January	16	16	<i>Breakdown not available</i>				22	18	<i>Figures not available</i>											
February	19	18					27	28												
March	20	6					33	15												
Total for 3 months.	55	40				82	61													
April	38	8	<i>Breakdown not available</i>				60	16	<i>Figures not available</i>											
May	25	6					42	17												
June	15	9					25	15					58	83	15	98				
Total for 3 months.	78	23				127	48													
July	9	16	<i>Breakdown not available</i>				19	25	<i>Breakdown not available</i>				55	74	25	99				
August	7	9					8	6					9	5	24	20	41	65	20	85
September	11	14					4	—					15	9	30	23	25	55	23	78
Total for 3 months.	27	39					73	68				121	194	68	262					
October	7	16	3	6	6	7	16	29	20	3	9	32	48	29	77					
November	19	14	5	2	7	9	31	25	13	6	9	28	59	25	84					
December	13	13	6	4	5	6	24	23	21	3	9	33	57	23	80					
Total for 3 months.	39	43	14	12	18	22	71	77	54	12	27	93	164	77	241					
Total for 1942 . .	199	145					353	254												

¹ War Shipping Administration ships only.

Source: Table compiled by the author from data in the Ministry of War Transport

CHAPTER XIII

THE CARGO-SHIPS AND THE MILITARY DEMANDS, FROM PEARL HARBOUR TO THE NORTH AFRICAN CAMPAIGN

IT IS THE VEHICLES', the Prime Minister once said, 'that take the shipping-space out of all proportion to the other needs of the fighting men.' Mechanical transport—M.T. as it was known for short—plays an inconspicuous part in the histories which describe the problems which faced the British Government in its attempts to supply the troops in the Western Desert and elsewhere in the crucial year of 1942, yet it was the principal cause of all the shipping difficulties. As can be seen from Appendix LI, the tanks and aircraft that had to be shipped, intractable objects though they were, were very few by comparison with the vehicles, that moved in prodigious and, until the summer of 1942, constantly increasing numbers. As long as they were shipped on wheels (as invariably happened on the routes from the United Kingdom until May 1942, and largely for some time afterwards, and as was always unavoidable in the assault phase of an operation) they were the sole determinant of the number of ships required for military cargo; on an average, 150 could be got into a ship, and after they had been accommodated there was always a large amount of empty space that was more than enough for the Army's other needs.

Throughout 1942 vehicles were being carried from the United Kingdom and North America to all the areas where British troops were stationed, or were being equipped and trained, or were engaged in fighting the enemy—not only to the Middle East, Persian Gulf, India and Australia, but also to Gibraltar, West, South and East Africa and Iceland; they were also being carried in considerable numbers to the Middle East from India, where the bodies built locally were attached to the chassis built in America. In the second quarter of 1942 vehicles were being transported to all these destinations from the United Kingdom and North America at the rate of about 294,000 a year.¹ The largest movements, and the ones most extravagant in ships because the distances were longest, were between

¹ See Appendix LI, p. 309.

North America and the United Kingdom on the one hand, and the Middle East, Persian Gulf and India on the other. As more troops were sent to these theatres in the crucial first half of 1942 the demand for vehicles—that, like the troops, had to traverse about 13,000 miles of ocean to their destinations—increased more than proportionately. The number of men carried on the W.S. route was about 20 per cent. higher in the first quarter of 1942, and nearly 90 per cent. higher in the second, than it had been in the last quarter of 1941; the comparable increases in the movements of vehicles were approximately 72 per cent. and 123 per cent.¹

The results were felt in all the areas which British ships had to supply, for the shipping services that linked the territories of the free world formed a design of which no part could be altered without altering the proportions of the whole. The principal countries of the Commonwealth on the periphery of the Indian Ocean area—South Africa, India, New Zealand and Australia—which had hitherto, in spite of the growing dangers, been living in relative peace and plenty, suddenly found that not only their imports of raw materials consumed in large quantities—grain and fertilisers—were in jeopardy, but that much of the others, and many manufactured articles, could now no longer find transport. During 1941, exports of civil goods from the United Kingdom to the Union of South Africa, though considerably less than before the war, had averaged 40,000 tons a month. In the spring of 1942 this figure fell to 5,000 tons a month; and at the same time the twelve to fifteen sailings a month which American shipping services had provided in 1941 had, by April 1942, all been suspended. Similar misfortunes befell India and the Southern Dominions.

All these countries, therefore, were suddenly faced with the intractable problems of deciding—with inadequate controls and hence inadequate knowledge—which goods they needed most; the Ministry of War Transport was faced with the necessity of saying how much shipping-space it could provide—although the answer depended in large part on how much the Army needed, which for some time was unpredictable; and meanwhile commodities which could not be shipped piled up for shipment—in May 1942, in the United Kingdom, there were 400,000 tons for South Africa alone—and a variety of British purchasing missions in the United States were competing to procure lend-lease supplies in ignorance of the quantities for which shipping-space could be provided. What could, and what could not, be dispensed with; how to order the essentials and get them to the right ports at the right time; how to marry the ships and the cargoes; all these questions, settled in peace by a

¹ See Appendix LI, p. 309.

multitude of individual decisions, suddenly presented themselves for answer amid a growing confusion to overburdened governments lacking the means to answer them in countries where in many cases the enemy was at the gate. At the same time the peoples in the Middle East had to be sent the large quantities of grain which it had appeared at the end of 1941 were necessary to avert a famine, as well as considerable quantities of nitrates and other things; their railways had to be sent sufficient coal, which could largely no longer be supplied from the accustomed places relatively near at hand; the ships in all the ports that could still be used in the Indian Ocean area had to have bunkers, as well as repair facilities and other services often requiring imports from overseas. It must, it might be supposed, have passed the wit of man to organise things in such circumstances so as to ensure that no vital need went unsatisfied, while maintaining at the same time the various other essential services in other parts of the world, and a flow of imports into this country sufficient to keep up morale and war production.

Nevertheless, as far as could be seen the task was accomplished in essentials until the end of the first half of 1942. The large demands for grain in the Middle East which had been accepted at the end of 1941 were more or less met, together with about 80 per cent. of the demand for nitrates, and the price in ships was smaller than that which had been paid previously, when less had had to be carried in total but more along the cross routes;¹ for the arts of the ship-owners and the planners could make the huge numbers of ships that sailed to the Indian Ocean area with vehicles serve many purposes besides those of the theatre commanders for whom they were provided. Into the empty spaces left by the vehicles went not only other items of military cargo, but commodities for the civil populations in the Middle East, coal for the ships and railways—carried from the United Kingdom or North America to replace the supplies that had formerly come from Calcutta—and a large miscellany of imports needed by South Africa, India and Australia.

Partly by these means, and partly by hastening the process of converting the Egyptian railways to use oil, the coal crisis was overcome in the Middle East; and indeed, as the months passed, in one service after another order began to emerge out of the chaos that Pearl Harbour had created. Although outside the Middle East it generally proved impossible to produce programmes of requirements before 1943 (for though the need for them was admitted at the beginning of 1942 it was a slow and difficult process to draw them up), in most cases methods of determining priorities were devised that worked well enough for the time being; the Ministry of War Transport's representatives in North America and the other loading

¹ See Appendix LVII, p. 354 below.

areas managed, by the light of nature and experience, and with the advice of the representatives of the countries concerned, to get the necessary cargoes into the ships except for grain for India, and fertilisers for South Africa and the Southern Dominions; for these commodities were normally imported in a volume far beyond what it was now possible to carry and the kind of grain principally required—rice—was no longer to be had.

The pattern of trade in the Indian Ocean area thus began to assume a new, war-time shape. Contacts with the outside world were maintained almost entirely by means of the military cargo-ships, mostly British, but some American,¹ allocated in accordance with British estimates of the military requirements, their space which the armies did not claim being apportioned by means of discussions between all the parties concerned. Trade within the area was conducted partly, as in the past, by means of ships which could not be used elsewhere (either because they were on the Dominions' registers and the Government in the United Kingdom had no control over them, or because they were unsuitable for service in the Atlantic and Pacific oceans), partly, again, by means of the military cargo-ships which, before they returned to their base, were sent on cross voyages by the Liner Division of the Ministry of War Transport and the Ministry's representatives abroad, to meet needs which these people's past experience led them to suppose essential.

It may seem that these arrangements placed the territories in the Indian Ocean area in a peculiarly precarious position because of the way in which their trade was linked with the fortunes in the theatres of war, which determined the numbers of military cargo-ships in the area at any given moment, and because it took a ship sailing from the United Kingdom or North America from three to four months to reach the Indian Ocean. Precariousness is, however, in the nature of war, and it would be hard to maintain that, as things turned out, there need necessarily have been any more of it in the Indian Ocean area than in the British Isles, if all the countries concerned had been able to estimate their needs with a moderate degree of precision and sufficiently far in advance.²

The fact that they could not do this at the beginning of 1942 was, however, for reasons that will appear presently,³ a smaller source of danger before the invasion of North Africa than it later became. In the first half of 1942 the existing, somewhat haphazard arrangements seemed to work satisfactorily, at least for the purposes of the immediate present, although admittedly the future results were doubtful.

¹ See Appendix L, p. 296 above.

² See Chapters XVI and XVII below.

³ See Chapters XIV and XVI below.

In particular, after Pearl Harbour the only substantial remaining sources of phosphates outside enemy control, except in Florida, were on the shores of the Red Sea where the mines did not yield nearly enough to meet the demands of the competing claimants; and, since it was impossible at this time to weigh the claims against each other on a scientific basis, the amount available was divided up in the proportions of one-third for South Africa and two-thirds for Australia.¹ This was not a happy state of affairs, for the allocations were arbitrary besides being inadequate; nevertheless, justice at a time of such crisis, and with so much ignorance of legitimate needs, was too much to ask for and, when the fate of the whole free world hung in the balance, no one could contemplate endangering it in order to transport large quantities of phosphates from Florida for the benefit of a future that, as a result, the British Commonwealth might not live to see. It was more disturbing that, outside the Middle East, the needs for grain were still largely unknown. If there were to be a series of sudden emergencies of the kind that had occurred in the Middle East in 1941 when the harvests failed, what would then happen? No one indeed could say or had time to think.

Even in the United Kingdom, where knowledge of needs though still imperfect was vastly greater than anywhere else in the world, it was hard to estimate the extent of the risks that Great Britain ran in keeping the armies supplied at the same time as the hundreds of millions of civilians for whom she was responsible. Dry-cargo imports into the United Kingdom in 1941 had been just over 30 million tons—a figure approximately the same as that reached in 1918, and over 3 million tons less than that reached in 1917, the two worst years of the 1914-18 war. After Pearl Harbour it was clear that whatever the fortunes of 1942, and for some time they were wholly unpredictable, imports must fall much below the 30-million-ton mark.

For some months no forecasts of importing-capacity could be made at all. 'The uncertainties of the shipping situation', the Ministry of War Transport wrote in March, 'are probably now greater than at any previous time, partly because of the movements to the Middle East and Far East and partly because we do not know at what rate the output of United States merchant shipping will be made available for our assistance.' There had been a comparable situation in the summer of 1940, but a state of uncertainty did not present the same dangers now as then. In January 1942 the purchasing departments were asked to make estimates of their minimum requirements. They did not, as they had done after France fell, produce demands that were grossly in excess of anything it could be possible to lift; the gap between supply and demand was smaller than it had been then, and the means of dealing with it greatly improved—controls were

¹ New Zealand, it was agreed, was to rely for the most part on Makatea.

more efficient, knowledge of needs more precise, stocks higher, and the chances of sudden, disastrous shortages proportionately smaller. Nevertheless when, in May, the military requirements could be gauged for the first time with reasonable accuracy, and it emerged in consequence that the largest quantity of imports for which the United Kingdom could hope could not exceed 25 million tons, it seemed that consumption could not be reduced within this compass. What, then, was to be done?

If the supply of shipping-space available for imports was to be increased there were (short of more American help which, for the time being, was out of the question) only three possible alternatives. The first was to reduce the amount of space required by the vehicles by packing them in crates. This project, of which the results will be discussed later, involved many difficulties, encountered considerable opposition, and in the event appears only to have yielded fairly small returns before the spring of 1943.¹

The second possibility was to reduce the tonnage in the cross trades, that is, principally, to reduce the numbers of cross voyages that the military cargo-ships undertook when they had reached the Indian Ocean; for if they were not to spend their time in this way they would get to and from the theatres of war more quickly and fewer of them would be needed. The amount of shipping engaged in cross voyages of this kind amounted in the summer of 1942 to about 1 million deadweight tons at any given moment. This was a large amount. The same amount employed on the North Atlantic could have brought to the United Kingdom rather more than 3 million tons of imports in a year. Yet the volume of tonnage in the cross trades serving the civil needs of the overseas territories was so much smaller than before Pearl Harbour; the essential demands were so imprecisely known; the difficulties of planning to meet them so great; the risks of denying them still further so dangerous, that it did not seem that here was any source of help.

The remaining possibility was to reduce the supplies of war material themselves²—to conclude, in other words, that the point had been reached when the shipping shortage must set a limit to the deliveries to the fighting men in the theatres of war. But in the spring and summer of 1942 no one contemplated such a course. 'It is', it was stated in July, 'a principal object of policy to avoid . . . a modification of military plans . . . by reason of a scarcity of

¹ The policy would, of course, have reduced—and did reduce when it was applied—the amount of space available for civil cargoes for the territories in the Indian Ocean area.

² This was not, of course, altogether an alternative, for if the military sailings had been cut, other things being equal there would have been less tonnage in the cross trades. The amount of tonnage in the cross trades, however, could have been kept up by means much less extravagant than the military sailings—i.e. by working ships out to the Indian Ocean for employment permanently in these trades.

shipping.' 'Service needs,' the edict had gone forth two months earlier, 'including maintenance, take priority over all civil requirements except where there is a specific directive to the contrary', and no general directive of this kind was ever issued before October 1942; indeed, none of a type to produce significant results was issued before January 1943.

It is true that the Ministry of War Transport had on successive occasions, since the summer of 1941, taken steps to ensure that the Services should not waste the shipping-space allocated to them by failing to present their demands in as orderly a manner as possible, or to arrange for their cargoes to reach the ports at the proper time, or to determine which cargoes were the more urgently needed on the various routes, in case—as in the short run frequently happened—there were not enough suitable ships to carry them all. By these means, waste of the type of which the British supposed the United States Services to be guilty was increasingly prevented. The demands in total, however, were not questioned.

In the period of the acutest difficulty, between Pearl Harbour and Alamein, the cargo-ships delivered to the theatres of war virtually all the available supplies which the Army demanded according to standards of need which the Army alone determined and which no one scrutinised. The demands were met without protest and in full until May¹—as far as meeting them was a question of ships and not of production; between May and August, when the planning for the North African campaign started, they were largely met in spite of protests.

To protest against them was indeed tempting, for it took a ship about three times as long to carry war material to the Indian Ocean area as it took her to bring imports from North America to the United Kingdom;² and the disproportion between the effort required in the two cases increasingly obtruded itself as the prospects of significantly more American help diminished, as the need grew for

¹ Report by Movements Control, War Office, 25th August 1942: 'Up to May 1942 shipments of military material from North America did not present any major difficulties. In May, however, it became obvious that production was increasing while opportunities for shipment were becoming more and more difficult. . . .'

² The following were the round-voyage times as given by the Ministry of War Transport in 1943:

United States-Indian Ocean area via Cape . . .	8.0 months
United States-Indian Ocean area via Pacific. . .	6.5 months
United Kingdom-Indian Ocean area via Cape . . .	7.5 months
United Kingdom-North America . . .	2.6 months

As has often been said, the British ships that sailed to the Indian Ocean area brought imports to the United Kingdom on the homeward voyage when suitable imports were available. As the tonnage required in the Indian Ocean area, however, increased, the possibility of finding suitable imports diminished. At the height of the movement in 1942 about 50 per cent. of the British military cargo-ships could bring no imports home at all, but operated on a shuttle service between North America and the Middle East, Persian Gulf and India.

a second front in Europe, with the large claims it must make on shipping, and as the power of this country to play her proper part in the war-effort became correspondingly more uncertain. It began to seem that there might be a middle way between denying either the armies or the home front the necessities of life and war. Did the armies, it began to be asked, really need the huge volume of supplies with which they were being provided? It was said that in the Middle East they were equipped with mechanical transport on four or five times the scale of the German armies in the area.¹ Must they not, in these circumstances, be piling up unnecessary reserves? On what bases, in any event, were the reserves computed? Was it proper that the Army should have reserves, sufficient—as far as could be guessed—for more years than the United Kingdom had for months?² Only the Prime Minister, however, could take the action necessary to produce answers to these questions, and for a long time the appeals to him fell on deaf ears.

In these circumstances the only question to be determined was how far the supplies imported into this country could be reduced. To reduce them without lowering vitality, morale and war-production appeared, as has been shown, a formidable task. From the first it was assumed that to accomplish it the British would not only have to cut consumption but would also have to eat into the stocks accumulated in 1941, and this seemed a proper course in a time of great danger that, if successfully surmounted, would be succeeded by a period of relative plenty when, it was to be hoped, the Mediterranean would be open again and when the Americans would have ships to spare for British use. In the meantime, the questions were: how far could stocks safely be depleted? How far could consumption be reduced? Could these two measures in conjunction bridge the gap between the likely volume of imports and the needs for food and raw materials?

The task of answering these questions—and of answering them more precisely than any of the similar questions had been answered in the past—was entrusted to a new committee, the Shipping Committee, which superseded the Import Executive. The Shipping Committee was an inter-departmental committee under the chairmanship of the Secretary of the Department of Overseas Trade. Its members were the Director-General of the Ministry of War Transport and representatives of the Services and the purchasing departments. Its functions were defined as being 'to keep the shipping situation as a whole under review', to 'settle questions

¹ This assertion was made by Lord Cherwell to the Shipping Committee on the 11th June 1942.

² According to Lord Cherwell's computations at 11th June 1942 stocks of ammunition in the Middle East were, at the existing rate of consumption, sufficient for over four years.

involving the current use of shipping which require discussion between the representatives of several departments', and, particularly, 'to make forecasts of the available shipping-capacity, and the demands likely to be made upon it for the import programme and for other purposes, in order to ensure that the implications of the shipping situation will be foreseen and brought to the notice of the ministers concerned'.

This, indeed, had been the goal for a long time, but even now it could not be reached; for of the three categories of demands which merchant ships had to meet, the demands of the overseas territories, it was shown, were to a considerable extent unknown, although the necessary knowledge was being accumulated; the demands of the Services were unchallengeable; only the demands of the United Kingdom import programme, therefore, could be scrutinised in any detail. Thus, the task of 'keeping the shipping situation as a whole under review' resolved itself principally into keeping the import programme under review for the purposes of establishing how far it could be safely cut. The more deeply, however, that one cuts into the sources of a nation's life the more cautiously one has to proceed. A great deal more, it emerged, needed to be known than had been discovered hitherto about the needs for imports, and about what was done with the imported commodities.

In the summer of 1942 the Shipping Committee began to produce figures of stocks, of changes in stock levels, and of consumption rates for all major imported commodities. The stock figures, it is now well recognised, were somewhat misleading since they concealed hidden reserves—at least in the case of foodstuffs. Things were not, in other words, quite so bad as they looked; nevertheless they would not, it seems, have looked much better even if the stock figures had been accurate, for in relation to the needs the hidden reserves can only have been small.¹ The final conclusion that emerged from the discussions that took place in the summer of 1942, on the basis of the Shipping Committee's investigations, was that consumption of imported foodstuffs and raw materials during the eighteen months from January 1942 to June 1943 could be reduced to 40 million tons, that is, to an annual rate of between 26 and 27 millions, and that 4 million tons could be taken from stocks. This left the requirements for imports over the eighteen months (apart from 2 million tons required principally for finished munitions) at 36 million tons. If, however, the demands on ships for other purposes than supplying this country remained the same, and if American help did not increase, apart from finished munitions the British would only, it appeared, be able to import 33 million.

¹ It has been suggested to the writer that they are unlikely to have been more than about 1 million tons.

There would thus be a gap to be bridged of 3 million tons and little left in the way of stocks with which to bridge it. By June 1943, in other words, the United Kingdom would, as far as could be seen, have nearly reached, or at the best have been within a month or two of reaching, the point when factories would have to close down and when rations would fail. These were the prospects in the late summer of 1942, before the British began to consider undertaking the first major amphibious operation in history.

In the files of the Ministry of Transport there are a number of calculations about what the task might be expected to involve. It seems clear that with so many unknowns they must have appeared highly suspect. No calculations about the cost of combined operations can ever come out entirely right, and in the late summer of 1942 there were many reasons why they should be peculiarly unreliable. The British and American programmes were drawn up separately and at the time when the British started their planning the Americans had not begun theirs. The British had to assume that the Americans would be able to provide enough shipping to meet their own commitments, but if they could not, the British might—and indeed did—have to help them out. Again, an operation of this sort requires constant and detailed collaboration between all the four Services—for merchant shipping was in effect a fourth Service—and a collaborative effort on so grand a scale is unlikely to work without hitches at the first attempt; yet if there are hitches shipping will probably be wasted, perhaps on a large scale. Finally, with only the examples of Norway and Madagascar as guides, and by comparison they were very small affairs, there was virtually no experience of the kind of things that are likely to go wrong when an assault is attempted on the shores of a foreign territory in the face of enemy resistance on land—and no one knew whether or not the French would resist—and of enemy attack by sea and air.

Apart from these hazards and the constant changes of opinion about the date and scope of the operation, the planning presented immense complications. Even in the most favourable circumstances to estimate the number of cargo-ships required for a task of this sort, and the results of providing them, must involve so large a number of calculations, based on such uncertain data, that the possibilities of error must always be very large.¹ When the North African campaign was being considered it had first of all to be calculated how many cargo-ships would be required to carry the equipment of the assault force, and how long it would take to fit the ships out for their duties; it had then to be calculated how many ships would be required for

¹ Nevertheless, although the estimates of the cost of operations always turned out wrong, and were always too small, the demands for maintenance, equally always wrong, were always too large, so that, as far at least as the British were concerned, the pluses and minuses tended to cancel out. See Chapter XX below.

the build-up and maintenance—and in the event over a quarter of a million British troops had been transported to North Africa by the 1st March 1943. But the answer to this second question turned not only on the amount and type of equipment to be carried, but also on the amount of time that would have to be allowed for the round voyage—outward with military cargo and, as soon as circumstances permitted, home with imports according to the classic principle. Round-voyage times, however, are always hard to assess, and particularly so in such cases as this where they turned, principally, first on the rate of loading (itself determined by all the complicated causes that dictate the rate at which supplies can be moved by road and rail to the ports and there put into the ships); secondly, by the speed of ships and convoys and the convoy cycle; thirdly, by the rate at which ships could be discharged in the battle area. This is, however, a matter impossible to forecast, turning as it does, among other things, on how soon it will be possible to capture a major port and bring it into operation.

In the summer of 1942, after hypotheses had been accepted on all these matters, an allowance had then to be made for increased sinkings and for the loss of ships' time that would result because the convoys required for the North African operation would need so many escorts that none could be provided for ships sailing out to or home from West Africa and the Indian Ocean area. These ships, normally escorted to and from Sierra Leone, could not, it was held, be allowed unescorted on this dangerous route. It was proposed, therefore, on the outward voyage to sail them in the transatlantic convoys to the Azores (the most southerly point the endurance of the escorts would permit) whence they were to proceed independently. On the homeward voyage they were to sail from the Cape to Trinidad or New York, and return to this country, as they had gone out, in the transatlantic convoys. In the event, when these expedients were adopted (and other and even more extravagant ones had to be resorted to afterwards) it was estimated that the diversion added some 4,000 to 5,000 miles to the length of the voyage, with a corresponding decline in carrying-capacity.

A figure had to be put on the cost of these many and hazardous operations, most of them to a greater or less extent at the mercy of chance, before the strain on the United Kingdom import programme could be estimated; before it could be decided whether, and if so at what cost to the armies, ships should be withdrawn from the Indian Ocean military programmes, and what the results of withdrawing them would be on the economies of the overseas territories whose fate was linked with theirs.

It needs no imagination to realise how precarious in such circumstances must be the fate of the various shipping services if there

are no reserves, for all the services were so closely bound up one with another that a crisis in any one of them must immediately have precipitated a crisis in the others, spreading confusion if not disaster round the world. Nevertheless, relying on American help the British decided to take the risks. The Prime Minister said in July that:

. . . we must be careful not to let our position deteriorate to an unmanageable degree before we have a clear understanding with the United States as to the future. With this object we must now in the next few weeks come to a solemn compact, almost a treaty, with the United States about the share of their new building we are to get in 1943 and 1944.

But conditions in the United States made treaties or compacts about merchant ships impossible at this time, and none was entered into in the summer of 1942; for a government cannot negotiate to any purpose over matters which it neither properly controls nor understands; so that when the British decided to invade North Africa they took a leap in the dark.

Admittedly the prizes of victory would be very great, not only in terms of morale, but in terms of the strategic situation generally, including the shipping situation. But were the prizes within Britain's reach? In the summer, before the planning for the North African campaign started, it had, it was shown, been supposed that between January 1942 and June 1943 the United Kingdom would import 33 million tons of food and raw materials and, including finished munitions, 35 million tons in all. At the end of October, when the first assault convoy had already sailed, but before it had reached its destination, the 35 million tons had been scaled down to 33 million. It is true that consumption also seemed likely to decline, and that hitherto, in every crisis, it had always turned out that it had been overestimated; nevertheless, each experience revealed smaller possibilities of economy. The economies had now to be counted in thousands of tons, while misfortunes in the theatres of war, or miscalculations about the needs of the armies, might involve millions. To fail half-way through, however, in the task of providing the ships for the North African operation would be a great deal worse than to have said at the beginning that the task was impossible. Yet all the various statements that were made in the United Kingdom about the shipping situation, and all the diagnoses made in America, however much they might conflict or change, always pointed to one conclusion; the North African campaign might easily lead to disaster on the home fronts (and equally therefore, perhaps, in North Africa itself) and indeed in the opinion of some people, including Lord Cherwell, probably would.

APPENDIX LI

(i)

Shipments of military cargo from the United Kingdom to the Indian Ocean area (Middle East, Persian Gulf and India) in fulfilment of British programmes

Date	Vehicles	Stores	Guns	Tanks	'Planes
	No.	D.W.T.	No.	No.	No.
1941					
June	3,633	86,807	—	—	183
July-September	11,274	220,577	—	—	230
October-December	15,018	244,641	—	—	168
Total 7 months	29,925	552,025	—	—	581
1942					
January-March	17,716	446,019	—	471	290
April-June	27,127	296,285	—	1,053	376
July-September	18,920	352,672	—	551	314
October-December	6,669 ¹	267,433	213 ²	273	360
Total 12 months	70,432	1,362,409	213	2,348	1,340

¹ Guns included in October figure (and presumably in figures for previous months).

² November and December only.

Tanks evidently included under the heading of vehicles until January 1942.

(ii)

Shipments of military cargo from North America to the Indian Ocean area (Middle East, Persian Gulf and India) in fulfilment of British programmes

Date	Vehicles	Stores	Guns	Tanks	'Planes
	No.	D.W.T.	No.	No.	No.
1941					
June	13,328	35,707	—	—	120
July-September	18,668	101,477	—	—	190
October-December	16,962	165,514	—	—	504
Total 7 months	48,958	302,698	—	—	814
1942					
January-March	37,386	379,519	—	332	809
April-June	44,117	418,500	—	559	494
July-September	48,644	554,310	—	1,257	505
October-December	38,166 ¹	535,950	1,021 ²	709	359
Total 12 months	168,313	1,888,279	1,021	2,857	2,167

¹ Guns included in October figure (and presumably in figures for previous months).

² November and December only.

Tanks evidently included under the heading of vehicles until January 1942.

(iii)

Shipments of vehicles from United Kingdom to destinations other than the Indian Ocean area in fulfilment of British programmes

Date	Gibraltar	West Africa	South and East Africa	Far East	Iceland	Australia	Grand Total
	No.	No.	No.	No.	No.	No.	No.
1941							
June	39	197	154	223	353	—	966
July-Sept.	92	2,961	131	566	547	33	4,330
Oct.-Dec.	16	926	50	1,561	42	14	2,609
Total 7 months	147	4,084	335	2,350	942	47	7,905
1942							
Jan.-Mar.	118	208	94	2,215	22	805	3,462
April-June	109	709	562	—	43	755	2,178
July-Sept.	198	1,059	263	—	37	1,201	2,758
Oct.-Dec.	86	680	454	—	18	395	1,633
Total 12 months	511	2,656	1,373	2,215	120	3,156	10,031

(iv)

Shipments of vehicles from India to the Far East, Middle East and Persian Gulf in fulfilment of British programmes

Date	Far East	Middle East	Persian Gulf	Grand Total
	No.	No.	No.	No.
1941				
June	51	—	1,062	1,113
July-September	538	471	3,936	4,945
October-December	631	143	4,893	5,667
Total 7 months	1,220	614	9,891	11,725
1942				
January-March	899	141	1,460	—
April-June	—	182	885	—
July-September	—	259	3,477	—
October-December	—	141	1,683	—
Total 12 months	899	723	7,505	—

Note. Vehicles also moved from India to Ceylon, South and East Africa, West Africa and Australia.

Persian Gulf includes vehicles for Russia from January to April 1942.

(v)

Shipments of vehicles from North America to destinations other than the United Kingdom and the Indian Ocean area in fulfilment of British programmes

Date	West Africa	South and East Africa	Far East	Australia	Grand Total
	No.	No.	No.	No.	No.
1941					
June	—	6	21	—	27
July-September	80	58	829	8,499	9,466
October-December	319	2,360	1,118	1,341	5,138
Total 7 months	399	2,424	1,968	9,840	14,631
1942					
January-March	469	38	246	3,414	4,167
April-June	2,083	272	—	5,835	8,190
July-September	2,199	3,059	—	9,576	14,834
October-December	1,588	1,114	—	6,208	8,910
Total 12 months	6,339	4,483	246	25,033	36,101

Source: Tables compiled by the author from data in the Ministry of War Transport

CHAPTER XIV

THE EFFECTS OF THE NORTH AFRICAN CAMPAIGN AND THE BEGINNINGS OF THE WORLD SHIPPING CRISIS

IT WILL no doubt be said', Sir Winston Churchill wrote in his fourth volume, 'that the course of events proved that I took too sanguine a view about the prospects in North-West Africa.'¹ The shipping authorities indeed had occasion to say this very soon after the operation began. In the early stages of the planning it had been assumed that sixty-six ships a month would be needed until the beginning of February 1943, and that after that only the relatively small claims for maintenance would have to be met. Even at the beginning of December it was assumed that the enemy would have been driven out of Tunisia and Tripolitania by the end of the following month.² All these assumptions, however, proved wrong.

As the planning proceeded the number of troops—and therefore of troopships—required for the assault force increased, and the requirements for cargo-ships increased more than proportionately as it emerged that the War Office had miscalculated the number of vehicles, and therefore the amount of shipping-space required on an average per man. Not an average of 66, but an average of 106 ships sailed each month³ from this country to North Africa between October and January. As the enemy opposition proved greater than had been expected, more formations had to be sent out, and the date when the build-up would be complete continually receded. First it had been the beginning, then it was the end of February; at the end of February it was postponed till the middle of March; on the 20th March there was still a parachute division to be shipped. In the end, the forces in North Africa were not put on to a maintenance basis until May, and instead of the thirty ships a month that the requirements of maintenance had been expected to need, ninety-two ships sailed in February, seventy-five in March and thirty-eight in April.⁴

¹ W. S. Churchill, *Second World War*, Vol. IV, p. 590.

² *ibid.*, p. 596.

³ See Appendix LII, p. 323.

⁴ See Appendix LII.

At the same time the calculations made before the event went wrong in a number of other respects. The ships that went out to North Africa in the earlier convoys had to come home in time for the later ones, since no fresh supply with the necessary qualifications existed. In spite of the delays in the North African ports, the task of maintaining a fourteen-day convoy cycle was more or less achieved; but the price was paid in terms of imports to this country. The ships that had gone out with military cargo could not, as had been hoped, bring imports home; they could not load imports in North Africa because the quays and the means of transport behind the quays were cluttered up with military cargo; they could not even load the ballast needed for the voyage home, and had to be provided with it before they started; they had not the time to fetch imports from elsewhere than North Africa if they were to return to this country soon enough to load a fresh consignment of military cargo for the battle areas and catch the appropriate outward-bound convoy.

Again, because more troops and military supplies had to be shipped to North Africa than had been expected, and because, in consequence, more convoys had to sail, fewer escorts than had originally been supposed were available for other services; thus the ships bound for West, South and East Africa, and for Suez, and areas east of Suez, continued for much longer than had been expected to sail unescorted at a great cost in carrying-capacity. For a number of months they followed their devious courses, sailing on occasions on the outward voyage even as far as the coasts of North America, in an endeavour to escape the submarines in the South Atlantic which, in the end, they did not escape.

It is not possible to proceed from this country to the Cape without crossing the South Atlantic at some point. The submarine commanders laid their plans accordingly, and took a heavy toll of the unescorted ships. In general, though no British ships were lost in the outward-bound assault convoys,¹ total losses from all causes in November—well over half a million gross tons—were heavier than in any other month of the war.² Altogether 1.3 million gross tons of British and British-controlled shipping was lost in the last quarter of 1942, that is, roughly 26 per cent. more than in the third, over

¹ One United States ship, the *Thomas C. Stone*, was torpedoed with the loss of nine lives, but was later towed into port. The submarines meanwhile concentrated on the trade convoys. A number of the ships in the assault convoys were, however, sunk in port and on the homeward voyage. See also W. S. Churchill, *Second World War*, Vol. IV, p. 544.

² The actual figure (for dry-cargo ships, 1,600 gross tons and over) is 606,000 gross tons. It includes ships under British control as well as ships flying the British flag. It is no doubt not entirely accurate, since it is for losses notified as having occurred during the month, not for the losses subsequently established as having occurred. The figures for losses thus calculated are, however, the only available figures in the case of British flag and British-controlled ships combined.

33 per cent. more than in the second, and roughly 43 per cent. more than in the first quarter.

All these misfortunes followed hard on each other's heels while victory was being slowly wrung from the Axis forces in North Africa. The inescapable conclusion was that unless the Americans came to the rescue it would be impossible to maintain all the services which it had been proposed to maintain when the planning for the North African campaign started. Either imports into the United Kingdom must be reduced to a larger extent than had been allowed for; or the shipments of military cargo to the Eastern theatres must be cut (with all the results such a course must entail for the economies of the overseas territories for which the British Government was responsible); or operations in North Africa themselves must suffer.

The shipping authorities would have liked to see the first two of these alternatives (for the third was out of the question) reviewed in an orderly manner. The task of reviewing them, however, must raise the now familiar issue, hitherto insoluble, of reconciling the conflicting claims of this country's needs for imports with the needs of the armies in the Middle East, Persian Gulf and India. The issue turned in each case on the size of the reserves; but while the figures of stocks in this country (although in a somewhat imperfect form) were plain for all to see, no one still knew anything with certainty about the size of the armies' reserves, let alone about how the estimates of what was necessary were arrived at.

When, much later, figures of the reserves in the Middle East were produced they revealed an astonishing state of affairs. The Army, it emerged, to take the most extreme case, had stocks of rifles, at the average rate of loss in 1942—'a very heavy year', as the Prime Minister observed, 'comprising the heaviest fighting from May onwards' when 'immense losses of material were . . . experienced by us in our retreat'—sufficient for nearly fourteen years. In the significant case of load-carrying vehicles the stocks were sufficient for nearly four years.¹

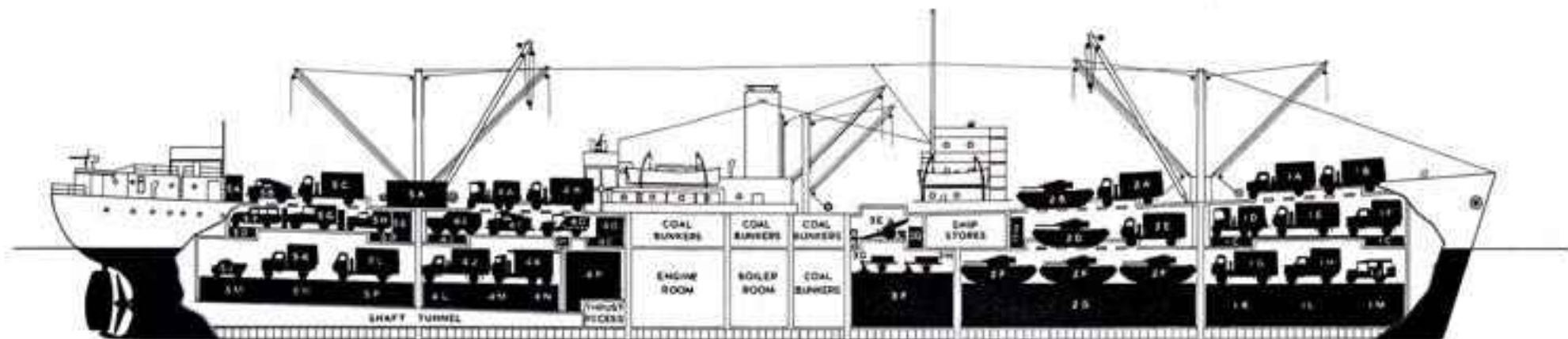
These revelations did not appear until March 1943. Before then—until the crisis in this country made drastic action imperative—the Army remained the judge in its own case. Throughout the spring and summer of 1942, as was shown earlier, its case was not challenged. In October, for the first time, the War Office was instructed to review it. What, the commanders in the Eastern theatres were then asked, was the least with which they could make do?

Answering this question, however, though a familiar exercise for the civil authorities was an unprecedented one for the military, and their response was similar to that which the civil authorities had

¹ See Appendix LIII, p. 324.

A SHIP WITH MILITARY CARGO

(S.S. "FORT HALKETT", 7,150 GROSS TONS, 10,384 DEAD WEIGHT TONS)



	5	4	3	2	1	
ON DECK	1A 100,000 LBS 2 1/2 TON 4 WHEELER S.S. LOCOMOTIVE	4A 1 1/2 TON 4 WHEELER WAGON 4B 2 1/2 TON 4 WHEELER S.S. LOCOMOTIVE		7A 2 1/2 TON 4 WHEELER S.S. LOCOMOTIVE (2 ON WHEEL, 2 ON GEAR) 2 1/2 TON S.S. LOCOMOTIVE	1A 2 1/2 TON 4 WHEELER STORAGE WAGON 2 1/2 TON 4 WHEELER S.S. LOCOMOTIVE	ON DECK
TWEEN DECK	10 1000 TRUCKS 10 1000 TRUCKS 1 1/2 TON 4 WHEELER S.S. LOCOMOTIVE 2 1/2 TON 4 WHEELER S.S. LOCOMOTIVE 2 1/2 TON 4 WHEELER S.S. LOCOMOTIVE	41 1000 TRUCKS 42 1000 TRUCKS 43 1000 TRUCKS 44 1000 TRUCKS 45 1000 TRUCKS 46 1000 TRUCKS 47 1000 TRUCKS 48 1000 TRUCKS 49 1000 TRUCKS 50 1000 TRUCKS 51 1000 TRUCKS 52 1000 TRUCKS 53 1000 TRUCKS 54 1000 TRUCKS 55 1000 TRUCKS 56 1000 TRUCKS 57 1000 TRUCKS 58 1000 TRUCKS 59 1000 TRUCKS 60 1000 TRUCKS 61 1000 TRUCKS 62 1000 TRUCKS 63 1000 TRUCKS 64 1000 TRUCKS 65 1000 TRUCKS 66 1000 TRUCKS 67 1000 TRUCKS 68 1000 TRUCKS 69 1000 TRUCKS 70 1000 TRUCKS 71 1000 TRUCKS 72 1000 TRUCKS 73 1000 TRUCKS 74 1000 TRUCKS 75 1000 TRUCKS 76 1000 TRUCKS 77 1000 TRUCKS 78 1000 TRUCKS 79 1000 TRUCKS 80 1000 TRUCKS 81 1000 TRUCKS 82 1000 TRUCKS 83 1000 TRUCKS 84 1000 TRUCKS 85 1000 TRUCKS 86 1000 TRUCKS 87 1000 TRUCKS 88 1000 TRUCKS 89 1000 TRUCKS 90 1000 TRUCKS 91 1000 TRUCKS 92 1000 TRUCKS 93 1000 TRUCKS 94 1000 TRUCKS 95 1000 TRUCKS 96 1000 TRUCKS 97 1000 TRUCKS 98 1000 TRUCKS 99 1000 TRUCKS 100 1000 TRUCKS	3A 1000 TRUCKS 3B 1000 TRUCKS 3C 1000 TRUCKS 3D 1000 TRUCKS 3E 1000 TRUCKS 3F 1000 TRUCKS 3G 1000 TRUCKS 3H 1000 TRUCKS 3I 1000 TRUCKS 3J 1000 TRUCKS 3K 1000 TRUCKS 3L 1000 TRUCKS 3M 1000 TRUCKS 3N 1000 TRUCKS 3O 1000 TRUCKS 3P 1000 TRUCKS 3Q 1000 TRUCKS 3R 1000 TRUCKS 3S 1000 TRUCKS 3T 1000 TRUCKS 3U 1000 TRUCKS 3V 1000 TRUCKS 3W 1000 TRUCKS 3X 1000 TRUCKS 3Y 1000 TRUCKS 3Z 1000 TRUCKS	2A 1000 TRUCKS 2B 1000 TRUCKS 2C 1000 TRUCKS 2D 1000 TRUCKS 2E 1000 TRUCKS 2F 1000 TRUCKS 2G 1000 TRUCKS 2H 1000 TRUCKS 2I 1000 TRUCKS 2J 1000 TRUCKS 2K 1000 TRUCKS 2L 1000 TRUCKS 2M 1000 TRUCKS 2N 1000 TRUCKS 2O 1000 TRUCKS 2P 1000 TRUCKS 2Q 1000 TRUCKS 2R 1000 TRUCKS 2S 1000 TRUCKS 2T 1000 TRUCKS 2U 1000 TRUCKS 2V 1000 TRUCKS 2W 1000 TRUCKS 2X 1000 TRUCKS 2Y 1000 TRUCKS 2Z 1000 TRUCKS	1C 1000 TRUCKS 1D 1000 TRUCKS 1E 1000 TRUCKS 1F 1000 TRUCKS 1G 1000 TRUCKS 1H 1000 TRUCKS 1I 1000 TRUCKS 1J 1000 TRUCKS 1K 1000 TRUCKS 1L 1000 TRUCKS 1M 1000 TRUCKS 1N 1000 TRUCKS 1O 1000 TRUCKS 1P 1000 TRUCKS 1Q 1000 TRUCKS 1R 1000 TRUCKS 1S 1000 TRUCKS 1T 1000 TRUCKS 1U 1000 TRUCKS 1V 1000 TRUCKS 1W 1000 TRUCKS 1X 1000 TRUCKS 1Y 1000 TRUCKS 1Z 1000 TRUCKS	TWEEN DECK
HOLD	11 1000 TRUCKS 12 1000 TRUCKS 13 1000 TRUCKS 14 1000 TRUCKS 15 1000 TRUCKS 16 1000 TRUCKS 17 1000 TRUCKS 18 1000 TRUCKS 19 1000 TRUCKS 20 1000 TRUCKS 21 1000 TRUCKS 22 1000 TRUCKS 23 1000 TRUCKS 24 1000 TRUCKS 25 1000 TRUCKS 26 1000 TRUCKS 27 1000 TRUCKS 28 1000 TRUCKS 29 1000 TRUCKS 30 1000 TRUCKS 31 1000 TRUCKS 32 1000 TRUCKS 33 1000 TRUCKS 34 1000 TRUCKS 35 1000 TRUCKS 36 1000 TRUCKS 37 1000 TRUCKS 38 1000 TRUCKS 39 1000 TRUCKS 40 1000 TRUCKS 41 1000 TRUCKS 42 1000 TRUCKS 43 1000 TRUCKS 44 1000 TRUCKS 45 1000 TRUCKS 46 1000 TRUCKS 47 1000 TRUCKS 48 1000 TRUCKS 49 1000 TRUCKS 50 1000 TRUCKS 51 1000 TRUCKS 52 1000 TRUCKS 53 1000 TRUCKS 54 1000 TRUCKS 55 1000 TRUCKS 56 1000 TRUCKS 57 1000 TRUCKS 58 1000 TRUCKS 59 1000 TRUCKS 60 1000 TRUCKS 61 1000 TRUCKS 62 1000 TRUCKS 63 1000 TRUCKS 64 1000 TRUCKS 65 1000 TRUCKS 66 1000 TRUCKS 67 1000 TRUCKS 68 1000 TRUCKS 69 1000 TRUCKS 70 1000 TRUCKS 71 1000 TRUCKS 72 1000 TRUCKS 73 1000 TRUCKS 74 1000 TRUCKS 75 1000 TRUCKS 76 1000 TRUCKS 77 1000 TRUCKS 78 1000 TRUCKS 79 1000 TRUCKS 80 1000 TRUCKS 81 1000 TRUCKS 82 1000 TRUCKS 83 1000 TRUCKS 84 1000 TRUCKS 85 1000 TRUCKS 86 1000 TRUCKS 87 1000 TRUCKS 88 1000 TRUCKS 89 1000 TRUCKS 90 1000 TRUCKS 91 1000 TRUCKS 92 1000 TRUCKS 93 1000 TRUCKS 94 1000 TRUCKS 95 1000 TRUCKS 96 1000 TRUCKS 97 1000 TRUCKS 98 1000 TRUCKS 99 1000 TRUCKS 100 1000 TRUCKS	4A 1000 TRUCKS 4B 1000 TRUCKS 4C 1000 TRUCKS 4D 1000 TRUCKS 4E 1000 TRUCKS 4F 1000 TRUCKS 4G 1000 TRUCKS 4H 1000 TRUCKS 4I 1000 TRUCKS 4J 1000 TRUCKS 4K 1000 TRUCKS 4L 1000 TRUCKS 4M 1000 TRUCKS 4N 1000 TRUCKS 4O 1000 TRUCKS 4P 1000 TRUCKS 4Q 1000 TRUCKS 4R 1000 TRUCKS 4S 1000 TRUCKS 4T 1000 TRUCKS 4U 1000 TRUCKS 4V 1000 TRUCKS 4W 1000 TRUCKS 4X 1000 TRUCKS 4Y 1000 TRUCKS 4Z 1000 TRUCKS	3A 1000 TRUCKS 3B 1000 TRUCKS 3C 1000 TRUCKS 3D 1000 TRUCKS 3E 1000 TRUCKS 3F 1000 TRUCKS 3G 1000 TRUCKS 3H 1000 TRUCKS 3I 1000 TRUCKS 3J 1000 TRUCKS 3K 1000 TRUCKS 3L 1000 TRUCKS 3M 1000 TRUCKS 3N 1000 TRUCKS 3O 1000 TRUCKS 3P 1000 TRUCKS 3Q 1000 TRUCKS 3R 1000 TRUCKS 3S 1000 TRUCKS 3T 1000 TRUCKS 3U 1000 TRUCKS 3V 1000 TRUCKS 3W 1000 TRUCKS 3X 1000 TRUCKS 3Y 1000 TRUCKS 3Z 1000 TRUCKS	2A 1000 TRUCKS 2B 1000 TRUCKS 2C 1000 TRUCKS 2D 1000 TRUCKS 2E 1000 TRUCKS 2F 1000 TRUCKS 2G 1000 TRUCKS 2H 1000 TRUCKS 2I 1000 TRUCKS 2J 1000 TRUCKS 2K 1000 TRUCKS 2L 1000 TRUCKS 2M 1000 TRUCKS 2N 1000 TRUCKS 2O 1000 TRUCKS 2P 1000 TRUCKS 2Q 1000 TRUCKS 2R 1000 TRUCKS 2S 1000 TRUCKS 2T 1000 TRUCKS 2U 1000 TRUCKS 2V 1000 TRUCKS 2W 1000 TRUCKS 2X 1000 TRUCKS 2Y 1000 TRUCKS 2Z 1000 TRUCKS	1A 1000 TRUCKS 1B 1000 TRUCKS 1C 1000 TRUCKS 1D 1000 TRUCKS 1E 1000 TRUCKS 1F 1000 TRUCKS 1G 1000 TRUCKS 1H 1000 TRUCKS 1I 1000 TRUCKS 1J 1000 TRUCKS 1K 1000 TRUCKS 1L 1000 TRUCKS 1M 1000 TRUCKS 1N 1000 TRUCKS 1O 1000 TRUCKS 1P 1000 TRUCKS 1Q 1000 TRUCKS 1R 1000 TRUCKS 1S 1000 TRUCKS 1T 1000 TRUCKS 1U 1000 TRUCKS 1V 1000 TRUCKS 1W 1000 TRUCKS 1X 1000 TRUCKS 1Y 1000 TRUCKS 1Z 1000 TRUCKS	HOLD

This diagram shows the cargo that was actually loaded into Fort Halkett at Suez in February 1945, for discharge at Suez in North Africa.
 The storage plan was drawn up in London by Military Cargo Branch of Sea Transport Division of the Ministry of War Transport and a branch of the War Department.
 The work of loading the ship in accordance with the plan was done at Suez under the supervision of Sea Transport Officers and the ship's own Officers.

given in the early days of the war, before the urgent need for retrenchment had been brought home to them. Though far fewer troops were dispatched to the Eastern theatres in the autumn and winter of 1942 than previously, because many W.S. ships had to be taken for the North African campaign, the theatre commanders said, in effect, that the supplies of military cargo which they had been receiving before the North African campaign started had even then been insufficient and could not now be reduced.¹ This judgment was not challenged.

Yet there was, as it turned out, no means of preventing a reduction. With the ships on the Indian Ocean routes taking longer over the round voyage than normally because of the evasive routing, more tonnage was needed than previously to yield the same returns. Yet even before the North African campaign started it had been difficult enough to find sufficient ships of the right type. Now, it was constantly repeated, the task had become impossible. Gradually, therefore, the sailings of cargo-ships to the Indian Ocean area began to diminish, not because it had been decreed that they should, but because the physical possibilities lagged behind the unduly optimistic plans.

The shipping authorities, meanwhile, were instructed to do what they could to make good the deficit, and, in obedience to these instructions, though not without warnings of the consequences, they proceeded, when suitable ships turned up, to reduce still further the services that supplied this country in order to maintain as far as possible the deliveries to the theatres of war in the Middle East, Persian Gulf and India.

Clearly, however, this was a process that could not long continue. Imports in November 1942 were 30 per cent. less than in the previous month; they fell even further in December and January; in January they reached the lowest level of the war; they were then considerably less than half what they had been in January 1941 when the crisis after the fall of France was approaching its peak, and nearly 42 per cent. less than in January 1942 when the disasters that followed Pearl Harbour first began to make themselves felt. Even in the last quarter of 1942, when the worst was yet to come, they represented, allowing for seasonal differences, an annual rate of importation of

¹ The facts in this matter are somewhat hard to disentangle. It appears that in October 1942 the Services were asked to produce a minimum programme for sailings to the Indian Ocean area. This programme, which it was supposed would be in force for four months only, was for 102 sailings a month—as compared, so it was said, with an average of 109 a month between March and August 1942. Meanwhile, however (see Appendix L), sailings in August and September, when ships for the North African campaign were being taken up, reached an average of only eighty-one. From the date (June) when complete figures are first available they had never exceeded ninety-nine in any single month. By December, apparently, the minimum programme had been got down to ninety-two, but even this figure was far in excess of what was possible.

only about 20 million tons, when consumption was expected to be at a rate of about 26 millions at the least.

In the months November to January (and the process indeed went on throughout the whole of the first quarter of 1943) the purchasing departments began to eat into stocks on a considerable scale. By the end of January 1.6 million tons—that is, getting on for half the amount which it had been decided that it would be safe to consume—had been used up.¹ In these three months nearly half the imported raw materials that were consumed came from stocks. At this rate of proceeding, it was clear, there would soon be no stocks left. Yet such possibilities as remained for economising in the use of imported foodstuffs appeared negligible; if the British Government were to restrict substantially the use of imported raw materials war-production must suffer and factories close; if factories closed men would be unemployed; if there were unemployment morale and a proper distribution of labour would be jeopardised; in general, the results, as the Prime Minister put it, would be 'discreditable in the last degree to His Majesty's Government'.

As these alarming facts became increasingly apparent, and as, at the same time, no remedies suggested themselves, the need for more American help became increasingly urgent. Yet no moment could have been less propitious for appeals to the Americans than the winter of 1942 to 1943, for they themselves were in serious difficulties. Not only had the British provided them with the bulk of the troopships they needed to transport their forces from this country to North Africa;² they had often lent them cargo-ships when they were in difficulties, and had not received an equivalent return. Between October 1942 and mid-April 1943 the British lent the Americans a volume of cargo-shipping which, after American loans to Britain have been deducted, amounted to approximately 17 per cent. of the tonnage that sailed on British account.³ In these circumstances it was clear that nothing could be hoped from the Americans unless they were prepared to reduce the amount of their shipping employed in military operations outside Europe.

Stated in general terms the fundamental need was thus to decide between the claims on shipping of the war in Europe and the Far East. Specifically, as things were, what had to be decided was the

¹ See Appendix LIV, p. 325.

² Roughly 150,000 United States troops were sent to North Africa from the United Kingdom between 26th October 1942 and 16th March 1943, of whom 121,988 went in British ships. 3,480 British troops sailed in United States ships between the same dates, net British assistance being thus shipping for 118,508. At the same time the British gave the Americans considerable assistance in the movement of their troops from the United States.

³ 422 ships, of 3.7 million deadweight tons, sailed from this country to North Africa between October 1942 and mid-April 1943 with British cargo; and 81, of 682,500 deadweight tons, with United States cargo; 33 United States ships, of 330,000 deadweight tons, sailed with British cargo.

amount of help to which the British were entitled in order to enable them to maintain health, morale and war-production in the United Kingdom; for as long as the Americans refused to hand them over a block of ships but insisted on giving them ships on a voyage basis; and as long as the Americans also insisted on allocating the ships to particular services, then the British had, it seemed, no alternative except to make their requests on behalf of those services which seemed in the greatest peril.

The British could, it is true, have asked the Americans to increase the help they were providing on the only route—the Indian Ocean route—where hitherto they had provided any; but it was clear that such a request would cause trouble. Already the Americans were saying that if the military cargo-ships made fewer cross voyages the British would not need so many. The British had, they said, too much tonnage in the cross trades. The British did not think so—and indeed the events showed that they were right, but they could not prove the point. They still had not assembled programmes of requirements for most of the countries whom the cross voyages served; the statistical complications were such that they found it extremely difficult even to demonstrate how the ships in the cross trades were employed. Since, therefore, they could not produce clear evidence of need, here was shaky ground on which to attempt a stand.

Again, they might have appealed to the Americans on behalf of their commitments in North Africa where the need was indisputable. But it will be plain that it would have been inexpedient to do this because, apart from any other reason, the power of the Americans at this time to fulfil any promises they might make was at the mercy of so many hazards that to rely on them might jeopardise the course of the operations. To appeal on behalf of the United Kingdom import programme was therefore the only practicable course, exasperating though such appeals were to the United States Services.

The British Shipping Mission in Washington did indeed believe, in the autumn of 1942, that it had found a way out of this dilemma. For some time it had seemed to it that appeals for help on the grounds of particular needs were apt to lead to tedious and fruitless arguments. 'I have been deeply conscious', Sir Arthur Salter wrote on the 12th December 1942, 'that we should be fighting a losing battle if we had to struggle day by day and month by month for extra ships without the aid of any general directive, or understanding, or accepted principle.' The Mission thought it had discovered a principle that would, if agreed to, at one and the same time provide the help the British needed on the routes where they needed it, and avoid provoking the American Service chiefs by appeals specifically on behalf of their imports. This principle was that the Americans

besides the help they were already providing on the Indian Ocean routes (of which the equivalent of a considerable part had been in British service before Pearl Harbour), should replace such net losses as the British had incurred after the date when they themselves had had a net gain. It was assumed that the tonnage that would accrue to Britain if this principle were accepted would be the equivalent of $2\frac{1}{2}$ million deadweight tons in continuous employment throughout 1943; and that it would be used on the North Atlantic where it would bring in approximately 7 million tons of imports—or the difference between the rates of consumption and importation as this appeared at the end of 1942.

The Mission believed that there were good grounds for assuming that this proposal would be accepted. In retrospect, however, it seems doubtful if they were right. For the Americans at this time were so short of ships themselves that, like other people in such circumstances, they could, no doubt, have found objections to surrendering, on any principle, what they could so little afford to spare. In any event, however, before the matter could be put to the test the Minister of Production went to Washington in November 1942 with an alternative proposal. This was, equally, that the United States should provide the equivalent of $2\frac{1}{2}$ million deadweight tons in continuous employment. The gift, however, in this case, was asked for not to replace British net losses but to meet the United Kingdom's need for imports.

The British case, therefore, was squarely stated in terms of the need for imports. But this was a case where people bent on picking holes could always find holes to pick. The British stock figures, as has been shown, were not above reproach; it had often happened in the past, and was to happen again, that the purchasing departments stated as a minimum requirements which, when pushed to it, they could reduce. With the yields of the harvest unpredictable, and with the production programmes constantly changing with the course of the war, it would indeed have been strange if the estimates had turned out to be entirely accurate. Nevertheless the inaccuracies always aroused suspicion.

Yet, in spite of the loopholes, the case for the United Kingdom import programme was immensely strong. The state of affairs which the stock figures revealed though not exactly was substantially true; the charge of extravagance could not seriously be maintained when consumption of imported raw materials, at a time when war-production was reaching its peak, was under half the peace-time average. These facts were accepted by the economists whom the President deputed to examine the matter, and the President professed himself convinced by their arguments. The Minister of Production accordingly brought back with him a letter to the Prime

Minister which the President wrote on the 30th November, and in which he said, 'I . . . want to give you the assurance that from our expanding fleet you may depend on the tonnage necessary to meet your import programme'.

Where, however, was the President to get the tonnage from, since hitherto however much the United States' fleet might expand it had never expanded so quickly as the demands of the United States Services? Here, indeed, was the crux of the matter. It subsequently emerged that the President had made his promise on the 30th November without consulting the United States Services. He had not even informed the War Shipping Administration, who did not hear of the promise, and refused to credit it, until over a month after it had been made. Prudently, no doubt, in these circumstances, the President hedged the promise round with a variety of qualifications.

The British authorities when they came to examine the letter discovered eight separate qualifications almost every one of which might render the promise valueless. This state of affairs, they said, was 'quite intolerable'. Nevertheless, since there was no alternative, it had to be tolerated; it left the British Government with only one practicable possibility—to cut the Indian Ocean sailings.

For a long time, it has been shown, this course had been pressed on the Prime Minister; for a long time the growing suspicions of the size of the armies' reserves, and of the kind of calculations on which the need for them was based, had been leading to the belief that, to quote Lord Cherwell, there could be 'little doubt that the Services can do much more [in the way of economies] if they find the shipping is simply not forthcoming' and that 'the only effective way' of enforcing economies 'is to fix a ceiling for the Eastern theatres . . . and make it perfectly plain to the War Office that this limit can in no circumstances be transgressed'. When the safety of the Middle East was assured after Alamein these arguments, however much the theatre commanders might object to them, became increasingly hard to refute.

By the last week in December the Prime Minister had come to accept them. On the 26th he sent a minute to the Minister of War Transport asking how much imports would be gained if sailings to the Eastern theatres were cut to forty or fifty a month. The answer was that if they were cut to forty (that is, by nearly 60 per cent. on the basis of the programmes and by 50 per cent. on the basis of existing sailings) there would be a gain of 3½ million tons during the first six months of 1943. At the same time the Prime Minister asked the Secretary of State for War to estimate the effects of a cut of this magnitude on the fighting efficiency of the Eastern armies.

There was, however, no time to consider this second question in any detail. Before the military authorities were able to assess how

the cuts would affect them and to make their plans accordingly—in the event it appears to have taken the best part of a month before they became clear on the matter¹—the edict went forth. Sailings to the Indian Ocean area, the Prime Minister decreed, were not to exceed forty a month.²

Account [he wrote] must be taken of the complete change in the Middle East since August. The decisive victories in the Western Desert and the immense come-back of the Russians in South Russia and the Caucasus have removed for an indefinite period the principal dangers which we then faced. Rommel's army has been destroyed and there will soon be no enemy within 1,000 miles of Cairo, except for garrisons in the Balkans and the islands. The need which called the Tenth Army into being for the defence of Persia and Iraq has diminished and taken quite a different form. This army can now be considered available in whole or in part for action in the Eastern Mediterranean or in Turkey. The Eighth Army and the British troops in Egypt have undergone . . . reductions: the Australian Division has gone, leaving its equipment behind; the 44th British Infantry and 8th British Armoured Divisions have been suppressed and their personnel carried to maintain the remaining formations. All stocks and equipment must be examined in the light of these facts.

There are at least three divisions' worth of equipment going spare. 91,000 men have been found from the rear services and from the above divisions to reduce the previous requirements of reinforcements. There are 400,000 tons of ammunition alone in the Middle East and 220,000 in India or on the way there. Only 25,000 tons were fired in the first month of the campaign that began at the Battle of Alamein. Generally speaking, the Eighth, Ninth and Tenth Armies and India must live on their tail, on their stocks and on their share of the forty ships per month.

Meanwhile, however, there was another issue besides the fate of the Eastern armies—an issue which the Prime Minister did not raise but to which the Ministry of War Transport drew his attention. To cut the sailings to the Indian Ocean must mean (unless shipments of military cargo were disproportionately reduced) to cut the amount of civil cargo which the ships also carried; it must mean cutting the cross voyages on which a number of the overseas territories largely depended for both civil and military supplies; it must mean altering to some extent the sources from which the United Kingdom drew its imports; in general it must portend violent changes and perhaps cataclysms in the sea-borne trade of large numbers of countries, not only in the Indian Ocean area, but as far to the west of it as, for

¹ The paper of the earliest date the writer has seen on this matter is that by the Vice-Chief of the Imperial General Staff of 23rd January 1943.

² The decision to cut was apparently taken on the 9th January.

example, Canada—where the returning military cargo-ships helped to sustain the bauxite service from British Guiana—and South America, whither they carried coal from South Africa for the refrigerating plants in the Argentine on which, among other sources, the United Kingdom depended for its meat.

Clearly it was impossible in a matter of days to estimate how the cuts would affect all these complicated issues. This was, indeed, the sort of situation which the shipping authorities had always struggled to avoid by demonstrating whenever the occasion presented itself that in arranging the movements of ships one cannot with impunity ignore the existence of time, space and the inter-dependence of all shipping services. Clearly, however, since the cuts had to be made, the only relevant question was how best to mitigate their ill-effects; and thus, as often before, the shipping authorities found themselves forced to adapt their organisation as best they could to a state of affairs imposed on them by the fortunes of war, and by the decisions of a government concerned principally, in the nature of the case, with the fate of the theatres where operations were in progress and with supplies in this country on which they depended.

In the event the United Kingdom import programme suffered no disasters in the first half of 1943. Stocks, it is true, continued to fall throughout the first quarter, but after that they began to rise.¹ It proved possible, without interfering with war-production or with food supplies, to reduce consumption to a somewhat larger extent than had previously been supposed.² Thanks principally to the cuts in the Indian Ocean sailings, but also to a small increase in the amount of American help³ and to the saving achieved in the crating of vehicles (which, as far as can be judged, comes last in order of magnitude)⁴ imports rose steadily after January.

Nevertheless, these achievements were won at the cost of transferring the crisis to the territories in the Indian Ocean area. Moreover, at the time when the sailings to this area were cut, the problem of providing the necessary ships for military operations in Europe remained to be solved. In January there were barely enough ships to sustain the North African campaign; the convoys to North Russia had had to be suspended—for lack of escort it is true, but if the escorts had been available the merchant ships would not have been,

¹ See Appendix LIV, p. 325.

² Imports during the six months were 11.6 million tons, stocks were reduced by 300,000 tons, therefore net consumption was 11.9 million tons.

³ In the first six months of 1943 United States ships brought 1.63 million tons of imports to the United Kingdom across the North Atlantic, besides providing, as previously, a number of sailings a month to the Indian Ocean area. Before this, except for a more or less negligible number at the end of 1941, no American-controlled ships had sailed to this country with imports.

⁴ See Appendix LV, p. 326.

even though the British commitment was only very small;¹ the victories in North Africa when they had been gained would have to be exploited; American troops and their equipment would have to be brought over in large quantities in 1943 for the final assault on France. Where was the shipping for all these (and various minor) projects to be found, at a time when, for lack of ships, famine and the breakdown of essential services menaced large areas in Asia and Africa?

¹ See Chapter X above.

APPENDIX LII

Sailings of British ships from the United Kingdom to North Africa, August 1942 to June 1943¹

Date	Number of Sailings	G.T.	D.W.T.
1942			
August (Gibraltar)	5	27,936	42,015
September (Gibraltar)	5	12,811	23,047
October	128	573,649	794,952
November	131	693,335	1,057,080
December	73	474,078	707,842
Total 5 months	342	1,781,809	2,624,936
1943			
January	91	534,696	804,342
February	92	505,717	780,845
March	75	435,962	649,187
Total 3 months	258	1,476,375	2,234,374
April	38	206,147	310,950
May	80	409,465	603,528
June	66	287,705	458,499
Total 3 months	184	903,317	1,372,977

Source: Table compiled by the author from data in the Ministry of War Transport

¹ No British ships sailed to North Africa from North America until June 1943. The increase in sailings in May and June is accounted for by the build-up for 'Husky'.

APPENDIX LIII

Note on the military reserves in the Middle East

The figures given on page 313 were provided by Lord Cherwell at the Prime Minister's request and sent by the Prime Minister to General Ismay on 5th March 1943. General Ismay reported to the Prime Minister on 9th May that the Chiefs of Staff did not agree with the figures and had asked Lord Cherwell to re-examine them 'which he has agreed to do'. The writer has not been able to find the results of this second examination.

General Ismay's minute, however, does not suggest (though this may not be a correct impression) that he held the figures to be a gross exaggeration. In the Ministry of War Transport the general impression, among well-informed people, appears to have been that some such state of affairs as the figures suggest undoubtedly existed.

It has been suggested to the writer that in the case of the vehicles the size of the reserves may in part be accounted for by the difficulty of getting spare parts. But it has also been suggested to the writer that, in that case, some of the blame must be attributed to the military authorities who put unnecessary obstacles in the way of standardising types. This is not a matter on which the writer is competent to express an opinion.

APPENDIX LIV

United Kingdom stocks of food (other than on farms) and of imported raw materials

Million tons

Date	Food (other than farm stocks)	Imported raw materials	Total	Excess over distributional minimum of:	
				11·5 ¹	9·8 ¹
1941					
January . . .	4·8	11·55	16·35		
February . . .	4·6	11·4	16·0		
March . . .	4·3	11·4	15·7		
April . . .	4·3	11·4	15·7		
May . . .	4·4	11·3	15·7		
June . . .	4·95	11·4	16·35		
July . . .	5·4	11·5	16·9		
August . . .	5·5	11·5	17·0		
September . . .	5·8	11·7	17·5		
October . . .	5·9	11·9	17·8		
November . . .	5·9	11·8	17·7		
December . . .	6·4	11·8	18·2		
1942					
January . . .	6·4	11·5	17·9	6·4	8·1
February . . .	6·4	11·2	17·6	6·1	7·8
March . . .	6·3	10·9	17·2	5·7	7·4
April . . .	6·2	10·7	16·9	5·4	7·1
May . . .	6·3	10·7	17·0	5·5	7·2
June . . .	6·3	10·6	16·9	5·4	7·1
July . . .	6·0	10·6	16·6	5·1	6·8
August . . .	5·8	10·8	16·6	5·1	6·8
September . . .	6·0	10·95	16·95	5·45	7·15
October . . .	5·9	10·9	16·8	5·3	7·0
November . . .	5·8	10·4	16·2	4·7	6·4
December . . .	5·7	10·1	15·8	4·3	6·0
1943					
January . . .	5·5	9·7	15·2		5·4
February . . .	5·4	9·4	14·8		5·0
March . . .	5·4	9·2	14·6		4·8
April . . .	5·7	9·2	14·9		5·1
May . . .	5·8	9·1	14·9		5·1
June . . .	6·0	9·5	15·5		5·7
July . . .	6·2	9·9	16·1		6·3
August . . .	6·35	10·4	16·75		6·95
September . . .	6·8	10·7	17·5		7·7
October . . .	7·3	10·75	18·05		8·25
November . . .	7·4	10·8	18·2		8·4
December . . .	7·6	10·9	18·5		8·7
1944					
January . . .	7·5	10·8	18·3		8·5
February . . .	7·4	10·8	18·2		8·4
March . . .	7·2	10·5	17·7		7·9
April . . .	7·15	10·4	17·55		7·8
May . . .	7·0	10·3	17·3		7·6
June . . .	7·0	10·1	17·1		7·2

Source: Table compiled by the author from data provided by the Central Statistical Office and the Ministry of War Transport

¹ 9·8 million tons is the figure given in a memorandum by the Ministry of Production, 12th April 1943. The Shipping Committee's first report, 11th June 1942, put the distributional minimum at 11·5 million tons.

APPENDIX LV

Note on the saving in shipping-space that resulted from the crating of vehicles

This was a matter on which the shipping authorities felt very strongly and that was ultimately taken up by Lord Cherwell and the Prime Minister in the middle of 1942. Crating presented a number of difficulties—particularly the erection of assembly plants at the receiving end. It encountered considerable opposition from the military authorities, particularly because of the amount of time that elapsed between the arrival of the crated vehicles and their assembly. Economies from crating were mainly, though by no means entirely, to be hoped for on the United Kingdom-Indian Ocean routes, the vehicles for maintenance requirements that were shipped from North America having been packed in crates (though not in the most economical form of pack) since the middle of 1941.

It appears unfortunately impossible to estimate how large were the gains—measured in terms of imports into the United Kingdom—for which crating was responsible. The people principally concerned were convinced that they were very large. All the same it needs, perhaps, to be pointed out that they were not as large as the uninitiated might deduce from the frequently popularised fact that, on an average, a ship could take only 150 vehicles on wheels but 1,000 in the most economical form of pack. The saving was never nearly as large as these figures suggest, because as long as vehicles were shipped on wheels there was room, when as many as possible had been got into a ship, for a great deal of other cargo. Beyond a certain point, however, it was not possible to increase the number of vehicles, by crating them, which a ship could hold without excluding cargo which nevertheless had to be carried.

How much imports were gained by crating vehicles cannot therefore be assessed without a knowledge (*a*) of the military cargo which had to be moved at the same time and (*b*) of the civil imports for the overseas territories, that could not be dispensed with, that went in the ships carrying military cargo to the Indian Ocean area. These facts are not now ascertainable.

Various statements were made in the course of the war about the extent of the saving. Some of them, it is clear, are misleading. The Prime Minister, for example, wrote on the 10th July 1942:

I see that a beginning has been made in boxing vehicles shipped abroad from this country and that during May 1,126— . . . out of 7,517 were boxed. When we remember that boxing 15 per cent. of the vehicles has in one month saved about 80,000 tons of imports—as much as the quantity saved monthly by raising the milling ratio, clothes and soap rationing, and abolishing the basic petrol, all put together—the importance of carrying this policy to the limit of refinement both here and in America is evident.¹

¹ W. S. Churchill, *Second World War*, Vol. IV, pp. 779-780.

A similar, though less categorical statement has since been quoted in an authoritative work.¹ The impression conveyed is that the crating of 1,126 vehicles, or 15 per cent. of the total, in one month, would yield 80,000 tons of imports in that month. The inference therefore is that if all the vehicles moving from this country had been crated, the gain in imports would have been over half a million tons a month. This is clearly absurd. What the Prime Minister may well have meant (for he rephrased the statement on another occasion²) is that the gain from crating 1,126 vehicles moving out of this country would have been 80,000 more tons of imports in a year (i.e. from three to four ships would have been released and would, in twelve months, have brought in this amount if employed on the North Atlantic).

Because of the difficulties of making this kind of estimate the writer is unwilling to trust any estimates not made by the statisticians or by the Military Cargo Branch of the Ministry of War Transport, but these authorities, to the best of the writer's knowledge, never made any such estimates except on specific occasions in relation to a few ships only.

The following estimates were made by the Prime Minister's statistical office. This office had access to the Ministry of War Transport's data but did not always use them in a way which the Ministry would have held legitimate.

. . . in the last nine months [i.e. from June 1942 to March 1943] something like a million tons of imports have been saved by boxing these vehicles [i.e. vehicles shipped from United Kingdom].

Despite the need to send large numbers of unboxed vehicles to North Africa just when our boxing programme was getting going, we have already saved something like seventy-five ship journeys (most of them on the long seven-eight months' voyage round the Cape) by boxing vehicles shipped from the United Kingdom.

It seems likely that if these estimates err it is by exaggerating rather than reducing the gains achieved from crating. If this is so then it follows that this expedient, valuable and necessary though it was, did not yield nearly such large results as were produced by cutting the Indian Ocean sailings. The Shipping Committee had indeed supposed this would be so when it first began to press economies on the Services in the summer of 1942.

¹ W. K. Hancock and M. M. Gowing, *op. cit.*, p. 418.

² 'Calculations show that boxing these 1,126 vehicles in May has increased our potential imports by about 80,000 tons.'

CHAPTER XV

'THE SHORTAGE OF SHIPPING ... A STRANGLEHOLD ON ALL OFFENSIVE OPERATIONS'

IN JANUARY 1943 the President and the Prime Minister met in North Africa to determine the future strategy of the United Nations. The decision to cut the sailings to the Indian Ocean area had been taken a few days before the Prime Minister set out, and for some months at least it was clear that this country would not starve nor her factories have to close down. The results in the overseas territories, however, still remained to be seen, and as for military operations: since wherever the attack it would have to be by the invasion of enemy territory from the sea, the provision of the appropriate numbers and types of merchant ships, as well as of landing-craft and escort vessels, was a prerequisite of success.

Yet when a number of years later the Prime Minister came to write his account of what happened at the conference¹ the problems raised by the shipping shortage had left, it seems, no clear impression on his mind. As he remembered them they were evidently not fundamental problems that determined the course of strategy and that had, in consequence, to be considered in detail before the final decisions were made. His recollection of the proceedings in this respect is confirmed by the conference papers themselves.

The great questions at issue at Casablanca were how much, in general, of the United Nations' resources should be devoted to the war in the East and how much to the war in the West, and where the next attack in the West should come. In the main the British won their case on all these essential matters. Operations in Europe were to have pride of place; the next operation—'Husky'—was to be against Sicily 'with the favourable July moon as the target date'; meanwhile, in case German resistance in the West should show signs of collapsing before the invasion of France could be launched in full strength in 1944, the American forces, which (by what was known as the 'Bolero' movement) had begun to come over to the United Kingdom in 1942, but of which a large part had been sent to North

¹ The words are those of Sir Alan Brooke, Chief of the Imperial General Staff, Casablanca, 14th January 1943.

² See W. S. Churchill, *Second World War*, Vol. IV, Ch. XXXVIII.

Africa,¹ were to be built up in numbers sufficient to allow for 384,000 men to be available and equipped by the 15th August.² At the same time that these plans were approved for operations in the West, the Americans pledged themselves to large new undertakings against Japan, and the British pledged themselves provisionally to 'Anakim'—the opening of the Burma road—on which the Americans set great store. But 'Anakim' appeared to be jeopardised by a number of shortages—by the lack of naval forces and landing-craft, as well as of the merchant ships that were needed to carry supplies to the Army in India, and whose sailings had just been cut. What the British could ultimately do for 'Anakim' was left undecided. Nevertheless, they pledged themselves to do their best. 'Anakim', the Chief of the Imperial General Staff said on the 18th January, 'is now definitely on the books, is being planned, and should be put to the front. With . . . assistance from the United States Navy in providing landing-craft, the operation would be feasible.' The final report of the Combined Chiefs of Staff, approved by the President and the Prime Minister, set the 15th November 1943 'as the provisional date for the "Anakim" assault', but with the proviso that 'it will be necessary to decide in July 1943 whether to undertake or to postpone the operation'.

Where was the shipping for all these projects to come from, seeing that before the conference met the Americans had professed themselves too short of ships to guarantee the amount of imports that the British would need to meet their minimum requirements in 1943; seeing that the British had already had to curtail some of their existing commitments in order to meet the remaining and more urgent ones, and seeing that in the future they would have to reduce military sailings still further, perhaps in the West as well as to the East, unless they received much more American help than they had had hitherto?

The conference provided no comprehensive answer to this question, yet any answer short of a comprehensive one was valueless. Attempts were, it is true, made at Casablanca to estimate how much shipping would be needed and how much would be available to meet some of the military requirements, but in calculations of this sort there is no half-way house. If all demands are not considered simultaneously, and in relation to total supply, the answers provided to individual questions can have very little chance of being even approximately right.

¹ 250,860 United States troops had been brought to this country in 1942. Of these 129,000 had been re-embarked for North Africa. Of the 250,860 brought over here, 153,379 came in British troopships. British cargo-ships also supplied thirty-four sailings on United States account.

² It was proposed to bring over 983,000 in the course of 1943, of whom approximately 250,000 were to come in the first six months.

The American Service Chiefs did not realise this, in the circumstances understandably enough. The problem was one familiar in the abstract to economists and in practice to people experienced in managing merchant ships, but generals and admirals come into neither category, and the American Chiefs of Staff had arrived at Casablanca without civilian counsel; for at this time, and indeed for some time afterwards, they refused to sit down at the same table with representatives of the War Shipping Administration. Military matters, they conceived, were one thing, and civilian matters another. The shipping required for military purposes was, in their opinion, the affair of the Chiefs of Staff; the shipping for civilian purposes the affair of the War Shipping Administration.

The British knew better than this. Why did they not enlighten the Americans? It might be supposed that at Casablanca, where to start with the two sides were at variance on the vital issue of where the next blow was to be struck, the moment was not propitious for admonitions on the proper methods of controlling ships. This may have been true, but it is clearly not the whole explanation. The British could not assess with any hope of accuracy the amount of shipping they could provide for military operations until the United Kingdom's import programme was assured; and although it may have seemed inexpedient—indeed, in the absence of representatives of the War Shipping Administration impossible—to raise this question, the question was nevertheless fundamental. Everything turned on it. Until it was settled the British could not answer any questions on shipping matters with confidence and could not answer most questions at all. Equally, the amount of shipping the Americans could provide for military operations would to a large extent be determined by the amount they lent to Britain. How can it have seemed possible to plan for the dispositions of armies, all of which had to move in ships, when this crucial matter of British imports was still undecided?

As it appeared later to Lord Leathers, the answer was to be found in the 'deeply-rooted belief' of the British Chiefs of Staff that 'the Minister of War Transport is not concerned with military questions'.¹ The Chiefs of Staff, in other words, though they did not demand control over the merchant ships they used, and though they were aware of their limitations when it came to obviously technical matters, shared in other respects the views of their American counterparts. The Minister of War Transport was summoned to the conference, but as a technical adviser only, not as a principal who must have his say in formulating the plans.

For a variety of reasons the shipping situation was, in consequence,

¹ See Lord Leathers' letter in Appendix LVI, p. 336.

misunderstood or not understood at all at Casablanca. The extraordinary complexity of shipping problems; the mystery which shrouded the activities of the Ministry of War Transport (and in fact concealed a certain amount of confusion there) yet, nevertheless, the success with which hitherto the Ministry had always produced the ships needed for military operations like a conjuror drawing rabbits from a hat; the knowledge that American ships were about to materialise in enormous numbers; the belief that Britain would acquire a large share of them—some such considerations as these, apparently, induced in the British framers of strategy at Casablanca a mood in which ignorance and hopefulness about shipping matters combined to suggest that somehow or other, as in the past, shipping problems would sort themselves out.

As a result, most of the British commitments were entered into without calculating the cost in ships. Only in the case of the invasion of Sicily (which it was proposed to mount mainly from North Africa and the Middle East, and which it was therefore presumed must require less shipping than was currently being used for the North African campaign) was it said that the shipping could be found; various minor commitments were also accepted—notably to provide help to Turkey, and to Russia if the supply of escorts would permit, without the shipping implications having even been considered. Yet at this time the stringency was so acute that the Ministry of War Transport was haggling over single ships on the routes to India and the Middle East, and in the cross trades. 'Anakim', as envisaged at the conference, would have cost the United Kingdom about half a million tons of imports in the crucial first six months of 1943,¹ but the Minister of War Transport was not told of the decision to mount it until nearly two months after the end of the conference. At the conference itself the Chiefs of Staff merely noted that it was impossible to say whether or not it would prove possible to provide the necessary ships.

In the past, this way of proceeding had appeared to work. It had permitted the big movements to the Far East and Middle East in 1942, and even the North African campaign itself. There had, however, never been a situation in the past comparable with that

¹ Assuming:

- (i) Thirty-five sailings a month (starting in February), as stated in Lord Leathers' letter.
- (ii) that the Mediterranean was closed (as it was until the late summer of 1943) and that the round-voyage time was therefore on an average seven and a half months;
- (iii) an average ship of 5,000 gross tons or 8,000 deadweight tons;
- (iv) 2.25 round voyages on the North Atlantic in six months and roughly 1 ton of cargo per 1 gross ton per round voyage;
- (v) that the cargo was available in North America (as it evidently was until the late summer).

which faced the Casablanca Conference. It was not only that the British merchant fleet had never before been so small nor the British schemes so grandiose; the hand-to-mouth methods, inevitable when it was a question of avoiding defeat or of seizing the first opportunity to turn the tide, were no longer appropriate now that the tide had turned. If victory were to be won as quickly as possible and at the minimum cost; if indeed it were not to be jeopardised again by disaster, this could only be on the basis of long-term plans, of which shipping, in the nature of the case, had to form the foundation. This fact became plain almost immediately after the Casablanca Conference had broken up.

Even before the Prime Minister left North Africa he had been besieged by telegrams about the dangers to the United Kingdom import programme that must shortly materialise if American help did not increase, and about the impossibility of making plans if the British Government could not know with reasonable certainty how much help it might expect. By the middle of February it had emerged that against a minimum requirement of 1·8 million tons of imports in American ships in the first half of 1943, the Americans could at the most provide about 1·5 million (besides the customary help in the Indian Ocean area), and after that the future was uncertain. 'It is impossible', the Prime Minister was told, 'to plan ahead as long as we are at the mercy of the day-to-day moods' of the Americans 'and can only extract last-minute promises, wrapped up in provisos, covering only a few months at a time.' But on the fulfilment of this country's minimum needs turned, among other things, the build-up in India, and as United States help was postponed so, *pro tanto*, the prospects of 'Anakim' diminished.

At the same time the British had discovered (and this was the invariable experience in such cases) that they had under-estimated the shipping required for their share of the assault phase of the invasion of Sicily, and that in consequence the early maintenance requirements were larger than they could meet. Since the invasion of Sicily had first claim on such of their resources as could be allocated to military needs, it followed that none of the other commitments that they had entered into at Casablanca could be met at all.

The Americans were in an even more humiliating position. Except in the case of the invasion of Sicily where the miscalculations as they emerged in March were only very small—indeed no larger, it seems, than must have been likely in any circumstances—when the British Chiefs of Staff had made assertions about shipping matters at Casablanca they had made them in general terms, knowing, presumably, that they could not safely enter into details. The American Service Chiefs suffered from no such inhibitions. Their

assertions, particularly in one important respect, were specific, and if they had ever had any basis in fact they quickly lost it as demands for ships for a variety of projects, sponsored by a variety of important authorities, poured in upon and could not be refused by the War Shipping Administration. At Casablanca the Americans had calculated that they had sufficient troopships to bring to this country 103,000 troops in the first quarter of 1943. In the event they could not find a single troopship for the purpose. They had proposed—since it had seemed that the shortage of cargo-ships would make it impossible to transport the equipment for a larger number—to bring over 80,000 troops; but only 15,000 came, all of them in British ships.

The British had said at Casablanca that they could, if required, provide troopship-capacity for 'Bolero' sufficient for 40,000 men, and so, it appeared, they could have done if there had been enough escorts. But the 'Bolero' calculations, among their other defects, had failed to take the escort position into account, although the Admiralty had set out the deficiencies clearly enough. Supposing there had been enough escorts more troops could have been brought over, though still not enough to fulfil the programme. Would there then have been enough cargo-shipping? As things were it seems that there could not have been. Supposing there had been enough escorts, and troopships and cargo-ships, could the ports in the United Kingdom have stood the strain of such large movements both inwards and outwards? Again, as things were, the answer is evidently no. In the winter of 1940/41, when London and the other east coast ports had been largely closed to ocean-going merchant ships, it had seemed that port capacity would set the limit to the ability of the British to feed and arm themselves. Since then imports had declined, but this relief to the ports had been more than counterbalanced by the large flow of supplies outwards demanded by the North African campaign. The port and transit organisation had achieved miracles since the days when France collapsed, but they were typically British miracles, brought about by co-ordinating the activities of innumerable different authorities. If the 'Bolero' movement were to be fitted into this scheme of things the Americans, whose genius lay in creating resources rather than in using them economically, would also have to practise the arts of economy. As the British knew, they are not easy arts to learn. 'We do not think', Port and Transit Control cabled to Washington at the time of the Casablanca Conference, 'that fifty per cent., repeat fifty per cent., of [the] indicated programme can be handled, though failure would be an unnecessary calamity, due only to inefficiency.'

In these circumstances, where disposing of one shortage only revealed or created another, and where ships were being demanded for projects which must, it seems, have foundered even if the ships

had been provided,¹ it would be profitless, even if it were practicable, to consider what were the physical limits to the strategy agreed on at Casablanca. For the successful launching of the great armadas that fired the imagination of the world was a task of such immense range and complexity, in which all the various operations were so closely interlocked, that unless all the relevant facts were considered together the plans must inevitably come to grief. The supply of ships and escorts had to be adjusted one to another and to the capacity of the ports—in the base in this country from which all operations in Europe were mounted wholly or in part, as well as in the battle areas. Before the numbers of ships that could be made available could be ascertained, the deployment of the whole of the merchant fleets under the control of the British and American Governments had to be known, together with all the civil and military demands on them.

Here were tasks—so formidable that the imagination finds it hard even to envisage them—that were too ambitious for the planners at Casablanca who were still novices, and had yet to learn in detail the nature of the problems with which sea-power confronts its possessors. By March it had emerged that there was nothing to be done but to start the planning over again in order to discover how far shipping would suffice to meet the demands of strategy, and in what ways strategy must be altered if it would not.

As this fact became plain the mood of optimism in which the Casablanca Conference had disbanded gave way to disillusion and bewilderment.² Apart from the heads of the two Governments, the harmony of whose relations appears to have remained undisturbed, each side became increasingly exasperated and began to accuse the other of incompetence or deliberate intent to deceive. As the head of the Joint Staff Mission in America, Sir John Dill, put it: 'We *think* the United States misuse ships in the Pacific but we do not *know*. They *think* that we may be using too many ships for British imports, but they do not *know*. In fact, neither side feels that either side is being quite open and there is distrust. I feel sure that we shall both have to put *all* our shipping cards on the table very soon . . .'.³

To this the Minister of War Transport on the other side of the Atlantic retorted—and the farther away one was from the scene of confusion in America the more irritating it appeared—that he could not understand 'how the Americans can "think" we may be using

¹ 'Anakim' as will be discussed later, is one case in point, and 'Bolero' another. Apart from the difficulties over 'Bolero' mentioned above it appears that even the troops themselves might not have been available. See Eisenhower, *Crusade in Europe*, pp. 76-80.

² Sir John Dill wrote on the 18th March: '[The] Edge is wearing off the general satisfaction which was experienced at the success of the Casablanca Conference. Main reason is the great disappointment felt at the actual shipping situation compared with what the Combined Chiefs of Staff were led to believe. . . .'

too many ships for British imports. Our figures have been examined again and again by the Americans and by the Combined authorities . . .'. As to the need to put all the shipping cards on the table: the Americans would never be able to do this—or to operate their fleet efficiently—'until their shipping is subject to a unified control'. We, on the other hand, had 'repeatedly' displayed our cards. 'We have no cards up our sleeve.'

To the members of the British Merchant Shipping Mission in America, however, who were struggling at this time to answer hitherto unanswerable questions about the employment of the tonnage in the cross-trades and about the innumerable demands of the overseas territories, the situation cannot have appeared altogether in this light. It was true that the British were not deliberately concealing anything; it was true that they were not creating a false impression—indeed, it was a false impression that they needed to dispel—but there were still things about their own needs that they did not know, and about the employment of their own ships that required accurate tabulation and could not in the meanwhile be explained.

Admittedly, on the American side there were many more and much larger unknowns, but it is difficult for the suppliant to press for information from the prospective giver when he, the suppliant, gives the impression that he is concealing things; nor does it help him to say that nothing material is concealed, for this is the point to be proved.

The essential task, therefore, in the spring of 1943 was to remove the causes of ignorance about the employment of and the demands on the United Nations' shipping. Until this was done it was clear that shipping must continue to appear a stranglehold on all military operations, not necessarily because the supply of ships was insufficient to meet the urgent strategic needs, but because it was impossible to say how many ships could be supplied for military purposes; because insufficient attempts had been made to determine military priorities, and because, as is common knowledge, the demands of armies, as of other human institutions and individuals, are apt to be insatiable unless disciplined by awareness of the available resources.

APPENDIX LVI

(i)

Personal letter from Lord Leathers to the Chiefs of Staff

1st March 1943.

I have been writing down some notes which I had intended to use during tomorrow's talk with you and your colleagues and I think it would be helpful to you, and would save our time at the meeting, if I let you have these notes now in the form of a letter so that you may see the way my mind is working.

SUMMARY OF THE SHIPPING SITUATION

The shipping shortage is not only inhibiting the deployment of our forces, but if we cannot very substantially increase our imports above the level achieved in the last three months, we shall be unable to maintain our war production on anything like the present scale.

'Bolero' movement has stood still or gone backward since last autumn; the Americans have been unable to provide the shipping which they indicated as available at the Anfa Conference.¹ In preparation for 'Anakim' we are asked to increase our monthly sailings to the Indian Ocean area from 40 to 75 ships per month; we cannot do this without creating most serious deficiencies elsewhere (see the P.M.'s note D.32/3 of 28.2.43). 'Torch', which we had hoped would by now have been on a maintenance basis, is still being built up; the commitment has not only become more onerous but more prolonged. Demands for 'Husky' are increasing. In addition, the Americans wish to send 25 ships with material for French troops in North Africa; these ships could only be found at the expense of other programmes and the cost seems certain to be borne by us directly or indirectly. General Somervell² is talking of a large increase in shipments to Russia via the Persian Gulf in three months' time and Admiral King³ is maintaining that no reduction can be contemplated in his Pacific commitments.

We are wasting effort in considering movements quite beyond the scale of our resources for many months to come. Something must be sacrificed, presumably either 'Anakim' or 'Bolero'; in choosing between these I would point out that for every man we can move to the Indian Ocean we can move 2½ across the North Atlantic. We must cut the coat of our strategy according to the cloth of our shipping, and it is essential that the shipping authorities on both sides of the Atlantic should be taken fully into confidence.

I recognise that the organisation of my Department will need strengthening at different levels to fit it for the necessary close and continuous liaison

¹ The alternative name for the Casablanca War Conference.

² Commanding General, Services of Supply, United States Army.

³ Commander-in-Chief, United States Navy.

with the Chiefs of Staff organisation. On the other hand, we have often not been consulted or not consulted in time.

I have felt for a long time that use of shipping for operational purposes has not been sufficiently co-ordinated with the other Services. In the past this deficiency has been irksome and wasteful, but in present circumstances I feel it of such major importance that I am bound to raise the issue at the highest level.

The situation which now faces us is entirely different; the volume of shipping engaged on military operations has increased and is increasing, and we are now more seriously short of shipping than at any previous stage of the war. Until recently our only fighting front was in the Middle East and supplies were unloaded in ports reasonably remote from the battle line. We are now embarking on a series of amphibious operations in which merchant ships, carrying troops and equipment actually sail into the battle line. Nor is this a temporary phase. Even after Germany is conquered there are bound to be innumerable combined operations throughout the Pacific and Indian Oceans. Merchant shipping has become a fourth service so far as major combined operations are concerned. This development makes it imperative that I and my Department should be more closely integrated with the joint military planning organisation than has been the case in the past.

I propose, therefore, so to strengthen the Sea Transport division at Headquarters that it shall be fully adapted for liaison with the Joint Planning organisation at every stage. In addition, I propose to despatch to Washington two or three capable and experienced officers to form a Sea Transport Section of the British Merchant Shipping Mission. The need for such a section has become very apparent recently. I consider that its existence would be of the utmost helpfulness to the Joint Staff Mission. I hope furthermore that the presence of this working unit would, by the example of its success, help to bring the American Service Departments and the War Shipping Administration into closer and more fruitful relationship. We must all have been struck by the fact that there was no representative of the W.S.A. at Casablanca, and in consequence we had to depend on figures provided by General Somervell, figures, which experience has already shown, had no basis in fact.

For the success of my proposal it is essential that representatives of the Ministry of War Transport should be members of each section of the Joint Planning Staff (Strategic Planning Section, Future Operational Planning Section and Executive Planning Section*). They would thus be able to make their proper contribution to the planning.

The Chiefs of Staff would, I hope, invite me to their meetings whenever questions of shipping policy were to come under consideration.

The C.O.S. Committee is aware of the relation of shipping to strategy, but I am not convinced that all those engaged in planning are equally alive to the needs of the situation. It is not only that we have not always been consulted, more often it is that we have been consulted too late. Plans are laid and decisions taken and we are asked to provide shipping to

* It is only fair to say that our co-operation with E.P.S. has been regular and fruitful.

fit in with these plans. This we have usually been able to do but at an unnecessary sacrifice. If we had been present in the earlier stages of the planning, before the outlines crystallised or any decisions were taken, we would, I am certain, often have been able to suggest modifications, which while acceptable from the military angle, would still have effected a real economy of shipping. If we know in time there are all sorts of ways in which we can minimise the strain on our carrying capacity. We can work suitable ships into position. We can make modifications in the time-tables for meeting other demands. We can arrange to carry deck cargo on spar deck tankers (which we specially provided in anticipation of needs—an example of what can be done by informed foresight). We can carry useful flattening or cut out ballast. There are innumerable permutations and commutations which would in their cumulative effect achieve a substantial saving in shipping.

My representative at each level of the Planning Staff would be a member of that body and not, as at the moment (except in the case of J.A.P.C.) only a liaison officer. He would receive all papers where shipping movements may be concerned, for he will be better able to decide whether a shipping issue arises than any other member.

I hope that you will see no difficulty in accepting the foregoing proposals which I am sure present the best remedy for the insufficiently close contact between the military and shipping authorities.

It may sketch in some of the background if I give two examples which have come up in the last few days.

There is first of all the fall down of 'Bolero', due to lack of co-ordination among the Americans.

There is next our obvious inability to meet the demands of 'Anakim' as now formulated. I and some of my staff were constantly available for consultations at Casablanca, yet at no stage were we consulted regarding 'Anakim'. I was even unaware of the conclusions of the Conference on this point until this last weekend. I was not put on the circulation list for the record of the Conference. Although my Private Secretary wrote a month ago requesting a copy of this document, I have only just received it. This shows how deeply rooted is the belief that the Minister of War Transport is not concerned with military questions. As its name implies, my Ministry was set up to meet the needs of war, and for that purpose the Prime Minister asked me to attend the Anfa Conference.

I am afraid this is a long letter, but I hope it will be useful to you to have it in advance of the meeting.

I am sending copies to C.N.S. and C.A.S. and also to Lord Cherwell.

(ii)

Reply by Sir Alan Brooke, Chief of the Imperial General Staff, to Lord Leathers, 4th March 1943

The Chiefs of Staff asked me to thank you for your letter of 1st March and to reply to it on their behalf.

We much regret that you should think that there is any deep-rooted 'belief that the Minister of War Transport is not concerned with military questions'. We were always under the impression that your selected representative had very close relations with the Joint Planning Staff, and we have regularly availed ourselves of the help of Sir Cyril Hurcomb¹ and Mr Hynard.²

As for 'Anakim', there were no detailed discussions on our shipping requirements at the Casablanca Conference, but it was taken for granted that General Somervell had discussed the matter with you in general terms. That he himself is under the impression that he did so is shown by the following extract from the minutes of the second meeting of the Conference recently held in India:

General Somervell said that he had talked at Casablanca to the Minister of War Transport, and that he had received the impression that all the shipping that was needed for the requirements in J.P.S. Paper No. 52 would be provided. He had then been told that recent cuts in shipping to India were temporary and would not last for more than three months. When needs were clearly stated, he felt that shipping would be allocated.

We agree with you, however, that no good purpose would be served by dwelling on the past. Our one concern is to ensure that in future there is the very closest collaboration between your Ministry and our organisation. We therefore welcome the proposals contained in your letter under reply that representatives of the Ministry of War Transport should be members of each Section of the Joint Planning Staff; and we propose that these representatives should have precisely the same status as the representative of the Chief of Combined Operations.

We suggest that the details of the above arrangements would best be settled between Joint Planning Staff themselves and your representatives. If you would let me have your nominations for each of the Sections concerned, I will arrange to put them in touch.

Finally, we warmly welcome your proposal that you yourself should come to our meetings whenever questions of shipping policy are under consideration. We are only too glad to avail ourselves of your kind offer to help us.

¹ Director-General of the Ministry of War Transport.

² Director of Sea Transport.

CHAPTER XVI

THE SHORTAGE OF SHIPPING A STRANGLEHOLD ON ESSENTIAL CIVILIAN SERVICES

(March 1943)

SINCE THE SHIPS to be fitted out for the North African campaign had begun to be collected, in the early autumn of 1942, the allocation of tonnage among the various services had increasingly been determined by the need to avert crises. But no sooner was a crisis averted in one place than another sprang up somewhere else. First, the United Kingdom import programme had been cut for the benefit of the armies in North Africa; then (by force of circumstances and not by design) the Indian Ocean programmes had followed suit; then the United Kingdom import programme had been cut still further to maintain the Indian Ocean programmes; then the Indian Ocean programmes were cut to maintain the United Kingdom import programme. Now, in March 1943, it appeared that the result of these manœuvres was victory within sight in North Africa but too few ships to exploit it; a flow of imports into this country sufficient to meet minimum needs until the end of June but not thereafter, and the cost of the North African victories still to be met by the military commanders and civil populations in the Indian Ocean area. In the Indian Ocean area the burden of paying for victory, shifted from place to place to ease the weight, finally came to rest.

The sailings to the Indian Ocean, which had been gradually diminishing since August 1942, were, it was shown, cut by 50 per cent. in January 1943; but since ships outward bound from this country and North America for the Red Sea and east of Suez took over three months to reach their destinations, the 50 per cent. cut could not be felt before April or May at the earliest. By April or May, however, there would be only forty ships¹ a month, compared with an average of over one hundred in the first half of 1942, of roughly eighty-seven in the third quarter, and of roughly eighty in

¹ In the event—for reasons that will be explained later—the edict restricting sailings to forty ships a month was only enforced in the first quarter of 1943 and not enforced completely even then. The reader should be reminded that the ships were allocated primarily to carry military cargo. Where the cuts were enforced they were, as far as the writer is aware, applied to civil and military cargo in equal proportions.

the last. In consequence, the civil populations in the Indian Ocean area must find themselves caught as it were between the two jaws of a pincer moving inexorably towards each other; for the Indian Ocean territories would not only get less imports from this country and North America; they would also get less from within the area itself since, other things being equal, the smaller the number of ships sailing to the Indian Ocean the fewer available within it to move supplies on the cross routes. But the closing jaws of the pincer did not move at equal rates; ships were already being taken out of the cross trades before the cuts in the sailings from North America and this country could be felt.¹ Even, therefore, the three to four months' grace, which the authorities concerned must otherwise have had in which to consider how best to soften the blow, was in part denied them; and for the rest: forewarned is not necessarily forearmed; there can be times when warnings of impending misfortunes do not help because there is nothing to be done. As the lean days drew nearer this is increasingly how the situation appeared in the Indian Ocean territories where in many cases it had seemed, even before the cuts were imposed, that no more economies were possible; and when the cuts came into force, and the process of robbing Peter to pay Paul, which had hitherto been proceeding on a world scale, was confined to the Indian Ocean area, the hope of dealing with the difficulties one by one diminished until the moment came when all the possible difficulties occurred at more or less the same time.

As after Alamein the Eighth Army pursued the enemy across the desert towards Tripoli its needs for coal increased. The demands of the Egyptian State Railways, which had been 14,000 tons a month in December 1942, had reached 30,000 by the spring of 1943; a fleet of coal-ships, based on Alexandria and requiring bunkers there, was needed to shuttle along the coast to supply the army as it advanced. At the same time the Royal Navy's demands for bunker coal in the Eastern Mediterranean also rose. Meanwhile, because of casualties and other reasons, the number of old creaks, unsuitable for service elsewhere, that maintained, with occasional help from the military cargo-ships, the shuttle services from India and South Africa, reached its lowest point. The Commanders-in-Chief in the Middle East and East Africa said that their stocks were dangerously

¹ I.e. the military cargo-ships, that had sailed from the United Kingdom and North America in the months September to November, and that reached the Indian Ocean in the months January to March, were allowed to spend less time there because of the need to get them back quickly. The fact that the territories in the Indian Ocean area were supplied from two sources, though to a considerable extent in the same ships, meant that help could reach them, or cuts be applied, in less than the 3½ months taken (while the Mediterranean was closed) over the voyage from the United Kingdom and North America; for the length of time spent by the military cargo-ships in the Indian Ocean could be lessened or increased. This fact worked to the disadvantage of the Indian Ocean territories in the spring of 1943, but to their advantage afterwards.

low; the Admiralty said that its stocks at Aden were exhausted and that those at Alexandria, Port Said, Suez and elsewhere would barely last a month. This was the position in March, and it was bound shortly to grow worse when the cuts came into force and there were fewer or no military cargo-ships to lend a hand.

An expedient, adopted in the early spring of 1943, was to send in ballast to South Africa the coal-ships that had to return there for fresh supplies. This saved the time that would otherwise have been spent in loading and discharging cargo. But the unshipped cargo was phosphates on which, among other things, depended the future ability of the Union to feed herself and the East African territories to which she exported in peace.

To the appeals for more coal were thus added South Africa's appeals for more phosphates, and to these in turn similar appeals from Australia; but the diminishing number of ships that could be spared for the long haul across the Indian Ocean were needed for other purposes.¹ Future had to be sacrificed to present needs. But were there going to be enough ships even to meet these?

In East Africa and in all the territories in the Indian Ocean area except in the Middle East, where the danger had been brought under control, the threat of food shortages had been growing throughout 1942 at a pace that could not be measured. The flow of supplies from overseas had been disorganised, diminished, and cut off altogether in the case of Burma rice, which normally fed many millions in India, Ceylon and East Africa. At the same time, demand was rising as wages rose in the towns among under-nourished native labour and because armies had to be fed on rations larger than the peasants who composed them enjoyed in peace; inflation with its accompaniments of hoarding and speculation made equitable distribution increasingly difficult; smaller supplies than normal left the farms because uncertainty, lack of consumer goods and rising prices induced the cultivators to keep a larger proportion than normal of their crops; the needs for imports therefore increased, often without warning, not only, and sometimes not even primarily, because the physical quantities of available food diminished, but because of the incalculable effects of the stresses and strains of war on economies that were largely uncontrolled. Thus, in the spring of 1943, as the number of ships in the Indian Ocean diminished—and with the principal granaries of the free world from 3,000 to 10,000 miles away from the areas in need of food—the menace of famine suddenly loomed up like a hydra-headed monster with a hundred clamouring mouths.

In Ceylon, in February, labourers were leaving the rubber estates in search of food; in East Africa, the East African Governors'

¹ Principally, one must assume, to carry grain to the Persian Gulf, Ceylon, etc.

Conference reported that without more imports there would be a 'general breakdown' in work in Kilindini, the main repair base of the Eastern fleet, and in agricultural production; at the same time in Southern Rhodesia, Mauritius and Seychelles, famine, though not an immediate threat, might, it seemed, easily become so.

The demands of Africa and the Indian Ocean islands were only small, apart from those of Ceylon which were substantial;¹ but Ceylon was now far removed from the battle areas. In the Middle East, a projected base for Mediterranean operations, where the Middle East Supply Centre had, it maintained, reached the limit of its possible economies in the second half of 1942, disaster could not be risked, and yet seemed increasingly likely after the Indian Ocean sailings were cut. In the last half of 1942, when the sailings were already declining, an average of just over 22,000 tons of grain a month had been shipped to the Red Sea area.² This was only about half what was asked for and represented, so it was said, the minimum tolerable even in a state of siege that might be expected to last only for a short time. But in the first quarter of 1943 the shipments—that would arrive in the second and third quarters—fell to an average of 13,000 tons.

Similar misfortunes were in store for the Persian Gulf territories, but even in February famine was in sight there. 'I must', the Minister of State in the Middle East cabled to Lord Leathers in February, 'ask again for your assistance with shipments of cereals to the Persian Gulf. . . . I am certain that we are heading for a most serious and possibly dangerous situation. Tehran will not receive sufficient bread in February and March unless we can move a ship (about 6,000 tons) of wheat from the Red Sea to the Persian Gulf immediately. . . . But even so we shall be living from hand to mouth'. With the lean days ahead, however, one ship-load—nearly half the monthly average they were expecting shortly to receive—could not easily be spared by the Red Sea territories.

Added to all this were the demands of Turkey, the result of political decisions made at Casablanca and earlier without the shipping authorities having been consulted. Turkey was to be helped, not only with war material but also with grain. In December she had been promised 150,000 tons, of which she was to fetch 50,000 from the Middle East in her own ships. The highest importance was attached to this commitment. 'Turkey', the Foreign Secretary wrote on the 9th March 1943, 'is going to be a vital factor in the future strategy of the war. . . . She must therefore be treated on a different

¹ Ceylon's demands in the spring of 1943 were for 45,000 tons of wheat and flour a month from Australia, besides as much rice as could be obtained from Egypt and India.

² Appendix LVII, p. 354, shows the total amount of grain shipped to all the Middle East territories. The above figures for shipments to the Red Sea area have been taken from the same source.

level [from the other Middle East territories] and exceptionally favourable treatment accorded her.' For military reasons, moreover, her needs had to be met in the space of a few months. For Turkey's benefit, therefore, the other Middle East territories were to be asked to make further sacrifices.

Thus, from all over the Indian Ocean area the demands for food poured in, the threats of famine mounted, and one suppliant could only be helped at the expense of another. By the beginning of March there was still—or seemed to be—a little latitude. The Red Sea territories were not for the moment so hardly pressed as the Persian Gulf territories; they were in the event able to deliver some grain; nearly all the ships available for the long voyage from Australia were sent to the Persian Gulf; India, it appeared, could spare some rice to tide over, temporarily, the worst difficulties in Ceylon and East Africa; but how was this all to end?

It is true that the volume of tonnage required to meet the demands for grain that have so far been considered can only have amounted to the equivalent of about a quarter of a million gross tons in continuous employment—if, indeed, it amounted to as much¹—at a time when the total dry-cargo tonnage of the free world amounted to nearly 27 million gross tons, and the tonnage available for carrying military and civil supplies to nearly 16 million gross tons. But in the Indian Ocean it did not for the moment help matters that the deficiencies were only small. A quarter of a million gross tons of shipping was not in sight, or anything approaching it. The arguments in many cases were turning on single ships. In these circumstances, it could not be long before the precarious arrangements must collapse by which the British were attempting to discharge their responsibilities to the Middle East and Commonwealth territories, and before famine from a threat must become a reality.

In March it appeared that the Turkish demands were about to precipitate this catastrophe. The 50,000 tons of wheat the Turks had been promised from the Middle East could only come from Egypt, the largest producer in the area. But the Egyptians declined to deliver it—indeed, they declined to deliver any further exports of cereals at all—unless they were supplied with nitrate fertiliser. Throughout the second half of 1942 they had been sent on an average over 19,000 tons of nitrates a month;² in January 1943, to make room for grain, less than half this quantity was shipped, and in February none was shipped at all, on the principle, applied in the case of phosphates for South Africa and the Southern Dominions, that in times of emergency the future must take its chance. The Egyptian Government, however, autonomous, and in a strong

¹ See Appendix LVIII, p. 355.

² See Appendix LVII, p. 354.

bargaining position, did not see the matter in this light. The future that concerned it was that of its own people's food; the present needs were those of others. In consequence, it turned a deaf ear to all appeals and persisted with its threats; no nitrates, no grain exports.

Before the trouble over the nitrates arose, however, Egypt had promised to export 150,000 tons of cereals immediately, and the Middle East Supply Centre had hopes of another 100,000 later in the year. Some of these exports were for other territories in the Middle East: the rest, consisting for the greater part of rice, was for elsewhere in the Indian Ocean area, and particularly for Ceylon, whose inhabitants would not eat any other kind of grain and who, if India stopped exporting, as seemed likely at the time, could get rice from nowhere else.¹ Yet if nitrates were to be shipped to the Middle East this could only be at the expense of grain which was needed equally urgently.

There appeared only two possible ways out of this dilemma: either the Americans must provide help—but in March they were in the worst phase of their shipping crisis—or the shipments of military cargo to the Eastern theatres must be still further reduced. But when this second proposition was put to the War Cabinet it was not well received. The Casablanca Conference had recommended greatly increased military shipments to the Indian Ocean area. Ever since the cuts had been imposed in January, indeed ever since the Indian Ocean sailings had begun to decline in the previous August, the theatre commanders concerned had never ceased complaining that their quotas were wholly inadequate.

Thus it seemed in March not only that the Anglo-American machinery of shipping control was not working, but that its separate parts in London and Washington were breaking down. Strategy was in the melting-pot for lack of ships; American shipping policy was in a state of confusion; no British programme was safe and many were immediately menaced by disaster. Indeed, the magnitude of the possible disasters was larger than anyone knew; for besides the needs which have so far been considered and the size of which was approximately known, there was another need, potentially much larger than any of the others and indeed than all of them combined, asserted by some, denied by others, suspected by many but incapable of measurement by anyone.

In the summer of 1943 there were severe food shortages in Southern India and famine broke out in Bengal. As nearly as could be estimated, 1½ million people died from starvation or from the diseases

¹ At the end of 1942 the Secretary of State for the Colonies reported to the War Cabinet that 'other cereals such as wheat can only be substituted to a limited extent because the rice-eating population of Ceylon will not accept them in place of rice'. Later, evidently (to judge by the imports of wheat), the Cingalese were prevailed upon to change their habits.

that resulted from it. The Commission appointed in 1944 to examine into the causes of the disaster concluded, looking back, that September 1942 was, as it said, 'a critical month';¹ then (before the failure of the winter crops) was the most propitious moment for introducing the measures of control that in the event were not successfully introduced until after the famine had started. By December 1942, in the Commission's words, 'the crisis . . . which culminated in the famine' had begun; it had become acute by the following March, at the same time as all the other crises.²

There was thus a curious correspondence between the significant dates in the progress towards calamity in India and the dates of the principal decisions that determined the pattern of shipping employment. In September 1942 the planning for the North African campaign had just started; in December it was realised that the sailings of the military cargo-ships to the Indian Ocean must be cut; in March 1943 it was decided that the strategy agreed on at Casablanca must be re-examined in the light of the shipping shortage—a task, as will be shown presently, that had been completed by the end of the following May.

All these decisions were taken without reference to and with no clear knowledge of the state of affairs in India, although if there were to be a famine there the burden of relieving it (always supposing it were a burden that could in fact be shouldered)³ must fall on the cross-trade services between India and Australia, at this time the nearest source of substantial grain supplies. But *was* there a serious danger of famine? This was a question which different people answered differently, and which even the same people answered differently at different times.

The population of India in the famine year amounted to nearly 400 million souls and was growing at the rate of about 5 millions a year;⁴ the Famine Commission estimated that the total production of grain in India was on an average about 50 million tons a year,⁵ a figure that is, it would seem, if anything an under-estimate;⁶ India's normal net imports of grain in peace were on an average between 1 and 2 million tons a year,⁷ virtually all of which was

¹ Famine Inquiry Commission, *Report on Bengal*, p. 82, published by the Government of India.

² *Ibid.*, p. 76.

³ See p. 352 below.

⁴ See Famine Inquiry Commission, *Final Report*, p. 74.

⁵ *Ibid.*, p. 51.

⁶ See White Paper on the Food Situation in India, 1943, p. 21. Summary of the Food-grains Policy Committee's report. 'Indian Agricultural statistics are notoriously defective and they probably understate India's total production.' In January 1943 the Secretary of State for India put total Indian grain production at an average of about 70 million tons annually.

⁷ Famine Inquiry Commission, *Report on Bengal*, p. 216, Appendix III.

accounted for by rice from Burma. When Burma fell her rice was no longer available, but the imports thus lost represented a minute proportion of India's total grain supplies; the amount of Burmese rice that was normally imported into Bengal represented an even smaller proportion of the total available supplies there, for Bengal is a large rice-producing area though a considerable importer of wheat.¹ The war placed on India the burden of maintaining an army of over two million men who had to be fed on rations larger than they consumed in peace, yet the net increase in consumption can, in relation to total supply and total demand, only have been very small. In the winter of 1942 there was a series of calamities—the flooding of the Indus destroyed the rice crop in Sind; the failure of the south-west monsoon destroyed crops in Bombay, Madras and part of Hyderabad; in October a cyclone struck Bengal and the standing rice, then in flower, was extensively damaged. Yet disasters of this sort were not uncommon. The failure of the winter rice crop in Bengal resulted in a deficiency in rice supplies that was only, the Famine Inquiry Commission estimated (on the basis of the 1928-42 average and taking all possible considerations into account),² about 700,000 tons³—the equivalent of the amount normally consumed in three weeks or of 6 per cent. of total requirements. Meanwhile, elsewhere there were bumper crops. On balance, the Famine Inquiry Commission concluded, rice production reached a normal level in 1942-43, and wheat production a level higher than normal.⁴

If the position were stated thus, in terms of total supplies in relation to total demand—and for some time this is how it appeared both in the United Kingdom and in India itself—there could seem no reason why India should not manage without imports. Yet, as the event proved, the assumption was quite untrue. It was the ability to import rice when the harvest failed that in normal times made the

¹ Famine Inquiry Commission, *Final Report*, p. 8. This put average annual rice imports into Bengal (apart from unrecorded imports by boat from Assam and Burma which, from the context, appear not to have been considered large) as 123,000 tons. Production of rice in Bengal was about 8 million tons (see p. 51). Imports of wheat in the five years before the famine were on an average 250,000 tons.

² I.e. principally the carry-over from the previous year.

³ See Famine Inquiry Commission, *Report on Bengal*, Appendix II. This (see Statement III) put the 1928-42 average for 'adjusted current supply' of rice in Bengal at 9.6 million tons and the amount available in 1943 at 8.9 million. Elsewhere (see p. 212) this Appendix put the deficit in 1943 at three weeks' requirements, and since the population of Bengal was about 60 millions, and average consumption per head per day somewhere in the neighbourhood of 1 lb. (see p. 204, 17 oz. for all cereals) it will be seen that these two figures are evidently in agreement.

⁴ See *Report of the Foodgrains Policy Committee*, p. iii, published by the Government of India. 'It is not in a deterioration of productive conditions—taking India as a whole—that the key to the present difficulties is to be found.' See also Famine Inquiry Commission, *Final Report*, p. 54. 'There was a bumper crop of wheat in 1942-43 and a normal crop of rice. On the other hand 1943-44 was marked by a bumper rice crop and a sub-normal crop of wheat.'

peculiar Bengal and Behar rice economy workable. If rice could not be imported this economy must be in perpetual danger of collapse unless a very large number of conditions were fulfilled which, in the event, had only been fulfilled to a limited extent even by the end of the war and after the spur to effort which the famine provided. For if there were to be no imports from overseas, and if, nevertheless, the threat of famine were to be removed, the supplies of grain would have to be distributed reasonably equitably between and within the various provinces with all that this involved in the way of controls; and arrangements would have to be made to meet or to circumvent¹ the need to persuade a proportion of the rice-eating population to eat wheat, when, if left to its own devices, it would sooner starve to death.²

In the vast sub-continent of India, larger and more populous than Europe, it would have been foolish to imagine that it could ever have been possible to introduce controls on the model of those applied in the United Kingdom where the physical and psychological conditions were entirely different. The comparison was more nearly with the Middle East. Here the Middle East Supply Centre, according to the figures kept by the Ministry of War Transport, reduced imports of grain by nearly 60 per cent. in the second year of its existence,³ even allowing for the relatively large shipments which, as will appear presently, it received in the second quarter of 1943 as a result of its appeals for help. Admittedly, it was possible to do this without disaster in part because the harvests did not fail again; principally, however, the achievement was due to all the measures the Centre had adopted to pool resources, to increase production, to maintain confidence and to prevent hoarding.

By the time the crisis started in the Indian Ocean, the Middle East Supply Centre was a well-established, successful institution. Though it never found it wholly possible to treat its area as a single

¹ It has been suggested to the writer that it would have been possible to have fed the mixed population of Calcutta on wheat, and thus to have prevented the Calcutta market, which dominated Bengal, from sucking supplies from the countryside leaving the non-producers there to starve. It therefore seems that, given the necessary controls, the famine could have been averted by wheat imports. By a curious coincidence the amount of the deficit in the province (700,000 tons) was almost exactly the amount needed to feed Calcutta (a city of 4 millions consuming on an average 1 lb. per head per day) for a year.

² The Permanent Secretary of the Ministry of Food, who went to India at the end of 1944, said that:

... In Bengal and in the States of Cochin and Travancore, there are people who, if they cannot get rice, will not eat other foodgrains even if this means that they will starve and die. There is, unfortunately, no easy cure for this lamentable situation. The Food Department is endeavouring to persuade rice-eaters to widen their diets to include other foodgrains but, although in some areas a measure of success has been obtained, the process is bound to be a slow one and is not likely to have any appreciable effect in, say 1945.⁴

³ See Appendix LVII, p. 354.

economic unit, nevertheless it made great strides in this direction, and flattered itself that in so doing it had brought many benefits to the people of the Middle East that they had never known before. It took particular pride in the investigations into agricultural matters that it set on foot and in the campaign it organised against the locusts, which showed no regard for man-made frontiers and could only be dealt with by a supra-national authority scientifically equipped and advised. In general, as its London admirers put it: 'For the first time in its immensely long history the Middle East feels the drive of a single, constructive policy, providing the essentials of life and the benefits of honest, impartial, efficient economic administration, gradually infiltrating through traditional channels'.¹ Admittedly, this is not how the matter appeared to many of the inhabitants of the Middle East; admittedly, by British standards the controls had many defects—they could not prevent the making of large fortunes on the one hand, and an undue degree of hardship for some classes on the other; nevertheless, the fact remained that the Middle East Supply Centre averted all the major calamities, and particularly the danger of starvation, that war is apt to bring to primitive communities.

This feat was achieved by introducing the economic techniques of the West and adapting them to local conditions. In particular, a beginning had been made at the end of 1941, and thereafter the work proceeded apace, to buy centrally all the most urgently needed commodities that were consumed in large quantities and that, to a greater or less extent, were required from overseas—wheat, sugar, tea, coffee, fish, meat, tinned milk, oils and fats, and a variety of other things. The purchases were made by the United Kingdom Commercial Corporation—a body created by the Treasury at the beginning of the war to buy and sell on Government account in the Balkans and Turkey—and the Middle East Supply Centre distributed the supplies to the various territories in accordance with what it judged to be their needs. The United Kingdom Commercial Corporation also accumulated stocks of these commodities for distribution by the Centre. The principal means, however, by which the Centre ensured that the people were fed were the grain collection schemes. The officials of the governments in the various territories, aided by experts supplied by the Centre, went into the villages, estimated the likely yields of the crops, fixed the prices and bought the surplus not needed for local consumption, thereby eliminating private trade or drastically restricting it. With the aid of various forms of rationing and other devices, and of the increased acreage under grain (although the shortage of fertilisers considerably reduced the yield per acre in Egypt) it thus became possible largely to feed

¹ See P.E.P. Broadsheet, No. 195, 27th October 1942.

the towns and the deficit areas from local resources, leaving only a small residue to be imported from overseas.

Moreover, all these arrangements made this residue predictable. It could always be estimated reasonably accurately for several months ahead, and since the centrally controlled stocks, though only very small, were nevertheless enough, as things turned out, to meet any sudden emergencies, the demands could be spread out more or less evenly over the months whatever the local vicissitudes.

In the opinion of the Ministry of War Transport this was the proper way of proceeding, and indeed, in general, the Middle East Supply Centre inspired confidence. Its relations with the Army, with which it was in constant contact (for the military and the civil imports came in the same ships and used the same roads and railways so that the two sets of programmes had to be compiled jointly) were always particularly happy: the British and American officials in the Centre in general worked harmoniously together (in spite of occasional disputes between London and Washington over the economic policy to be pursued in the Middle East) and this had the great advantage that in moments of crisis, as in the spring of 1943, the United States Government, like the British, was disposed to listen to appeals for help. The domestic controls in the Middle East, and the harmony between all the authorities there, that made adequate programmes possible; the efficiency of the programming that made for easy relations with the Ministry of War Transport; the links with Washington—these, it seemed, were the conditions that ensured safety for the overseas territories, as far as safety is possible in war. They were all, however, conditions that did not exist in India.

The task of distributing supplies there equitably in the midst of all the disruptive effects of war and inflation presented many administrative difficulties absent in the Middle East, where the population was much smaller, and where because the problems appeared more urgent (for the area was a vital theatre of war), the Middle East Supply Centre was allowed to acquire a relatively much larger staff of British officials than was available in India. Enterprising, unconventional, and speaking the language of business men and economists, of whom there were many among its members, the Centre thought naturally in terms of commercial management. This was, however, an unaccustomed way of thinking among the civil authorities in India who, in any case, were perpetually handicapped by lack of enough able and experienced officials. The Middle East Supply Centre had been set up specifically to correlate the economic activities of the territories within its purview; in India, on the other hand, the Central Government had no effective control over the provinces; the provinces—and even the surplus areas in

deficit provinces—took a narrowly selfish point of view; the provincial governments, and particularly in Bengal, were often distracted by their preoccupation with local politics, and were therefore irresolute and incapable of taking the necessary action. The grain collection schemes which were the *sine qua non* of the successful shipping arrangements in the Middle East were always held to be impracticable in India, both in the surplus and in the deficit areas. They had been introduced in the Middle East by agreement with the governments concerned and were devised in a way that made them seem acceptable to the peasants. In India it appeared that they could only be introduced by force, if at all, and that to use force was out of the question.

The task of feeding India proved, in consequence, too difficult to discharge. The country became a prey to fear of scarcity—to the 'rumours . . . allegations and wild exaggerations'¹ that afflict illiterate peoples in troubled times. And fear, in the Famine Commission's words, was accompanied by greed.² All who could buy, bought; there was hoarding and speculation; fewer supplies of hard grains moved to the deficit from the surplus areas than normally, so that the pressure on the inadequate supplies of rice was increased, and prices rose to fantastic heights.

The crisis was thus essentially a psychological crisis—the result of a belief in impending disasters that, but for the belief, might have been averted. As long as the belief lasted it frustrated the attempts to introduce the measures of control that were needed—particularly government purchase of supplies, arrangements for the distribution of surpluses, and rationing in the towns. For as it was held impracticable to requisition the grain from the cultivators, the authorities in the deficit areas could not, in the circumstances, buy in sufficient quantities, and, as a result, there could be no effective plans for distribution between provinces and no rationing. Such controls as ultimately proved practicable could not be introduced on a significant scale until after the famine had started and until large quantities of imports were arriving or were known to be on the way.

There had been a somewhat similar state of affairs in the Middle East in 1941, before the Middle East Supply Centre had properly begun its work. The only remedy then had been large imports of wheat. But shipping was more plentiful in 1941 than in 1942 and the first half of 1943, and whereas the Middle East Supply Centre, even in the early days, could make a plausible case for its needs, the Government of India could not. In the autumn of 1942 (already nine to twelve months since Pearl Harbour) when the first rumblings of approaching disaster were heard, it alternated between moods of

¹ *Report of the Foodgrains Policy Committee, 1943, p. 31.*

² See Famine Inquiry Commission, *Report on Bengal, p. 89.*

panic and undue optimism. At one time it seemed that famine was imminent; at another that things had often been as bad or worse before without catastrophe—for there had been no famine in India since the end of the nineteenth century—and that the problem was manageable even with no imports at all. At one moment, in consequence, the Government would put in a huge demand for imported wheat, at the next it would withdraw it. The demands when they came were often out of all reason. In December 1942, for example, the Secretary of State for India stated that 'it is beyond question that the need is most urgent' for 600,000 tons of wheat to be delivered before the end of the following April. Yet 600,000 tons in four months would have involved the continuous employment of about a quarter of a million gross tons of deep-sea shipping if the wheat had come from Australia,¹ but there cannot at the time have been much more than this amount of deep-sea tonnage in all the Indian Ocean cross trades.² On the other hand, if the wheat had come from North America, three times as much shipping would have been needed.³ A demand of this size must have occasioned great difficulty even in peace, and although, shortly afterwards, the demand was moderated, and it was said that 200,000 tons before the end of April would do if the rest came later, it was, at such a moment, out of the question to deliver even this much. In the event, India received 58,000 tons in the spring of 1943. This was slightly less than the amount delivered in the same period to the Middle East, although the controls there were far more efficient and, for this and other reasons, the demands of war on the various economies far less disrupting, and although the area, if considered as a whole, did not rely in peace, as India did, on imported supplies. By the end of the spring, however, the panic in India had again abated. In these circumstances it was difficult to take the Indian demands seriously, and the decisions on strategy that shaped the course of the war, and therefore the employment of shipping, were made regardless of them.

Yet if what was known later had been known in the summer of 1942; if, that is, it had been realised that India could not survive without imports, then (unless American shipping policy had been different) the British Government, when it decided on the North African campaign, must have been forced to contemplate a risk much larger than the risk that, in its ignorance, it believed it faced. It is true that even if the size of the risk had been realised, and if ships had

¹ Assuming 6,000 tons of wheat to 5,000 gross tons and a round-voyage time of two months, the figure usually allowed.

² A note by the head of Statistics and Intelligence Division to the Director-General said that in April 1943 tonnage in the cross trades had reached the 'bedrock minimum' of 2.15 million deadweight tons, of which a high proportion would not have been capable of the voyage to Australia.

³ Assuming a round-voyage time of six months.

been provided in the summer of 1942 to carry large quantities of wheat, the calamity might still have been inevitable. Indeed, given the existing lack of controls and the difficulties in the way of substituting wheat for rice, it seems that it must have been. At what precise moment and in what precise circumstances measures could have been taken to avert it are questions that cannot be answered with certainty. What seems clear, however, is that, as things were, with barely enough tonnage in the cross trades leaving the Indian demands out of account, the North African campaign doomed almost irrevocably to starvation any deficit area in India where the harvest failed.

But since, as things were, the state of affairs in India defied analysis, the British Government was spared a harsh dilemma. As a result, however, while in the spring of 1943 the British and the Americans were making their plans for victory, and as, in the summer, their troops advanced through Sicily into Italy, the people of Bengal drifted towards a disaster much smaller, it is true, than many previously known in India, or than those that came later, but nevertheless the only one of its kind that occurred during the war in all the vast areas of the Middle East and the British Commonwealth in the Eastern Hemisphere.

APPENDIX LVII

Loadings¹ of civil supplies for the Middle East (including supplies for the British forces)

(a) from North America and the United Kingdom, (b) from other sources, 1941-45

Tons weight

Date	GRAIN		NITRATES ²		SUGAR		OTHER CARGO		TOTAL		Grand Total
	From North America and U.K.	From other sources	From North America and U.K.	From other sources	From North America and U.K.	From other sources	From North America and U.K.	From other sources	From North America and U.K.	From other sources	
1941 3rd quarter	4,001	22,034	21,595	62,379	1,306	54,081	98,232	74,860	125,134	213,354	338,488
4th quarter	110,692	181,887	20,513	22,001	—	22,016	122,611	83,135	253,816	309,039	562,855
Total 2nd half 1941 . . .	114,693	203,921	42,108	84,380	1,306	76,097	220,843	157,995	378,950	522,393	901,343
1942 1st quarter	214,086	147,731	21,240	—	—	22,796	142,017	166,639	377,343	337,166	714,509
2nd quarter	89,999	46,042	53,671	5,500	792	65,623	191,928	155,620	336,390	272,785	609,175
3rd quarter	47,676	34,048	32,069	17,655	100	42,444	98,573	105,159	178,418	199,306	377,724
4th quarter	62,374	30,655	67,041	—	4,984	18,478	82,902	88,532	217,301	137,665	354,966
Total calendar year 1942 .	414,135	258,476	174,021	23,155	5,876	149,341	515,420	515,950	1,109,452	946,922	2,056,374
1943 1st quarter	50,919	16,699	11,914	—	610	16,871	16,088	42,311	79,531	75,881	155,412
2nd quarter	75,162	35,764	29,598	—	—	34,433	16,372	32,617	121,132	102,814	223,946
3rd quarter	70,024	24,540	45,328	—	—	75,885	32,900	31,669	148,252	132,094	280,346
4th quarter	82,835	30,102	57,278	—	—	42,413	35,239	36,961	175,352	109,476	284,828
Total calendar year 1943 .	278,940	107,105	144,118	—	610	169,602	100,599	143,558	524,267	420,265	944,532
1944 1st quarter	81,818	84,235	53,686	—	—	27,892	29,857	48,679	165,361	160,806	326,167
2nd quarter	95,052	36,611	118,575	—	—	54,835	26,268	71,058	239,895	162,504	402,399
3rd quarter	— 219,334 —	—	75,426	—	—	74,946	— 107,907 —	—	— 477,613 —	—	477,613
4th quarter	— 116,500 —	—	61,813	—	—	77,514	— 97,196 —	—	— 353,023 —	—	353,023
Total calendar year 1944 .	320,930	312,620	309,500	—	—	235,187	125,271	255,694	755,701	803,501	1,559,202
1945 1st quarter	65,792	36,727	61,389	—	—	52,434	43,979	41,998	171,160	131,159	302,319
2nd quarter	149,610	17,499	49,648	—	—	40,130	56,734	38,671	255,992	96,300	352,292
Total 1st half 1945	215,402	54,226	111,037	—	—	92,564	100,713	80,669	427,152	227,459	654,611

Source: Table compiled by the author from data in the Ministry of War Transport

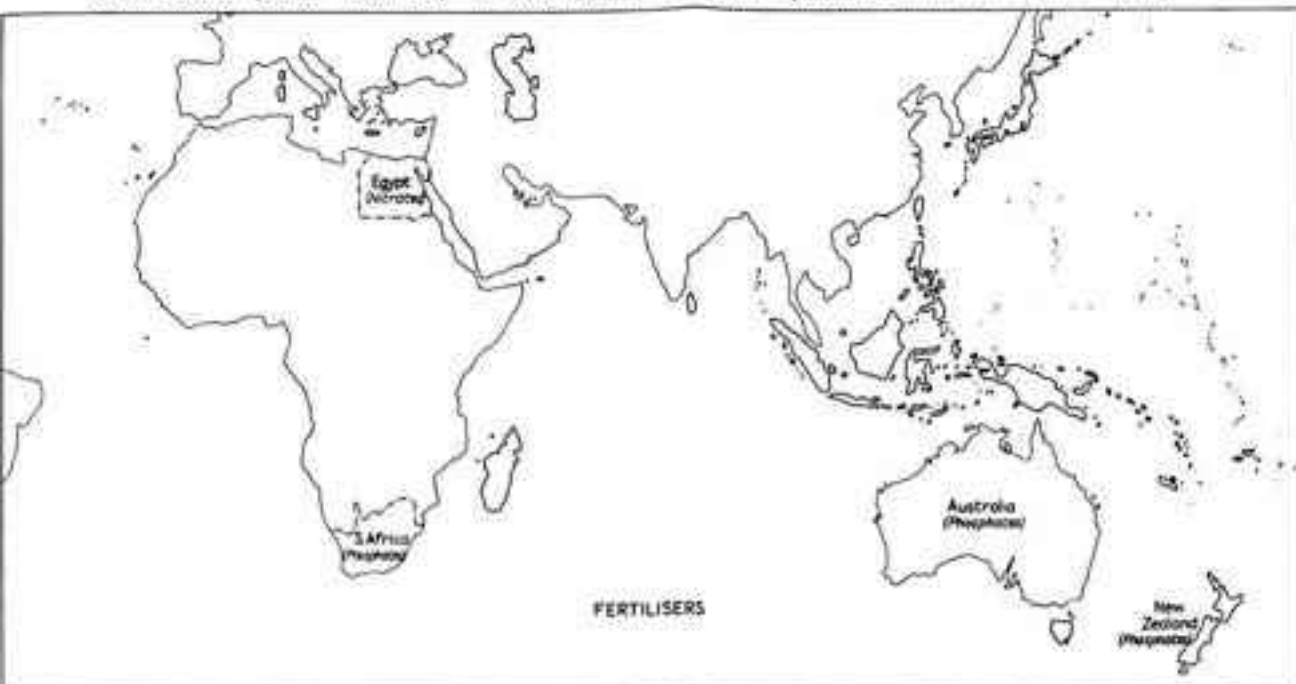
¹ After December 1943 figures are for arrivals, not loadings.

It must be noted that in 1944 the shipments shown above made provision for stocks on a considerable scale for the use of the liberated territories. At their peak, in the summer of 1944, these stocks appear to have amounted to between 300,000 and 400,000 tons.

The reason for dividing the sources of supply into the categories used above is to show the proportion of the total supplies that was carried in the military cargo-ships, at no (or little) shipping cost, and the proportion carried from sources other than the United Kingdom and North America in ships allocated for the purpose.

² Nitrates includes 'other fertilisers'.

Principal Importing Countries in the Indian Ocean Area, and Principal Imports of Bulk Commodities (other than Oil) in the Period of Crisis (December 1941 to June 1943)



APPENDIX LVIII

Note on the amount of shipping that would have been required to meet the demands for nitrates and for grain that could not be met by British ships (plus the standard American allocations) in March 1943

The figure of a quarter of a million gross tons or less (given on page 344 above), which is only a very rough approximation, was reached on the following rough-and-ready assumptions as to the cost of meeting the principal demands other than those of India:—

- (1) The Minister of War Transport in a memorandum for the War Cabinet of 9th March, 1943 put the quantities necessary to tide over the crisis in the Middle East as 30,000 tons of grain and 10,000 tons of nitrates a month. In the event most of these imports were sent in ships provided by the United States to carry war material to the area. If the American military cargo-ships had not been available it would have been most economical to have shipped the grain from Australia. This, assuming a round-voyage time of two months, and 6,000 tons of grain to 5,000 gross tons, would have required about 50,000 gross tons in continuous employment.

It has been assumed, somewhat arbitrarily, that 10,000 tons of nitrates a month from Chile would have required about 60,000 gross tons in continuous employment.

- (2) It has been assumed that to transport 45,000 tons a month of wheat and flour from Australia to Ceylon (the amount required) would have needed roughly 90,000 gross tons in continuous employment.

Thus, very roughly, about 200,000 gross tons in continuous employment would have been required to meet the above demands.

If one assumes (see Appendix LIX) that India needed about 750,000 tons of grain a year, which could have been brought from Australia in 1942 and 1943, the shipping required (assuming that the demands were spread evenly over the year) would have been roughly about 100,000 gross tons in continuous employment.

APPENDIX LIX

Shipments of grain to India 1942-45

1942

It appears that just over 30,000 tons of grain were shipped to India in 1942 from Australia against a demand, put forward in August of that year, and accepted, for 105,000 tons of Australian wheat, to be shipped at the rate of 15,000 tons a month, to meet the needs of the Indian Army. The balance of this demand which had not been shipped by the end of 1942 was shipped in 1943 and is included in the figure for 1943 given below.

1943

The Famine Inquiry Commission (*Final Report*, p. 10) put imports of grain into India in 1943 at roughly 370,000 tons. This figure is somewhat higher than the total, 303,000 tons, the writer has arrived at by putting together a number of figures in the files of the Ministry of War Transport.

1944

The Ministry's figure for wheat shipments to India (mainly from Australia) in 1944 was roughly 639,000 tons; the Famine Inquiry Commission's figure was 'over 700,000'.¹ But it is possible that this discrepancy may have arisen merely because the British and Indian authorities set a different date on the moment when some of the cargoes arrived. (The Ministry's figure of *loadings* for 1943 was roughly 825,000 tons.)

1945

The Ministry's figure was just over 693,000 tons shipped (all from North America) up to the end of October. Apparently a further 178,000 tons (also from North America) were shipped before the end of the year, making a total of just over 871,000.

Roughly, therefore, shipments of grain to India appear to have been as follows:

		<i>'000 tons</i>
1942	.	30
1943	.	303
1944	.	639
1945	.	871

¹ Famine Inquiry Commission, *Final Report*, p. 54.

PART V

From the defeat of the submarines
to the end of the War

CHAPTER XVII

PLANNING FOR VICTORY: THE WORLD SHIPPING BUDGETS, APRIL TO MAY 1943

(i)

The Problem

BY MARCH 1943 it had become entirely clear that things could not go on as they were. 'We cannot escape the fact', the President wrote to the Prime Minister on the 31st March, 'that something must give . . .'; it was necessary that whatever gave should not be something essential; yet in the existing circumstances it was impossible to distinguish between the more and the less important. Plans for the future could not be made without 'shipping budgets' (to use the phrase that shortly came into vogue) that should set out likely needs and resources in conjunction, and without administrative arrangements to ensure that all the needs, and the employment of all the ships, both British and American, should be kept continuously and simultaneously under review.

Hitherto a large number of different circumstances had conspired to prevent these objects from being achieved—the continual emergence of new, unexpected demands; the continual and unpredictable changes in the effective supply of shipping-space that took place for many reasons and, particularly, because one unforeseen and unforeseeable emergency after another diminished carrying-capacity and then was gradually brought under control; the sudden need to exploit unexpected advantages and to take big risks—all these conditions of a war whose outcome was still uncertain made elaborate planning not only impossible but undesirable. Now, however, things had changed. For the poor struggling in the face of hazards some degree of thriftlessness is often the price of survival; those within sight of sufficiency or affluence need to plan ahead.

All the authorities, civil and military, concerned with merchant shipping, on both sides of the Atlantic, became conscious of this need at more or less the same time. It was, however, the voice of the military that carried the greatest weight, for unless a way could quickly be found out of the confusion they could not prosecute the

war. On the 1st March the War Office, concerned for the moment only with British resources and commitments, had noted that 'as it appeared that additional shipping could only be found at the expense of the import programme, the Chiefs of Staff directed that an *aide-mémoire* should be prepared showing the extent of our world-wide shipping requirements'. But how, the Ministry of War Transport asked in effect, did the Chiefs of Staff imagine that this feat could be accomplished? Evidently what the Chiefs of Staff wished to see was a list of all the areas to be supplied, and of the numbers of sailings a month required and available to supply them, and this was indeed the way in which the Americans later compiled their budget. The American fleet, however, operated in a fashion different from the British, for most American ships were employed in shuttle services—in voyages, that is, backwards and forwards between two points—and even so the method had grave defects.¹ British ships on the other hand, it need hardly be stressed again, were for the greater part employed in voyages which took them half or the whole way round the world and in the course of which they met a large variety of different needs. Manifestly in these circumstances it was impossible to make a single table² that would show in one column all the areas to be supplied and, in the next, the number of sailings that were needed and could be provided. 'The Ministry of War Transport', the War Office was forced to note, four days after the Chiefs of Staff had put in their request for a survey, 'say that the shipping problem does not lend itself to a tabulated statement. . . . It is regretted, therefore, that it is impracticable to express the whole of our shipping commitments in the form of a number of monthly sailings.'

But if the shipping commitments could not be thus expressed what was the proper way of expressing them? Were they indeed not too numerous, too diverse, and yet too closely interrelated, to be tabulated at all? This was not the first occasion on which a world war had been fought, yet here were tasks on a world scale never before imagined, and as remote from the experiences of previous generations as the atom bomb.

To accomplish the tasks required that in certain quarters of the

¹ Apart from the difficulties, described on pp. 368-369 below, the method (known as a 'projection') was far less accurate than the British, for it had the effect of doubling any error that might be made: i.e. if it was estimated that there would need to be x sailings on military account in a given quarter, and if, later, as frequently happened, the United States Army found that it did not need as many ships as it had asked for and been allowed, then the estimates of the number of ships that would be available in future quarters, which were based on the sailings in previous quarters, were thrown out.

² For certain purposes the British, like the United States, calculated in terms of sailings. They did so for the purposes of estimating the amount of tonnage available, in relation to each particular programme, either at any particular moment or for short periods ahead. It was only when it was a question of showing how the whole fleet was employed, and might be estimated to be employed over the next six, twelve or eighteen months, that the method was impracticable.

war. On the 1st March the War Office, concerned for the moment only with British resources and commitments, had noted that 'as it appeared that additional shipping could only be found at the expense of the import programme, the Chiefs of Staff directed that an *aide-mémoire* should be prepared showing the extent of our world-wide shipping requirements'. But how, the Ministry of War Transport asked in effect, did the Chiefs of Staff imagine that this feat could be accomplished? Evidently what the Chiefs of Staff wished to see was a list of all the areas to be supplied, and of the numbers of sailings a month required and available to supply them, and this was indeed the way in which the Americans later compiled their budget. The American fleet, however, operated in a fashion different from the British, for most American ships were employed in shuttle services—in voyages, that is, backwards and forwards between two points—and even so the method had grave defects.¹ British ships on the other hand, it need hardly be stressed again, were for the greater part employed in voyages which took them half or the whole way round the world and in the course of which they met a large variety of different needs. Manifestly in these circumstances it was impossible to make a single table² that would show in one column all the areas to be supplied and, in the next, the number of sailings that were needed and could be provided. 'The Ministry of War Transport', the War Office was forced to note, four days after the Chiefs of Staff had put in their request for a survey, 'say that the shipping problem does not lend itself to a tabulated statement. . . . It is regretted, therefore, that it is impracticable to express the whole of our shipping commitments in the form of a number of monthly sailings.'

But if the shipping commitments could not be thus expressed what was the proper way of expressing them? Were they indeed not too numerous, too diverse, and yet too closely interrelated, to be tabulated at all? This was not the first occasion on which a world war had been fought, yet here were tasks on a world scale never before imagined, and as remote from the experiences of previous generations as the atom bomb.

To accomplish the tasks required that in certain quarters of the

¹ Apart from the difficulties, described on pp. 368–369 below, the method (known as a 'projection') was far less accurate than the British, for it had the effect of doubling any error that might be made: i.e. if it was estimated that there would need to be x sailings on military account in a given quarter, and if, later, as frequently happened, the United States Army found that it did not need as many ships as it had asked for and been allowed, then the estimates of the number of ships that would be available in future quarters, which were based on the sailings in previous quarters, were thrown out.

² For certain purposes the British, like the United States, calculated in terms of sailings. They did so for the purposes of estimating the amount of tonnage available, in relation to each particular programme, either at any particular moment or for short periods ahead. It was only when it was a question of showing how the whole fleet was employed, and might be estimated to be employed over the next six, twelve or eighteen months, that the method was impracticable.

Ministry of War Transport there should be a change of heart as well as of method. In the commercial world one does not reveal one's ways of doing things to outsiders, and there were many business men in the Ministry. As they saw it, they understood their own jobs while other people neither did nor could understand them. To attempt to explain the technicalities to other Government departments—sometimes even to other divisions in the Ministry itself—would, they felt, only give rise to foolish questions and ill-judged criticism.¹ In the past it had indeed done so only too frequently.

Yet all the same, the necessary co-operation would be impossible unless the shifting pattern of shipping employment and the causes that determined it could be explained, at least in outline, not only to the British Chiefs of Staff but also to the Americans. This became clear at the beginning of 1943. The obscurantists in the Ministry of War Transport therefore prepared themselves to expound their mysteries to the people in the Service departments who needed to understand them, as well as to the American economist and his British colleague who were jointly deputed in February 1943 to examine the shipping situation. Once begun, the task of explaining proceeded very satisfactorily if in a somewhat unorthodox fashion. For the explanations could never be made self-evident. It was always necessary to find a few individuals in the Service departments who were able and willing to learn, to take their instruction seriously in hand, and to leave them to deal with their colleagues. Nevertheless, it emerged in the process of explaining that the mysteries were not so mysterious as had originally been supposed, and that the mere fact of having to explain them made difficulties manageable that had not seemed so before. When it came to the point it appeared that there were certain commonsense, provisional ways of tabulating needs and resources that would, it seemed, yield sufficiently satisfactory results for the time being. The minimum needs of the United Kingdom for imports, and the areas from which the imports must come, were

¹ Many illustrations of this could be given. The following episode is typical. At the end of December 1942, Trade Division of the Admiralty attempted an estimate of the effects of the North African campaign, including the effects on United Kingdom imports. The paper was sent to two of the divisions in the Ministry of War Transport principally concerned, one of them staffed mainly by ship-owners, the other by professional statisticians. Both divisions, in their own peculiar idiom, exploded the Admiralty's arguments; both concluded that the Admiralty should not have embarked on the task because it could not possibly be 'aware of all the repercussions'. Neither thought that the Admiralty should be enlightened. As the head of Statistics and Intelligence Division put it in January 1943: 'requests for estimates or information are not always put by the applicants in a form which enables the complete picture to be seen or the implications understood . . . information thus provided may be put by the receivers of it to a use for which it was not intended and to which it is not applicable'. This point of view is readily understandable, even to outsiders, if (as the writer has) they have struggled for some time with the various technicalities of the Ministry of War Transport—a process that may be compared to learning a foreign language with some twenty different dialects, one for each division—and if they are then required to explain the problems to laymen who are at first sceptical of and then liable to be defeated by the complications.

already established, and the amount of tonnage required to carry the imports could thus be calculated. For the rest: the amount of tonnage currently employed in meeting the needs of the Services was known, and so was the amount in the cross trades; it was also known—more or less accurately in different cases—whether the tonnage employed in these three categories was sufficient and, if not, by how much it fell short of requirements. These three categories embraced all the principal shipping services. It proved possible—contrary to what had usually been assumed before—to set out in an intelligible form, or at least in a form capable of being understood after some explanation,¹ how British shipping was distributed between the categories; and once this had been done it became possible, if one demand were increased or diminished, to calculate the effect on the others.

Admittedly, as will appear presently, in the spring of 1943 details were still lacking about a number of the demands that were being or might shortly have to be met;² the problem of classifying the employment of ships was still in certain cases defeating the statisticians; nevertheless it turned out that enough data existed to produce a survey of the demands on and the supply of ships that would permit strategy to be planned in such a way as to maintain a proper balance between one military project and another, and to ensure that military needs were not met at the cost of civil disaster. At the beginning of April a group of British Service representatives, statisticians and other officials, sent to the United States to examine, in conjunction with their American counterparts, the implications of the strategy agreed on at Casablanca, applied themselves to the task of getting the British survey out, and at the same time the officials of the War Shipping Administration embarked on a similar undertaking in relation to American ships.

(ii)

The United Kingdom Import Programme

Once the two surveys should be completed and laid on the table for inspection, a start could be made with the task of allocating the available ships among the various claimants in accordance with informed judgments of respective needs. There was, however, one claim that had been so long neglected that it could not be judged in relation to the others but had to be met before they were even considered. This was the claim of the United Kingdom for an amount of imports sufficient to meet the needs of consumption and to permit stocks to

¹ See Appendix LX, p. 378, where the writer has made the attempt, perhaps not successfully.

² See p. 375 below.

reach a reasonable level. The United Kingdom had been the principal base for military operations in North Africa, and the attack on Western Europe had to be launched from it; but it is impossible to launch an attack from a base that is in danger of disintegrating. This could not be denied even by the American Services. The only point at issue was what might be said to constitute the minimum. This question, however, had already been answered, not, it is true, beyond dispute—the matter was one on which the American Services always found dispute possible—but beyond reasonable doubt. The President himself had admitted in November 1942¹ that the British could not make do in 1943 on a volume of imports that was less than 26 to 27 million tons, given the type of war material they were committed to producing and the type of imports it was possible for them to receive. The point was made again in the strongest terms by the two economists (one of them an American) who considered the matter in February 1943.²

It had been calculated at the end of 1942 that if the United Kingdom's imports were to amount to 27 million tons in 1943 the British would need (assuming that their commitments did not change significantly) enough American help in addition to what they were already receiving,³ to bring in 7 million tons. In fact, the commitments did change considerably between the date of this estimate and the spring of 1943, but the need for American help did not diminish. Yet in February 1943 the War Shipping Administration had allocated tonnage sufficient, it appeared, to bring in only about 1½ million tons in the first half of 1943, and nothing had been said about what was to happen after that.

Early in March the Prime Minister at last became convinced that this was an intolerable state of affairs that could not be allowed to go on. The Foreign Secretary was sent to Washington and succeeded—admittedly in circumstances that were much more propitious—where the Minister of Production had failed. He took with him a note, drawn up by the Prime Minister and the Paymaster-General, which set out the British need for help in the strongest possible terms. 'While', this note said, 'the United Nations' shipping position is improving and likely to continue doing so the British import position is steadily becoming worse . . . our imports in the last four months have been only a quarter of the total [in a comparable period] in a good pre-war year,⁴ half what they averaged in 1941 (and for that matter in 1918) and only three-fifths of the monthly average in the

¹ See Chapter XIV above, pp. 318-319.

² See p. 361 above.

³ See Chapter XIV above.

⁴ This was leaving out of account that many of the United Kingdom's war-time imports were coming in a form much more economical of shipping-space, e.g. dried eggs, deboned meat, finished munitions. The words in square brackets are the writer's.

first ten months of 1942.' The note set out the cuts that had been made in civilian consumption—in foodstuffs, by, particularly, the virtual elimination of feeding-stuffs for animals and of fruit and vegetables, and by reducing sugar imports by half; in raw materials, of which those 'used for purely civilian purposes are now negligible'; it stressed the dangerous level to which stocks had fallen, and the hand to mouth manner in which in consequence the British were forced to live; it enumerated the contributions British ships had made to the war-effort—how they had provided more than half the cargo tonnage (not to mention the passenger tonnage) that had been used for the North African campaign and how British shipping operated 'in all the dangerous areas, whereas American shipping is predominantly in the safer regions far from the U-boat bases'; it showed how (owing to the agreed policy that the British should concentrate their limited resources on naval shipbuilding, leaving the bulk of merchant ship construction to the Americans) the British fleet 'constantly dwindles, the American increases', and how, notwithstanding, the fleets of the two nations are 'not treated as freely interchangeable and distributed according to needs. The American Services claim a prior call on all American building'. The note concluded by saying that the United Kingdom's imports must be considered 'an absolute first charge on Allied shipping. . . . as vital to the war-effort as supplies to the various theatres . . . We have undertaken arduous and essential operations encouraged by the belief that we could rely on American shipbuilding to see us through. But we must know where we stand. We cannot live from hand to mouth on promises limited by provisos. This not only prevents planning and makes the use of ships less economical, it may, in the long run, even imperil good relations. Unless we can get a satisfactory long-term settlement, British ships will have to be withdrawn from their present military service even though our agreed operations are crippled or prejudiced'.

This time the President was not only willing to admit that the British need for help was beyond dispute; he was prepared to take the necessary steps towards providing the help that was needed. He summoned the authorities of the War Shipping Administration and, after having discovered from them the likely effects that helping Britain must have on American military projects—a question on which it was now possible for them to have some opinion—he told the Foreign Secretary that 'the American share of our [i.e. the British] import programme must be number one on the schedule of American execution' and that 'the American Chiefs of Staff must be told of the decision'.

In the event the decisions came to be interpreted somewhat differently from what the President's remarks might suggest. The

Americans, neither now nor later, accepted the liability to guarantee the United Kingdom import programme. As Sir Arthur Salter put it in April 1943: 'The United States Chiefs of Staff would offer the strongest possible resistance to a guarantee attached not to an amount of United States shipping assistance but to a figure of United Kingdom imports, which would mean varying United States assistance, and therefore changes in United States military arrangements, in accordance with British importing experience and British ship allocation policy'. The line, therefore, that the Americans took in April was in effect: 'You say and we agree that in 1943 you need at the minimum 26 million tons of imports;¹ in the conditions that are envisaged, and allowing for the help on the Indian Ocean routes which you are already receiving, your own ships, you say, and this seems to us right, can only carry 19 million tons. We will, therefore, undertake to provide you with a number of sailings a month across the North Atlantic sufficient to carry the balance of 7 million tons. We cannot provide more, and if your needs are less or your own carrying-capacity is greater than you have estimated, we cannot guarantee that we will not reduce our allocations to you accordingly'. As things turned out, however, the Americans did not reduce their allocations, the United Kingdom's needs for imports had not been underestimated, and the carrying-capacity of the British-controlled fleet, as will appear later, proved larger than had been expected.

In April 1943, therefore, the most intractable of the obstacles in the path of planning for victory was removed. Other obstacles, however, still remained. It was true that no plans could profitably be made until the United Kingdom import programme had been provided for; but the only means by which this could be done was by taking ships away from the American Services. How could the American Services do without them? How would combined strategy be affected by their removal? Would the Americans also be willing to continue the help which they were providing for the overseas territories, which they had increased in March at the height of the crisis,² but which needed to be larger still? These were the questions that remained to be settled after British imports had been assured.³

¹ The requirement which had been 27 million tons at the end of 1942 (see p. 318 above) was scaled down in the early part of 1943 as a result of changes in the production programmes.

² See pp. 375-376 below.

³ To be precise, when the Washington Conference opened there still appeared to be a relatively small deficit. See Appendix LXI, p. 382.

(iii)

Combined Strategy

The questions had to be settled at the War Conference, summoned to meet in Washington in May 1943 to consider how far the plans formulated at Casablanca could be fulfilled and expanded. The misfortunes which had overtaken the assumptions about merchant shipping at Casablanca had taught their lesson. For over a month before the Washington Conference met the statisticians had been at work on their shipping budgets; they were present in force at the conference to give advice; the British delegation arrived firmly determined that 'it was most important not to leave . . . without having related fully the shipping availability to the strategical programme'. Here were favourable auguries. Nevertheless the fact remained that very little more tonnage was available for military (and most other) purposes in May 1943 than had been available in the previous January when the shortage of shipping had appeared 'a stranglehold on all offensive operations'. It is true that at the beginning of May the total dry-cargo tonnage available to the United Nations was 38 million deadweight tons,¹ and that at the beginning of January it had only been 34.2 million;² but at Casablanca the amount of American help needed for the United Kingdom import programme had not entered into the calculations, and before the Washington Conference met the Americans had already pledged themselves to provide for this purpose the equivalent of roughly 3½ million deadweight tons in continuous employment in the second half of 1943.³ This meant that while—as always at each successive war conference—new military projects appeared essential, the supply of ships that could be allocated to them was scarcely any larger than that which had existed at the time of the Casablanca Conference.

On the other hand, the future prospects were much more favourable at Washington than at Casablanca, for it was clear in May that the excess of gains over losses and, for this and other reasons, the effective supply of shipping, must increase in the future at a rate much higher than any yet experienced. In the first place American new building was almost at its peak—it did in fact yield the unparalleled total of about 13½ million deadweight tons⁴ of dry-cargo ships in

¹ Figure for 30th April 1943, dry-cargo ships, 1,600 gross tons and over, all nationalities.

² Figure for 31st December 1942. Categories as in footnote 1 above.

³ Assuming that the 7 million tons of imports estimated to have come in United States ships in the second half of 1943 came across the Atlantic with a round-voyage time of 2.5 months.

⁴ The Combined Shipping Adjustment Board's figure for dry-cargo ships of 1,600 gross tons and over was 13.6 million deadweight tons.

1943, an amount roughly equivalent to the whole British dry-cargo fleet at the beginning of the year¹ and only about 5 million deadweight tons less than the whole British-controlled fleet at the same date. Secondly, if the operations against Italy succeeded, the Mediterranean would be open again to merchant ships by the end of the summer—with a gain, to the British alone, equivalent to between 1 and 2 million deadweight tons according to the number of British ships sailing to and from the United Kingdom and North America to Suez and areas east of Suez. Finally, as the Prime Minister said at the White House on the 11th May, 'we meet in the presence of a new fact, namely, what might prove to be decisive progress in the anti-U-boat war . . . there might be as many as thirty sinkings in May.'² If this continued, a striking change would come over the scene'.

In such a fortunate conjunction of affairs it must have seemed at first sight absurd to suppose that shipping could still hamstring military plans. So, apparently, the matter struck the Prime Minister, 'The British', he was reported as saying at Washington, 'came to the present meeting adhering to the Casablanca decisions. There might have to be adjustments made necessary by our success. We [i.e. the British and Americans] had been able by taking thought to produce a succession of brilliant events which had altered the whole course of the war. We had the authority and prestige of victory. The only questions outstanding between the two staffs were questions of emphasis and priority. He felt sure that these could be solved by mutual agreement.'

But could they? To the men who manned the merchant ships in the transatlantic convoys (as well as to the men who manned the escort vessels) and who throughout three years of unremitting strain had faced hazards more terrible and more prolonged than those experienced by almost any branch of the Fighting Services, the defeat of the submarine campaign was indeed the turning-point of the war. To the framers of strategy, on the other hand, it was, temporarily at least, otherwise.

Roughly 8.3 million deadweight tons of shipping,³ or something

¹ i.e. United Kingdom, Dominion and Colonial registered (excluding foreign ships transferred to the British flag). Ships in this category totalled 13.6 million deadweight tons at 31st December 1942 (see Appendix VIII, p. 69). The whole British-controlled dry-cargo fleet at the same date totalled 18.8 million deadweight tons.

² There were actually forty-one.

³ The writer has not seen any figures of United Nations losses calculated in deadweight tons. The above figure of 9½ million deadweight tons has been arrived at by taking the official figures (losses by enemy action and other causes of dry-cargo merchant ships, 1,600 gross tons and over, available to the United Nations) which are in gross tons, and converting them into deadweight tons by multiplying by 1.4—the ratio of deadweight tons to gross tons over the British-controlled fleet as a whole, excluding passenger ships. Of the total of 5.95 million gross tons lost in the above categories in 1942, 3.94 million gross tons were British and British-controlled.

under 1,200 ships,¹ of all nationalities but British or British-controlled for the greater part, had been lost in 1942. This was a formidable figure if considered in terms of physical human suffering and agony of mind. Considered, however, in terms of tonnage withdrawn from the service of the United Nations, in a single year, it represented an average of only about 4.8 million deadweight tons in continuous employment.² Even if there were to be no losses at all in the second half of 1943, and this was not to be expected, there could only be an average of about 2½ million deadweight tons more in continuous employment in the half-year than there would have been if as many ships had been sunk in this period as in the comparable period in 1942.³ Even in conjunction, the output of American yards, the defeat of the submarine and the opening of the Mediterranean could not solve the planners' problems in May 1943, for they could only yield results gradually and meanwhile the needs of strategy could not wait.

It did not even appear to be wholly true, although the United Kingdom import programme was now assured,⁴ that the British could meet all the undertakings they had given at Casablanca. 'Anakim'—the opening of the Burma road—must, for one thing, go by the board for lack of ships if for no other reasons, although in the event the other reasons proved sufficiently compelling; and even after 'Anakim' had been jettisoned at the opening of the Conference the British budget for the second half of 1943 still showed a deficit of about 800,000 deadweight tons,⁵ principally in respect of sailings to the Indian Ocean which it was urgently necessary to increase. As for the Americans; there was a gap of '336 sailings' between their estimated need for ships in 1943 and the number they thought they could provide.

The American habit of calculating exclusively in terms of 'sailings', from which they could not be weaned, made it impossible for the British, and difficult for the Americans themselves, to have a clear idea of how their tonnage was, or might be estimated for the future, to be employed; for a 'sailing' across the North Atlantic meant one

¹ This figure has been arrived at by assuming an average ship of 7,500 deadweight tons. The actual average was 7,400 at 3rd September 1939 and 7,600 at 30th September 1945. See *Statistical Digest of the War*.

² Assuming that the losses were spread out evenly throughout the year and that therefore on an average the ships sunk were in service for half the year. Losses were in fact heavier in the second half-year, but this was because of the withdrawal of escort vessels from the trade convoys for use for the North African campaign, and it seems therefore more reasonable in the present connection to assume that the losses were evenly spread out.

³ On the same assumption as in footnote 2 above.

⁴ Apart from the relatively small deficit referred to in footnote 3 to p. 365 above and in Appendix LXI, p. 382.

⁵ See Appendix LXI (i).

ship employed for a little over 2½ months, whereas a 'sailing' across the Pacific meant one ship employed for six months, or more than twice as long, and this was assuming that an American ship that sailed came home in a reasonable time whereas everyone knew that only too often she did not but, on the contrary, became, in the current terminology, the victim of a 'lock-up'—that is, was held, perhaps indefinitely, by a theatre commander expecting that he might need her in the future for military operations. Where were these 336 sailings to and from? Did they make any provision for lock-ups? What did they mean in terms of tonnage continuously employed? The answer to these questions was not, apparently, revealed at the time and cannot be discovered with certainty now. It seems likely, however, that the amount of tonnage that the 336 sailings represented must have been of an order of 1½ to 2½ million deadweight tons.¹ If this is so, then the British and American deficits combined must have represented between 2½ and 3 million deadweight tons, or roughly between 9 per cent. and 12 per cent. of the United Nations' tonnage available for carrying military and civil supplies at the time the conference met.²

Here indeed was a problem of 'emphasis and priority', to use the Prime Minister's words, but a problem much more serious than the words in their context suggested. There could, it appeared, be *either* 'Husky' (the invasion of Sicily) *or* 'Bolero' (the movement of American forces to this country) in full strength, but not both; and if there were not both could the invasion of France take place in the spring of 1944? It did not seem so. 'The existence of deficits shown by both the British and American shipping authorities was', according to the Ministry of War Transport's report of the conference, 'in danger of crippling military planning'. In this connection the prospective defeat of the submarine and the other expected blessings were no solace, for they had been taken into account (although in the event the results exceeded the expectations) in the calculations of which the deficits were the outcome.

The Washington War Conference of May 1943, and the assurance of American help to the United Kingdom import programme which preceded it, marked the end of the heroic phase in the history of the British and European merchant navies. The struggle to meet increasing commitments with diminishing resources in the face of an uncertain future was over. American ships were pouring in; they were to make an increasingly large contribution to victory in Europe

¹ See Appendix LXI (ii), p. 379.

² The total dry-cargo tonnage in this category available to the United Nations was 24.5 million deadweight tons at 30th April 1943. A more appropriate figure would be the amount in the category that was expected to be available on an average throughout the second half of 1943, but the writer is unaware what this figure was.

(although a contribution to British programmes much smaller than is usually supposed);¹ proverbially, however, it is often more difficult to spend a fortune than a pittance wisely, and it was in the arts of management, some long practised and others newly acquired, that the British excelled. To some extent—though not at all to the extent they would have liked—they succeeded in teaching these arts to the Americans. They attempted, on a modest scale but with some success, to do so now at the Washington Conference, when, in spite of the large expected increases, it still seemed that victory must be delayed for lack of ships.

For a long time, as has already been shown, the British had suspected without being able to prove that the Americans, for a variety of reasons, were using ships with an extravagance unimaginable in British circles. American troops, for one thing, were equipped much more lavishly than British troops, and each man in consequence needed more shipping to supply him. In the course of the Washington Conference the British discovered that whereas 0.6 measurement-tons per man per month had to suffice for the British troops in the Middle East, and 0.7 for those in North Africa, the Americans were working to an average of 1.3,² or roughly double as much. It seemed doubtful, even after making all allowances, if so large a discrepancy were justified. The point, however, could not easily be argued, but meanwhile there were more disturbing, less defensible extravagances. Many of these did not come to light till later, but some were known now. The American Services, it seems, had been greatly alarmed by the results of their mistaken optimism at Casablanca; they were determined not to repeat the mistake; in their calculations, in consequence, they proceeded to allow for every conceivable contingency—to inflate both the amount of cargo they needed to transport and (by exaggerating the likely rate of loss)³ the amount of tonnage needed to transport it.

The British shipping authorities were well acquainted with this way of proceeding, common to all claimants on scarce resources in controlled economies and particularly attractive to and hard to combat in the military mind. They soon discovered at Washington that, in the words of the official report, 'vital military operations' were in danger of being 'cancelled or postponed merely on account of a deficit in ships which existed on paper but not in fact'. The problem was how 'to find some means of inducing the Americans to remove their paper deficit'.

¹ See Appendix LXII, p. 384.

² The term measurement-ton is used by shipping companies to assess the freight on commodities that (speaking loosely) are bulky in relation to their weight, and is in contradistinction to a ton weight of which the opposite is true.

³ See footnote 1 to p. 372 below.

The force of example was applied to start with. With a gesture they could ill afford—for principally it meant depriving the commanders in the Indian Ocean area of a part of their long-promised increases—the British wrote their own deficit off. They then approached the American Generals and suggested that they should perform a similar feat.

This proposition was first put forward on the morning of Saturday the 22nd May and was debated throughout a series of meetings that occupied, apparently without break, the best part of twenty-four hours. According to the British account of the proceedings¹ the American Generals were not co-operative. They harked back to the usual bone of contention: the United Kingdom import programme. The British, they said, 'were still living soft' and could 'easily stand further reductions'. The British military representative retorted with the stock argument that the United Kingdom was to be the base for the conquest of Europe and 'no soldier could start large-scale operations from a base that was insufficiently supplied'; the British civilian representatives played their trump card—the United Kingdom import programme had been agreed by the President himself; the representatives of the War Shipping Administration—on this occasion permitted to be present—lost their temper with the most obstructive of the American Generals and there followed a 'sharp scene', which, the British observed, was 'not without its effect'. All the same, this General could not be deflected from his demand, which he put forward at 3.30 a.m. when the Combined Chiefs of Staff had to be provided with their answers within 5½ hours, that the British and American civilian authorities should make a forecast of shipping availability up to the end of September 1944.

The demand could not be refused in spite of 'the practical difficulty of producing new and comprehensive figures at 3.30 a.m. on a Sunday in Washington', and of the fact that even in the best of circumstances the figures must have been largely guesswork. Everybody accordingly sat down again to their sums, but even when the task had been accomplished the deficit of 336 sailings in 1943 still remained to be disposed of. The Commanding General, United States Army Service Forces, then appeared upon the scene to take a hand in the proceedings; the British authorities fetched the Minister of War Transport and his statistical adviser out of bed, whither they had retired shortly before to get some rest, and the arguments started all over again, though, since everyone was no doubt somewhat exhausted, evidently with less fervour than before. By 6.45 a.m. agreement had been reached; the Americans had given way; of the 336 sailings previously judged essential but unobtainable only 135

¹ It must be stressed that the writer has only had access to the British account.

remained, and this deficit, the Americans were induced to admit, was 'not unmanageable'.¹

This conclusion formed the basis of the report presented by the Combined Chiefs of Staff to the President and the Prime Minister and approved by them on the 25th May, the last day of the conference. Under Section V, 'Availability of Resources to meet the Requirements of Basic Undertakings and Specific Operations in Execution of Overall Strategic Concept 1943-44' it was noted that 'all the ground forces required can be made available'; that, with one possible exception, 'all the naval forces required can be made available'; that 'broadly there are sufficient air forces to meet all requirements in all theatres'; that 'provided the casualties in operations are no greater than we have allowed for, and provided that the United States and British planned production are maintained, all the assault shipping and landing-craft required can be made available'; and, finally,

The examination of the shipping resources of the United Nations shows that so far as can be foreseen now, and on the assumption that future losses do not exceed the agreed estimate, personnel shipping will be available to permit of the optimum deployment of United Nations forces up to the limits imposed by the availability of cargo-shipping.

The optimum deployment of available United Nations cargo-shipping to meet the requirements of the basic undertakings and projected operations for 1943-44 reveals small deficiencies in the third and fourth quarters of 1943 and first quarter of 1944 and a surplus of sailings in the second and third quarters of 1944. The deficiencies are small and, if properly spread over all the programmes concerned, the effect will not be unmanageable.

Thus the stranglehold was removed in which, hitherto, the shipping shortage had held, or had appeared to hold,² offensive operations. It

¹ The information on pp. 371-372 comes from the report on the 'Trident' Conference previously referred to. There is nothing in this report, or in any other paper the writer has seen, to show how the British managed to induce the Americans to remove their deficit. The writer, however, presumes that since the British cannot have been in a position to challenge the American requirements, the arguments must have turned on the rates of loss. There had been a great deal of dispute on this matter at Casablanca. At the beginning of that conference there had been no agreed estimate of the rate of loss, the British estimate being 1.9 per cent. per month and the Americans 2.6 per cent. Since the Americans refused to accept the British figure the British had eventually to agree that there should be a new calculation, to be made by the Combined Military Transportation Committee. The British were represented on this committee, but it was dominated by the United States Services.

² The words 'appeared to hold' are used advisedly since the writer has never read anything that suggests that any otherwise practicable operation was delayed by lack of ships to a significant extent. 'Bolero' undoubtedly was delayed, but if the American troops had come to this country at the scheduled time it seems that it would still not have been possible to mount 'Overlord' before the early summer of 1944. See pp. 333-334, Chapter XV above.

was removed within the space of a few days—for the greater part in the space of a few hours at dawn on a Sunday morning—and as a result, as far as can be judged, somewhere between $1\frac{3}{4}$ and $2\frac{1}{4}$ million additional deadweight tons were made available for essential military operations in the second half of 1943—an amount that on the first hypothesis is somewhat larger than the gain in the same period from the decline in sinkings below the 1942 level, and on the second hypothesis is considerably larger still.¹

(iv)

The Future Prospects and the Demands of the Overseas Territories

Thus the course was set for victory and the worst hazards seemed to lie behind. The United Nations, it appeared, were going to have enough shipping until the third quarter of 1944 and, it was to be presumed, thereafter until the war was won in both the West and the East. Since the shipping budgets compiled at the 'Trident' Conference were, in theory, combined² budgets, if there were enough tonnage to meet the needs of the United Nations there must be enough for the needs that were specifically British.

But at the 'Trident' Conference and, equally, at all the war conferences held afterwards, the budgets were combined budgets in theory only; for the British had no detailed knowledge of American needs in the Pacific nor of how their ships there were employed. What happened at the 'Trident' Conference, and at the subsequent conferences, as the statistician who drew up the British budgets put it in 1945, was that the American statistician 'made an estimate of the American . . . position and I . . . made an estimate of the British . . . position and the two surveys have been considered by the Minister [of War Transport] and the Administrator [of the War Shipping Administration] who, attaching such weight to them as they thought right, have then expressed their view of the combined situation as a whole'. The result, in consequence, was not a statistical

¹ Losses in the second half of 1942 were 3.2 million gross tons, and in the second half of 1943 were 1.1 million gross tons. There was thus a difference of 2.1 million gross tons—say 2.9 million deadweight. But a loss of 2.9 million deadweight tons in six months would only, on an average, have removed half this amount from service during that period.

² See Cmd 6351. *The Organisation for Joint Planning*: 'To avoid confusion, the terminology agreed by the United Nations is that the term "Joint" should be used to denote the Inter-Service collaboration of one nation; and that the term "Combined" should be used to denote collaboration between two or more of the United Nations'.

analysis, on a common basis intelligible to both parties, of all needs and resources; it was two analyses, on two different bases, of which one part was largely unintelligible to the British and concealed a great deal even from the American civil authorities who compiled the American budgets and who, at this time and for long afterwards, had to take at their face value the Services' estimates of their needs.

When, therefore, it was assumed in May 1943 that there would be enough shipping until September 1944 the assumption was based on insecure foundations. This was not only because in war the future can never be certainly forecast; it was also because the estimates were exposed to dangers larger even than those to which the uncertainties of war must have exposed them in any case. Matching needs and requirements was always an art as well as a science, depending on the ability continuously to make short-term adjustments as well as long-term estimates. It required experience, judgment and that very large numbers of people on both sides of the Atlantic should work amicably together. The unwillingness of the American Services to reveal what they were doing with the ships allocated to them, and to co-operate with the civilians, put the chances of successful adjustments in jeopardy and made even accurate long-term estimates hard to achieve.

Admittedly in May 1943 an event occurred which minimised these dangers. After the conclusion of the 'Trident' Conference the President agreed to hand over, in instalments of 15 or 20 a month, 200 merchant ships (later reduced to 182) to be operated, 'for temporary war-time duty' under the British flag, the help which the British thus received being deducted from the amount due to them by voyage-to-voyage allocations, under the arrangements already described. As the President put it in a letter to the Prime Minister:

You, in your country, reduced your merchant shipbuilding program and directed your resources more particularly to other fields in which you were more favourably situated, while we became the merchant shipbuilder for the two of us and have built, and are continuing to build, a vast tonnage of cargo vessels.

Our merchant fleet has become larger and will continue to grow at a rapid rate. To man its ever-increasing number of vessels will, we foresee, present difficulties of no mean proportion. On your side, the British merchant fleet has been steadily dwindling. Depending upon the way in which the calculation is made, it has shrunk somewhere between six to nine million deadweight tons since the war began,¹ and you have in your pool as a consequence about 10,000 trained seamen and licensed personnel. Clearly it would be extravagant were this

¹ These figures presumably include tankers and exclude foreign ships on time-charter or transferred to the British flag.

body of experienced men of the sea not to be used as promptly as possible. To fail to use them would result in a wastage of man-power on your side, a wastage of man-power on our side, and what is of equal importance, a wastage of shipping facilities. We cannot afford this waste.

As it turned out, however, both the British surplus of seamen and the manning problems in America were smaller than the President's letter suggested, and the loan of the SAM ships, as they came to be called, was not therefore merely an affair of mutual convenience. The President's act, as the Prime Minister said to the House of Commons, 'shows a deep understanding of our problems, and of the general problems of the war, by the Head of this most powerful State, and of the intimate and sympathetic relationship prevailing between our two Allied Governments'. It was, indeed, an act that the British Government, for better or for worse more calculating and cautious than the American, might well not have made had the positions been reversed. It provided the British not only with a large block of tonnage of which they could dispose freely and on whose continued possession they could count (assuming it was not diminished by losses, and in fact only ten SAM ships were sunk¹); it met their urgent need for ships of standard build suitable for carrying military cargo.

Yet the loan of the SAM ships, although it was of great and increasing value, did not eliminate British dependence on the Americans; for not only were the deliveries spaced out over the months, the last being in July 1944; even when all the ships were in service the gain was less than 2 million deadweight tons, and throughout 1943 the total British deficit was in the neighbourhood of double this amount.²

Moreover, at the 'Trident' Conference, after the fashion of those in debt, the British had not disclosed the full extent of their commitments. The case for the United Kingdom import programme, it was shown, had been made and met before the conference started; at the conference itself British military commitments, scaled down to the minimum, had been accepted and provided for; but nothing had been said about the need for more ships in the cross trades,³ for the task of analysing the employment of the tonnage there was still incomplete and the needs of the overseas territories were in many cases still unknown.

¹ See Appendix LXII, p. 384.

² i.e. the amount of United States help the British received. See Appendix LXII.

³ The figure put at the 'Trident' Conference on the needs in the cross trades was 2.15 million deadweight tons—i.e. the amount of tonnage employed there at the time, consisting almost entirely of the ships that because of their physical characteristics, or because they were on the register of the Dominions, could not be employed anywhere else. Yet—as indeed the British contingent at Washington must have known at the time—this amount of tonnage was quite inadequate.

In these circumstances it was impossible, either before or during the 'Trident' Conference, to make a comprehensive case to the Americans for help for the overseas territories. A case could only be made in those instances where the need was indisputably desperate. It had been so in the Middle East in March both for military and civil supplies, and in March, before even the United Kingdom import programme had been considered, the United States had agreed to provide eleven extra military sailings a month, an amount that, it was estimated, would supply the bulk of the shipping-space (and the British managed to provide the rest) needed to carry the necessary grain and nitrates whose absence had threatened to lead to catastrophe. The other most immediately pressing need was for coal for Egypt and the Eastern Mediterranean, and in April the British agreed to provide the ships for this themselves—at a cost to the United Kingdom import programme that must have been relatively small¹ although, even so, greater than it had seemed possible to afford before American help was certain. For the rest, the overseas territories had to continue to live from hand to mouth until the demands on and the likely supply of ships could be more precisely assessed. If it should prove necessary to give them substantially more help and if, as in the past, the Americans could not be brought to see the necessity, then the requisite number of ships would have to be taken from other British programmes. Yet here, as far as could be seen at the 'Trident' Conference, there were no margins.

Thus at the end of the conference, though the worst dangers had been overcome, and though (with significant omissions) a technique had been devised for surveying—and thus for estimating the relative claims of—the United Nations' major needs for ships, there was still a shipping shortage, and it was clear that there always must be one as long as the demands of the United States Services could not be challenged. Yet while the shortage lasted the British were in danger. Admittedly the danger differed from that of earlier periods both in its origins and in the type of difficulties it caused. Its origins did not lie principally in enemy action, direct or indirect, but in the nature of the attempt to apportion controlled resources between claimants of different nationalities, some of whom were unduly strong, and extravagant, and anxious to insure themselves against all contingencies. The difficulties were not those of the heroic period when the British had faced an unpredictable future because they could not forecast enemy action or, often, their own needs. They were the

¹ 'It was reported that as a result of discussions between Coal Division and Allocation of Tonnage, over twenty vessels, expected to present for loading [United Kingdom imports] during March, April and May, had been allocated on a voyage basis [to the Middle East] thus substantially meeting Coal Division's requirements.' The coal must have come either from India or South Africa, the round-voyage time for deep-sea ships being 2 months in the first and 2.5 months in the second case.

difficulties that arose because of the British dependence on the Americans for ships,¹ and because it was hard to negotiate over so complicated a subject in which so large a range of interests was involved. Many prominent individuals and groups in America were devoted champions of British claims, but others were hard to convince; the nature of the American constitution made it difficult for the American Government to speak consistently with one voice; the British in consequence were not only again and again required to prove that none of their multifarious shipping services was employing too many ships or was being inefficiently conducted; even if the proof were incontrovertible it had to be presented with much patience, tact and skill.

¹ In 1943 the extent of this dependence seems to have been equivalent to about 16 per cent. of total British resources. This assertion is based on the following data:

The total amount of British and British-controlled tonnage in service on an average throughout 1943 (excluding United States ships transferred to the British flag on bareboat charter as estimated in Appendix LXII, p. 384) was roughly 18.5 million deadweight tons (see Appendix VIII, p. 69). Total British shipping resources, including United States aid as estimated in Appendix LXII, were, therefore, roughly 22.1 million deadweight tons. The total amount of United States flag tonnage (including bareboats) in service on an average throughout 1943 was, roughly, 18.5 million deadweight tons.

APPENDIX LX

(i)

*The United States Shipping Budget presented to the Washington
('Trident') War Conference*

Requirement [Sailings]	1943		1944		
	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter
To maintain the war-making capacity of the Western Hemisphere	134	134	134	134	134
To maintain the war-making capacity of British Isles:					
United Kingdom import pro- gramme	270	300	330	330	360
To maintain the war-making capacity of areas other than the British Isles:					
Regular lend-lease allocations	111	111	150	180	200
Support and maintenance of forces in all areas:					
United States Navy requirements	240	235	204	195	205
United States Army requirements (Less United Kingdom—North Africa—China—Burma—India— Pacific moves in 1944)	365	355	240	240	240
Aid to Russia	45	54	54	54	54
Re-arm and re-equip French forces	Included in North African requirements or by use of French shipping				
Maintenance of prisoners of war	12	2	..	..	..
Economic support of Occupied Coun- tries . . . . .	..	..	90	90	90
STRATEGIC OPERATIONS					
China—Burma—India:					
United States Army requirements	48	52	34	51	51
United States allocations for British . . . . .	..	..	25	..	..
Mediterranean operations . . . . .	..	90	70	..	..
'Brisk' . . . . .	..	8	..	..	..
United Kingdom:					
United States Army requirements	259	280	420	400	360
British requirements (from North Africa) . . . . .	..	44	31	..	..
North Africa	188	166	123	123	123
Marshall Islands:					
United States Army requirements . . . . .	..	..	25	22	9
United States Navy requirements . . . . .	..	..	..	..	18
Solomons—Bismarck—New Guinea:					
United States Army requirements . . . . .	..	..	47	84	39
United States Navy requirements . . . . .	..	..	45	24	..
A. Total requirements	1,672	1,831	2,022	1,927	1,883
B. Total available	1,606	1,762	1,900	2,050	2,250
Balance	-66	-69	-122	+123	+367

Source: Ministry of War Transport

(ii)

Estimate of British shipping availability (dry-cargo ships, 1,600 gross tons and over) during the second half of 1943, presented to the Shipping Committee 29th March 1943, showing the estimated distribution of British tonnage between the various services and the estimated amount of tonnage available exclusively for importing into United Kingdom. The words in square brackets have been put in by the writer for the sake of clarity.

	Million deadweight tons
(a) [Estimated] average amount of British and British-controlled tonnage available during the second half of 1943, after allowing for tonnage transferred to Turkey on bareboat charter	17.80
(b) Allowance for vessels awaiting or undergoing repairs (13 per cent.)	2.41
(c) [United Kingdom] coastal tonnage	0.55
(d) Non-productive military, etc., tonnage, including troopships ¹	3.00
[Ships allocated primarily to carry military cargo on the outward voyage] (e) Provision required for military tonnage for Indian Ocean area if monthly sailings from July onwards are to be increased to sixty-six vessels (of which twenty-seven will consist of the standard United States allocation) as provisionally indicated by the War Office	1.75
(f) Provision for other military purposes, including supplies to North Russia and Turkey	1.90
(g) Estimated amount of tonnage permanently abroad ²	2.15
	11.76
Balance [available exclusively for importing into United Kingdom]	6.04

Source: Ministry of War Transport

¹ i.e. ships allocated to the Services on a permanent or semi-permanent basis, the nature of whose employment is set out in more detail in the 'Sextant' budget transcribed below.

² These are the ships in the cross trades (i.e. trading between ports other than United Kingdom ports except in the case of ships thus employed but moving into position to load imports to the United Kingdom). The word 'permanently', often used in peculiar senses in connection with the ships in the cross trades, has here its usual meaning. The ships in question (in all except a very few cases) could not be taken out of the cross trades either because they were of a type that precluded their employment elsewhere or because they were on the registers of the Dominions and outside the control of the British Government. This figure of 2.15 million deadweight tons represented what was always described as the 'bed-rock minimum' necessary to maintain the cross services. In fact it proved something considerably less than this minimum.

(iii)

British Shipping Budget as presented to the Cairo ('Sextant') War Conference¹ November to December 1943, showing the distribution of British tonnage between the various services and the deficit to be made good by the United States

A. NOTE ON THE BUDGET AND ON THE VARIOUS FORMS OF AMERICAN HELP

It will be seen that the deficit was arrived at as follows:

(1) Certain blocks of tonnage were deducted from the total fleet and counted out of the reckoning. This tonnage falls into two categories:

- (a) ships that for one reason or another it was impossible to remove from their existing employment (e.g. the ships constituting the 'bed-rock minimum' (see p. 379, footnote 2, above) in the cross trades);
- (b) ships whose existing employment had been agreed or sanctioned at previous war conferences and was necessary to the fulfilment of the strategy laid down there (e.g. the ships permanently in the Mediterranean and permanently allocated to the Fighting Services).

(2) The average amount of tonnage estimated to be available throughout the period was then subtracted from the amount of tonnage estimated (again in terms of an average throughout the period) as needed to meet the demands.

The British deficit was thus simply the difference between total demand and total supply although the United States Chiefs of Staff often appear to have supposed that it was caused by the difference between demand and supply in the United Kingdom import programme only.

American help was distributed among the various British services as the convenience or the interests of each side dictated, although the British never made any claim on it for combined operations except when they themselves could not provide ships of the right type. Mainly it took three forms:

- (i) United States ships transferred to the British flag on bareboat charter (the SAM ships).
- (ii) United States ships allocated to carry imports to the United Kingdom (this form of help was usually referred to as the United Kingdom Schedule).
- (iii) United States ships allocated to carry British military cargo for maintenance purposes, and to supply the overseas territories. (These ships were known as the 'customaries'—southern, eastern, etc., and 'flexible'.)

It was of the essence of the budgeting procedure that the final United Nations' surplus or deficit appeared in the United States budget, for since the purpose of the procedure was to cut the coat according to the cloth, any 'unmanageable' deficit shown by the British budget, and accepted by the United States as 'unmanageable', had to be made good from United States resources.

¹ This budget has been selected for transcription because it is more easily intelligible than the one produced at the previous conference ('Quadrant'). No British shipping budget was presented to the Chiefs of Staff at the Washington ('Trident') Conference discussed in the text, although data assembled in much the above form must have existed.

B. THE BUDGET

(1. Total shipping available is estimated to be as shown below:

Date	(Million deadweight tons)		Estimated tonnage at date
	Estimated losses (at rates approved by C.C.S.) during preceding quarter-year	Estimated new construction and transfers to British flag during preceding quarter-year	
31st December 1943	..	..	20.30
31st March, 1944	0.55	1.10	20.85
30th June 1944	0.55	1.00	21.30
30th September 1944	0.55	0.55	21.30
Average for first half of 1944	20.85	Average for third quarter of 1944	21.30

2. The estimated employment of this shipping is as follows:

	(Million deadweight tons)	
	First half of 1944	Third quarter of 1944
Estimated tonnage available	20.85	21.30
Deduct average allowance for tonnage awaiting or undergoing repair	2.60	2.65
	<u>18.25</u>	<u>18.65</u>
<i>Deduct</i>		
(1) United Kingdom coastal tonnage	0.45	
(2) Tonnage permanently abroad engaged in maintenance of war-making capacity of areas of British responsibility	2.20	
(3) Non-importing naval and military tonnage (including troopships):		
Naval commissioned vessels	0.60	
Naval, military and R.A.F. auxiliaries	0.60	
Vessels carrying military cargoes and permanently in Mediterranean and Indian Ocean and vessels detained in North Russia	0.50	
Troopships and L.S.I.(L)s	1.35	
	<u>3.05</u>	
	5.70	5.70
	<u>12.55</u>	<u>12.95</u>
Tonnage required (expressed as an average over the period):		
(1) for the maintenance of the war-making capacity:		
(a) of the United Kingdom after allowing for [imports in ships at (1) (b) and (2) (a) below] and for imports for British account at the average rate of 1,500 tons per ship in scheduled 'Bolero' sailings ¹	7.40	7.60
(b) of areas (other than United Kingdom) of British responsibility additional to item (2) above	0.90	0.90
(2) for military commitments:		
(a) build-up and maintenance as in (A) of Part I ²	5.90	5.90
(b) in respect of Allied operations as in (B) of Part I ³	1.05	1.40
	<u>15.25</u>	<u>15.80</u>
Net deficit	2.70	2.85

Source: Ministry of War Transport

¹ i.e. under the arrangement (see Appendix LXI (i), p. 382, below) by which, to the benefit of both parties, the high measurement cargo of the American forces was combined with the close weight cargo of the British import programme.

² i.e. for Mediterranean, India, Persian Gulf, and aid to Turkey and Russia.

³ i.e. for requirements within the Mediterranean and for 'Overlord'.

APPENDIX LXI

Attempted assessment of the extent of the British and American shipping deficits at the Washington ('Trident') War Conference, May 1943

(i)

The British deficit at the Washington ('Trident') Conference

At the opening of the conference the British had a deficit:

- (a) of ninety-five sailings on military account to the Indian Ocean area in the last six months of 1943 (excluding sailings in respect of 'Anakim');
- (b) of sixty sailings, in the same period, on the North Atlantic, this being the amount by which, it was estimated, the American 'schedule' would fail to meet the United Kingdom's requirements for imports.

Both these deficits were written off, the first by cutting requirements, the second by an arrangement with the Americans by which the bulky cargo of the United States troops was to be combined with the heavy cargo for the United Kingdom import programme, thus making a more effective use of both British and United States ships.

It is estimated that the amount of tonnage in continuous employment represented by these 150 sailings was as follows:

	<i>Million deadweight tons</i>
Ninety-five sailings to the Indian Ocean area in six months (or an average of approximately sixteen a month) which (assuming a ship of 8,000 deadweight tons and five months for the round voyage) represents in continuous employment	0.6
Sixty sailings on the North Atlantic in six months (or an average of ten a month) which (assuming a ship of 8,000 deadweight tons and 2.5 months for the round voyage) represents in continuous employment	0.2
	<hr/> 0.8 <hr/>

(ii)

The United States deficit at the Washington ('Trident') Conference

This deficit, as shown on page 368 above, was 336 sailings to unspecified destinations in the last six months of 1943. It was reduced by the end of the conference by 60 per cent. to 135 sailings (see Appendix LX (i) and pages 371-372 above).

The requirements which these 336 sailings represented must have been either in respect of all the various United States services, or in respect of the most contentious ones ('Bolero' and 'Husky') or in respect of a number somewhere between these two extremes.

If one assumes the first hypothesis then (allowing an average round-voyage time of four months,¹ and an average ship of 10,000 deadweight tons) the amount of tonnage involved must have been an average of about 2.2 million deadweight tons in continuous employment throughout the period, and the elimination of 60 per cent. of the deficit must have resulted in a gain of about 1.3 million deadweight tons.

If one assumes the second hypothesis (that the deficit was in respect of 'Bolero' and 'Husky') then the deficit must have represented about 1.9 million deadweight tons in continuous employment throughout the period and the removal of 60 per cent. of it a gain of about 1 million deadweight tons. This conclusion has been arrived at as follows:

Shipping requirements for 'Bolero' and 'Husky' as finally presented to the Washington Conference:

		<i>Sailings</i>
'Bolero'		539
North Africa		354
Mediterranean operations		90
Assume 336 sailings distributed in the same proportions:		
'Bolero'		184
North Africa		121
Mediterranean operations		31
Then amount of tonnage involved:		
		<i>Million deadweight tons</i>
'Bolero'	$\frac{184 \times 2.5 \times 10,000}{6} =$	0.8
North Africa	$\frac{121 \times 3.5 \times 10,000}{6} =$	0.7
Mediterranean operations	$\frac{31 \times 3 \times 10,000}{6} =$	0.2
		—
		1.7

¹ The writer has been told that the British never knew the round-voyage times for United States ships. This figure is therefore merely an assumption.

APPENDIX LXII

Approximate amount of United States help to British programmes in terms of tonnage in continuous employment

The figures opposite represent the principal forms of help provided by the United States to British shipping services—that is the 'customaries' and the 'United Kingdom schedule' (in which, for the purpose of score-keeping, was included the equivalent of any ships allocated to British operational programmes) and the SAM ships. The figures excluded allocations of coasters, tugs, lighters, etc., the cargoes carried in United States Army ships (the 'Bolero' ships) on British account which, as far as the writer is aware, represented no loss to the United States since the ships must otherwise have sailed light, and the help from Canadian ships purchased by the United States and transferred by them to the British on bareboat charter on lend-lease terms. Eighty-nine ships, of 10,000 deadweight tons each, were delivered on these terms, between February 1942 and March 1943, under the Hyde Park agreement of January 1942. Twenty-four were sunk—three in the summer of 1942, sixteen in 1943 and the rest in 1944, apart from one sunk in 1945. If these so-called FORT ships were added to the figures of United States help given opposite, the totals would be increased by, roughly, 0.3 million deadweight tons in 1942 and 0.7 million deadweight tons in the following years.

On the other hand it should be noted that as a result of the JAY ships and Hogmanay agreements concluded in the second half of 1942 the United States were allocated between $\frac{1}{2}$ and 1 million deadweight tons of Dutch and Norwegian shipping in derogation of the principle, observed hitherto, that the ships of the European Allies should not only be chartered by the British but should form a part of the British shipping pool.¹ This figure, therefore (assuming, as seems likely, that it was not significantly diminished by losses), might legitimately be deducted from the figures of United States help shown opposite.

No deductions have been made in the calculations opposite for the help provided by British cargo-ships from time to time to United States programmes, for no complete figures appear to have been kept. The figures opposite also exclude troopships, for the loan of which the United States was, on balance, heavily in debt to Britain.

The figures put on the various round-voyage time are in a number of cases merely guesses, based on the distances involved and the figures quoted, in other cases, in the files of the Ministry of War Transport. Particularly for 1943 the figures used are likely to be unreliable for the reasons stated opposite. The writer has been informed on good authority that the round-voyage times are likely to be on the high side and that the total of United States help is in consequence if anything an over-estimate for this as well as for the other reasons given above.

¹ See Chapter X, p. 262 above.

*Approximate amount of United States help to British programmes
July 1942-June 1945*

	Assumed round-voyage time	Second half 1942 (annual rate)		Calendar year 1943		Calendar year 1944		First half 1945 (annual rate)	
		Average number of sailings a month	Tonnage continuously employed	Average number of sailings a month	Tonnage continuously employed	Average number of sailings a month	Tonnage continuously employed	Average number of sailings a month	Tonnage continuously employed
U.K. schedule	months 2.5	—	—	68.6	mill. d.w.t. 1.72	46.0	mill. d.w.t. 1.15	38.7	mill. d.w.t. 0.97
Eastern customaries:									
Indian Ocean area	.. ¹	20.0	1.60	18.2	1.14	15.4	0.85	20.2	1.11
Central Mediterranean and North Africa	3.0	—	—	2.4	0.07	4.5	0.13	6.5	0.20
Southern customaries:									
Australia	5.5	2.3	0.13	2.8	0.15	2.75	0.15	3.5	0.19
South and East Africa	5.5	2.2	0.12	3.9	0.21	3.6	0.20	4.5	0.25
West Africa	3.0	3.0	0.09	2.8	0.08	2.2	0.07	2.2	0.07
B.L.A. (for British relief programme to N.W. Europe)	2.5	—	—	—	—	—	—	9.8	0.25
Total U.K. schedule and customaries	—	—	say 1.9	—	say 3.4	—	say 2.5	—	say 3.0
SAM ships ²	—	—	—	—	0.2	—	1.4	—	1.7
Grand total	—	—	1.9	—	3.6	—	3.9	—	4.7

Source: Table compiled by the author from data in the Ministry of War Transport

¹ It has been assumed that these ships went round the Cape in 1942 (because of the heavy sinkings in the Caribbean which presumably precluded the use of the Pacific route) with a round-voyage time of eight months. The writer does not know which routes were followed in the first seven months of 1943 but has assumed an average round-voyage time of seven months. In the last five months of 1943, and in subsequent periods, when the Mediterranean was open, the writer has assumed that the ships sailed on this route, with a round-voyage time of five and a half months.

² The SAM ships, of which ten had been sunk (at unspecified dates) by August 1944, came in as follows. A deduction of roughly 7 per cent. has been made for repairs.

January	1943	15	April	1943	16	July	1943	14	October	1943	13
February	1943	15	May	1943	17	August	1943	15	November	1943	13
March	1943	15	June	1943	17	September	1943	15	December	1943	14

CHAPTER XVIII

THE PROGRESS TO VICTORY IN THE WEST

(i)

The 'not unmanageable deficits' and the search for economies. May to August 1943

THE SHIPPING BUDGETS drawn up at the 'Trident' Conference had shown surpluses for the second and third quarters of 1944, and a 'not unmanageable deficit' for the preceding quarter and for the last half of 1943. A 'not unmanageable deficit', though preferable to a deficit that is 'unmanageable', is not a comfortable state of affairs, and was particularly uncomfortable for the British who must be its principal victim. Yet what had already come to light, and still more what was suspected, about American methods of managing ships made it seem likely that if only the Americans could be induced to be less wasteful there would be enough for everyone. The Prime Minister evidently succeeded, temporarily at any rate, in convincing the President of this fact, for at the end of the conference the heads of the two Governments jointly put on record that 'as the major portion of our combined shipping resources is employed on military work, notable gain for additional operations might be made by subjecting military overseas supply requirements of both countries to an immediate scrutiny, conducted by the appropriate officers of our two armies'. The President accordingly instructed the United States Chiefs of Staff to undertake this task in Washington, in consultation with the chairman of the Munitions Assignment Board; the Prime Minister undertook to set up a Cabinet Committee to institute a similar enquiry in London.

The British committee was composed, with one exception, of civilians. Its members, with the Minister of Production in the chair, were the First Lord of the Admiralty, the Secretaries of State for Air and War, the Paymaster-General, the Minister of War Transport and one Air Marshal. By August 1943, with the help of a working committee consisting of serving officers, and of representatives from the Ministry of War Transport and from the Paymaster-General's office, they had produced a document, of fifteen pages, designed to

show in outline the problems involved in building up and maintaining the armies in North Africa, the Middle East and India, and the means which had been discovered for doing so at the minimum cost in ships. The result was a formidable picture of the complications involved in supplying forces in established theatres of war, not to mention the still more formidable problems, with which the survey was not concerned, of planning and effecting their transportation to the beaches of hostile territories, and of maintaining them thereafter until major ports had been captured and brought into working order.

Here in this document were set out the extraordinary tasks, unimaginable before the event, imposed upon the British people by the German conquest of Europe and by the need to fight, at huge distances from the centres of production, with modern armies in territories where conditions of life and transport were often not markedly different, and sometimes did not differ at all, from those of the Middle Ages. Vast development work had had to be undertaken; ports had had to be opened or improved, railways and pipe-lines laid or extended, air-fields and depots constructed—all with material shipped for the greater part across thousands of miles of ocean; vast quantities and varieties of supplies had had to be transported for the Fighting Services—in the Middle East 273,000 different items of equipment were held in ordnance depots—vast complications had arisen in the endeavour to arrange that all these things should arrive at the right times and places, in quantities sufficient but not excessive, and in ensuring that their provision and movement did not unduly interfere with the needs of the civil populations in the areas concerned and in other parts of the British Commonwealth.

In a problem so intricate, on so grandiose a scale, and at the mercy of so many uncontrollable hazards, there could not, the survey pointed out, be any rules of thumb, except at a prohibitive waste of shipping and other resources. 'The variable factors are so many in number and so wide in extent that each case must be dealt with on its own specific merits.'

Yet—and here it appeared was the triumph—it had been discovered that there were 'certain basic . . . principles' which if applied could in all cases greatly reduce the possibilities of waste. The control exercised by the Ministry of War Transport over all merchant ships; its practice of combining military and civil cargoes in the same ships, and of predominantly military and predominantly civil services in the course of the same round voyage; the techniques that had been invented for packing and stowing military cargo and particularly vehicles—here were fruitful sources of economy for which, in the growing partnership between the shipping and the military authorities, the credit went chiefly to the civilians. The military authorities,

on the other hand, took pride to themselves for the savings—for whose necessity they had been bitterly complaining only a short while before—that they had been driven to when the sailings to the Indian Ocean area were cut. The various theatre commanders, the survey pointed out, had learned to work to priority programmes, as the civilians had long worked. They were told how much shipping-space they could have, which the staff of the theatre then divided up on the lines of a Dutch auction. Admittedly, the survey said, the stringency in the spring of 1943 had been uncomfortably severe, nevertheless it had not been crippling and because of it 'the Middle East Command has developed a wealth of administrative experience'. Altogether, in fact, 'experience in this war has shown that by skilful administration and searching scrutiny of all requirements, substantial economies in tonnage can be achieved and much valuable shipping thereby made available for essential purposes'.

Thus set out, how majestic appeared the problems which the British people had had to face and how impressive their achievements; and this indeed was the British Government's idea;¹ it was hoped that the Americans would be impressed.

Some British authorities, however, had other ideas. In the spring of 1943 Sea Transport Division of the Ministry of War Transport, which was responsible for meeting the needs of the Services for ships, was in process of being reorganised, for a number of the defects that had come to light two years earlier² had still not been remedied. The new incumbents, all of whom were ship-owners, were convinced that 'it is a very necessary piece of work that the Committee has been asked to undertake and that . . . some important discoveries will be made'. It took, they said, new men like themselves 'to get down to a thorough examination of the military programmes to see what they all mean'.

They were, however, immediately overwhelmed by more urgent tasks. They had to provide the ships for the invasion of Sicily. One of their number was sent to the Mediterranean in June, with a team of assistants, to investigate—as it turned out in effect to set up—the necessary local Sea Transport organisation.

Ninety-eight deep-sea cargo-ships and nearly the same number of coasters³ under British management took part in the assault and immediate build-up phases of this operation. All of them had to be

¹ At the first meeting of the British committee on the 10th June 1943 it was 'explained that the main purpose of this scrutiny was to show up the excessive scales of initial equipment and maintenance used by the U.S. Forces for overseas operations and their extravagant use of shipping. . . . By showing clearly the lessons in economy of shipping which we had learned during the course of the war, we might help the Americans to profit by our experience and to follow our example'.

² See Chapter IX, p. 215 above.

³ To be exact there were seventy-four British and ten French coasters.

specially fitted out for their tasks, most¹ with the aid only of such port facilities as existed in the Middle East. They had to be supplied with all kinds of curious equipment that merchant ships do not ordinarily carry; the crews had to be instructed how to use it; the various relevant provisions of the merchant shipping Acts had to be altered—where this had not been already done to meet earlier emergencies of a similar kind—to make these peculiar practices lawful; for merchant ships, even though engaged on warlike operations, were still merchant ships, bound by the complicated code evolved in the course of a century to ensure the safety of crews, passengers and cargo. The cargo had to be loaded in such a way that it came out in the order that was required for battle;² ballast for the return voyage had to be supplied beforehand since none would be available in the battle areas; innumerable other details had to be attended to, and since the greater part of the British merchant fleet, unlike the American, had been built in peace for specialised peacetime needs, British ships were of many different types and sizes and each made her own particular contribution to problems that would have been formidable enough had all been identical.

If all these problems were to be coped with even efficiently enough to prevent serious mishaps, intimate and continuous contact was necessary, not only between the Sea Transport organisation which controlled the merchant ships on military service, the Army whose supplies they carried and the Navy which escorted them, but also between all these authorities and the organisations in the ports; for if the movement of supplies inwards to the base depots in the theatre were not properly co-ordinated with the outward movements to the battle areas, and both with the claims on port facilities of the ships in need of repair, there would be at the best that familiar manifestation of disorder—ships wasting their time in idleness while waiting to discharge or load—and at the worst a confusion which would prevent the necessary movement of supplies and thus bring the operation to a halt.

These were the characteristic problems of amphibious operations in the West, whose successful launching presupposed the most

¹ i.e. all the coasters and sixty of the deep-sea ships.

² These problems had first presented themselves before the North African campaign when the following techniques (in the words of the report by Military Cargo Branch) were devised for dealing with them: '... cargo of all types had to be stowed in the assault ships in such a manner as to be capable of being speedily discharged in the precise order required by the Force Commander in relation to his plan of action. This form of loading for vehicles, guns and stores was described briefly as "tactical" loading, and it necessitated the introduction by Military Cargo Branch ... of a more detailed system of assessing, in particular, the vehicle capacities of individual ships. The clearance heights in 'tween decks became a matter of major importance. Builders' general arrangement plans, plus general information supplied by Sea Transport Officers regarding the dimensions of ships' compartments, which had previously been used for estimating vehicle capacities, were found to be inadequate for the purposes of tactical loading.'

intricate organisation at the base. They had first had to be tackled at the time of the North African campaign. But the British ships employed in the invasion of North Africa had been based on this country, while the greater part of those employed in the invasion of Sicily were based in the Mediterranean where, as the Sea Transport representative discovered when he got there, all the authorities concerned largely lacked the necessary experience.

In some quarters he found the belief that the light of nature might provide a substitute. 'What a hope!' he said. He found no proper co-operation between the shipping and Service authorities; no proper co-ordination—sometimes no co-ordination at all—between one set of military planners and another; no proper appreciation, either on the part of the Services or of the local shipping representatives, of the magnitude of the shipping problems. 'The system of planning operations which was in force at G.H.Q. Cairo', he concluded, 'was not satisfactory either from the shipping angle or from the point of view of the Services concerned.'

Yet in the end all the necessary ships were provided, adequately equipped and loaded and available at the right times. On the 13th October 1943 the headquarters of the Ministry in London produced a summary of what had been achieved up to date in Mediterranean operations. 'It has proved possible', the report noted laconically,

- (i) to cover the requirement of "Sicily", "Buttress", "Goblet", "Barracuda", "Brimstone", "Avalanche", "Slapstick", etc., throughout the period during which the merits and disadvantages of those operations were being debated.
- (ii) to meet the requirements of ["Husky"¹] "Avalanche"² (including assistance to the War Shipping Administration) and "Slapstick",³ when those operations finally became firm.
- (iii) to meet the numerous other operational and internal maintenance requirements of the Mediterranean area, including the Middle East.'

All this had been done even though the requirements had 'remained indefinite until the last moment, as regards forces to be employed, dates and loading ports'; it had been done, as far as could be estimated, with a waste of ships' time, clearly demonstrable as unnecessary, that was only minute;⁴ the Service authorities, who had looked, to start with, on the Sea Transport organisation as their agents—but whom the necessities of the case and the persuasiveness

¹ Invasion of Sicily.

² Salerno landings.

³ Taranto landings.

⁴ This report, however, was not concerned with delays in port which appear to have been considerable although many at any rate seem to have been inevitable. An investigation on this was undertaken later.

of the Ministry's chief representative had convinced of the error of their ways—were 'most fulsome in their praise and thanks'. This was exceedingly gratifying; co-operation between the Services and the civilians had been strengthened and extended, boding well for the more arduous tasks that lay ahead; nevertheless the invasions of Sicily and Italy, momentous though they were, formed only a part of a much vaster problem. While it was estimated in August that the amount of dry-cargo tonnage that would be required for Mediterranean operations throughout the rest of the year was about 3½ million deadweight tons,¹ the total amount that would be required to carry military cargoes was put at nearly 7 million deadweight tons² or about 900 ships. If one reflected on the many million tons of military cargo moving round the world in these 900 ships, what confidence could one have, particularly in view of what had come to light in the Mediterranean theatres, that all these movements were properly co-ordinated, and that no more cargo had been despatched than was strictly necessary?

The Sea Transport authorities did not have much confidence. In June they had felt 'convinced that so far only the fringe of a very big subject has been touched', and that 'major economies' were still possible. By August they were somewhat discouraged. The problem, they confessed, 'is one of immense complexity'; 'a detailed examination of military overseas supply requirements on a statistical basis is impracticable owing to the widely varying circumstances of each case'. Indeed, even if the Services had been willing to disclose all the necessary information, the requirements could not have been screened without a detailed knowledge of the plans in all the various theatres and the hazards to which they were exposed. It was clearly impossible that the military requirements—nearly as large at this time as the civil, and larger later, sponsored by less amenable authorities, and remote from the various kinds of commercial experience mustered in the Ministry of War Transport—should ever

¹ This figure has been taken from the British budget drawn up at the 'Quadrant' Conference. The budget allowed for 0.9 million deadweight tons for 'operations' (i.e. the Mediterranean lock-up) and an average of 64.25 sailings a month for maintenance from the United Kingdom and of 38.25 from the United States. It has been assumed that on an average the ships were 8,000 deadweight tons and that round-voyage times were 3.0 and 3.5 months respectively.

² i.e. the figures given in the British budget at 'Quadrant' for tonnage required for military operations and maintenance (5.25 million deadweight tons plus the figure (roughly 1.6 million deadweight tons) given in the United States budget for military cargo-ships required on British account other than for the United Kingdom import programme. It should be noted (i) that the figure of 5.25 million deadweight tons of British shipping excludes the British tonnage permanently allocated to the Services (3.1 million deadweight tons); (ii) that all of this 5.25 million deadweight tons, apart from the 0.9 million deadweight tons constituting the Mediterranean lock-up, was available for carrying civil cargo on the homeward voyage; (iii) that of this 5.25 million deadweight tons only about 1½ million deadweight tons was directly under the control of Sea Transport Division. Shipments of military cargo for maintenance purposes were made largely in liners on the berth, Sea Transport merely booking the space.

have been subjected to the kind of scrutiny that was applied to the civil programmes.

In these circumstances the Sea Transport authorities wondered how wise it was to lecture the Americans. Their scruples may have been misplaced. Whatever the defects in the Sea Transport organisation in 1943 there was no one—certainly not the American civilians in the War Shipping Administration—who would have wished to deny that if the Americans had had any comparable arrangements a vast quantity of shipping would have been saved. There were however more compelling reasons for not delivering the lecture than those that Sea Transport Division could supply.

The first was that the deficits revealed by the 'Trident' budgets in May had virtually disappeared by the time of the Quebec ('Quadrant') Conference in the following August. Admittedly they might at any moment re-emerge. As the military plans and the estimated cost of meeting them changed, the deficits blew up and subsided, within a matter of weeks, days or even hours, like a squall in thundery weather. In August, however, when the British survey of the problems involved in meeting the overseas military requirements was completed, there was, for the moment, calm.

In the second place the American survey, it appeared, had not even been begun. The President's idea of inviting the suspected delinquents to co-operate with him in exposing their own delinquencies had not been a happy one. As Lord Cherwell wrote to the Prime Minister: 'in view of the improved shipping position and the apparent hopelessness of getting anything done in America I agree . . . that there is no object in your sending the report to the President'. The course of future events suggests that this was the only possible decision in the circumstances. Nevertheless it was to have unfortunate consequences.

(ii)

The 'Surpluses' and the Invasion of the West

The budgets drawn up at the 'Quadrant' Conference in Quebec in August 1943 showed only a minute deficit for the last quarter of 1943 and large surpluses for each of the first two quarters of 1944, but when the shipping situation was examined again at the 'Sextant' Conference, held in Cairo in the following November to December, it was at the start in 'an atmosphere of the deepest statistical gloom'. Suddenly all the surpluses vanished and were replaced by deficits; and although, within a fortnight, as the Services reformulated their requirements and the statisticians did their sums over again, the

deficits in their turn vanished and the surpluses reappeared, their proportions were so small and the hypotheses on which they rested so uncertain that no one could have much confidence in them.

It was with these results that the last war conference before 'Overlord' planned the deployment of the United Nations' merchant fleets for the period when the invasion of the West was to be prepared and launched. Besides the shortage of landing-ships and landing-craft, which was the most intractable shortage, it appeared that even as far as could be foreseen—and on this as on other occasions amphibious operations came increasingly to require more ships as the plans progressed—there would only be enough merchant shipping by a narrow margin. Yet this conclusion was the result not of economic or physical facts, but of personal and political relationships and of the way in which the budgets were drawn up—of the United States Chiefs' of Staff suspicion of the British, and indeed of all, civil programmes; of the War Shipping Administration's belief that the concessions made before and during the 'Trident' Conference represented all, and indeed more than, the British had a right to expect; of the procedure adopted at the 'Trident' Conference and followed at the later conferences, whereby, as the statistician who drew up the British budgets said in his report on the 'Sextant' Conference: 'no figures showing the estimated [United States] shipping situation were laid before us until just before dawn broke on the usual all-night terminating meeting', so that the British had to make the best estimates they could, leaving it 'open to the [United States] Army and Navy to omit to state their requirements until the last minute and then to put them in at as high a figure as they like within the framework of the available tonnage'.

To restrain the United States Army and Navy was an extremely difficult task and might not have been possible in any circumstances at this stage of the proceedings. Nevertheless while before the 'Trident' Conference the British had usually been able to rely, although sometimes admittedly to no great purpose, on the support of the civil authorities of the War Shipping Administration, during the next six months this support was largely withdrawn. To an American writer who after the war composed a treatise on the work of the Combined Boards¹ it seemed that this state of affairs was due, directly or indirectly, to what had happened at the time of the Lyttelton Mission and afterwards, when the British Merchant Shipping Mission in North America had been overridden, and the negotiations which it was conducting disrupted, by the arrival successively of two plenipotentiaries from London. The Americans were accustomed in their own country to the spectacle of government

¹ S. M. Rosen, *Combined Boards of the Second World War*, Part II.

officials divided amongst themselves; they had come to suppose, however, that this normal feature of the American political scene had no counterpart in British Government circles. For some time they had observed that the many officials of His Majesty's Government in Washington usually spoke with one voice. At first this seemed suspicious. But it seemed still more suspicious when, later, the British took to speaking with different voices. What could this mean except an attempt to conceal some of the relevant facts? It did indeed appear that some of the facts were being concealed.

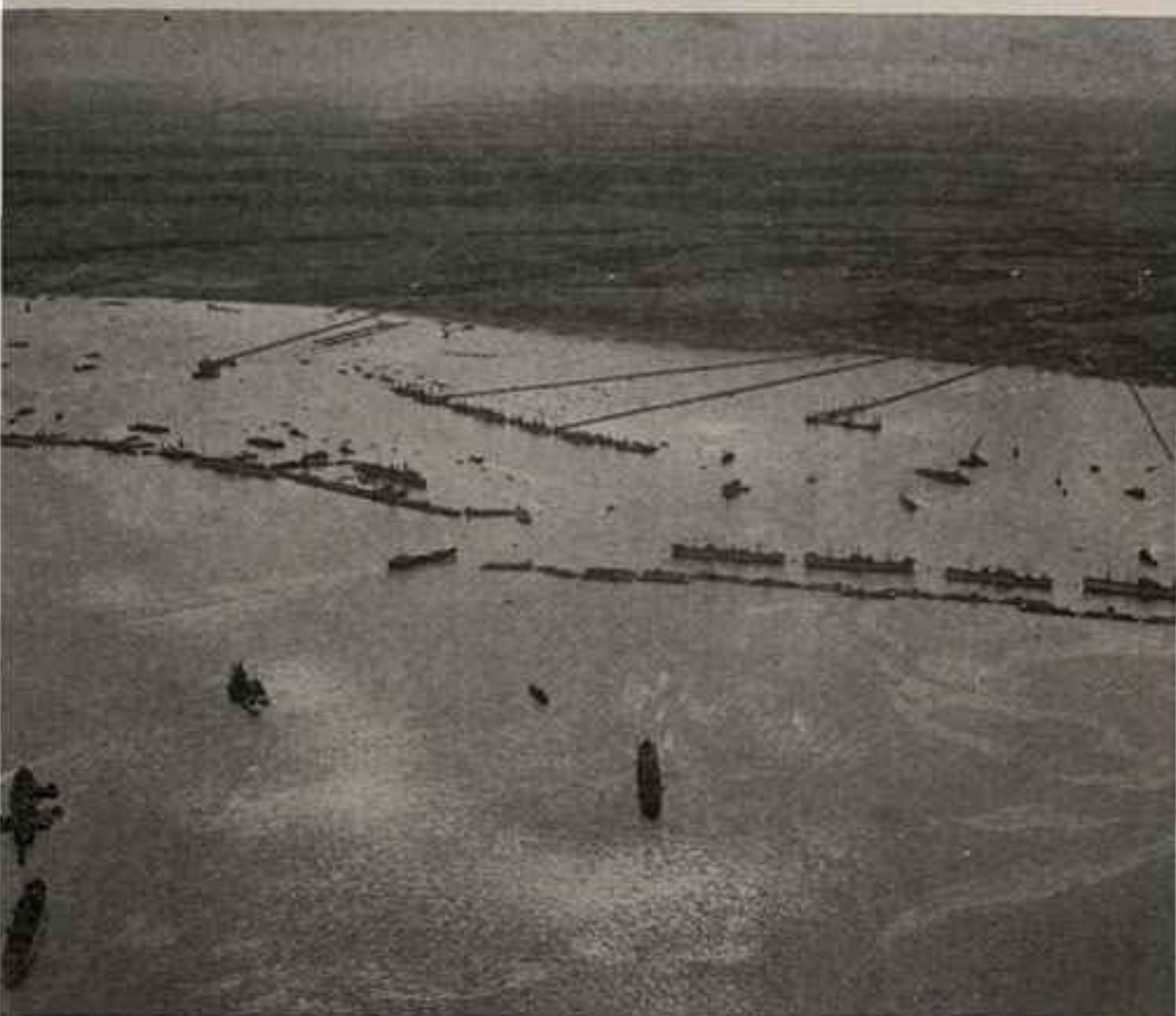
When the first British shipping budget had been drawn up in April 1943 it had been assumed that the average amount of British tonnage in continuous employment in the second half of 1943, after allowing for repairs, would be 15.35 million deadweight tons. In the event, largely because of the unforeseeable decline in losses, it appears to have been about 1 million deadweight tons more.¹ This windfall permitted (with the War Shipping Administration's consent) a small increase above the estimates in the United Kingdom's import programme, but was used for the greater part (apparently without American consent) to augment the tonnage in the cross trades whose needs had been insufficiently provided for in the 'Trident' budgets. The 'Trident' budgets had allowed for 2.15 million deadweight tons in continuous employment in the cross trades. The 'Quadrant' budget had increased this figure to 2.25 million. In November the amount of tonnage actually employed was 3 millions.

To the War Shipping Administration this seemed to be the result of a British manoeuvre to safeguard their post-war shipping position. Why, they repeatedly asked at the 'Sextant' Conference, were there so many British ships in the cross trades? What were they all doing? Were they really needed? Though the British now had much more information on the subject than they had had at 'Trident'—the first comprehensive estimate of the needs of the overseas territories had been got out in October, at roughly the same time as the first satisfactory analysis of the employment of tonnage on the cross routes—it was impossible to give convincing answers to all the questions, although with the Indian famine approaching its climax it might have been supposed that the questions were superfluous. In the end the British won their case—in the 'Sextant' budget the tonnage allocated to the cross trades in 1944 was 3.1 million deadweight tons²—nevertheless they did not allay all the suspicions.

¹ The actual average amount of British tonnage in employment in the second half of 1943 was 19.3 million tons, from which 13.5 per cent. must be deducted for repairs and 0.4 million deadweight tons for the SAM ships which were transferred to the British flag and for which the Committee had made no allowance.

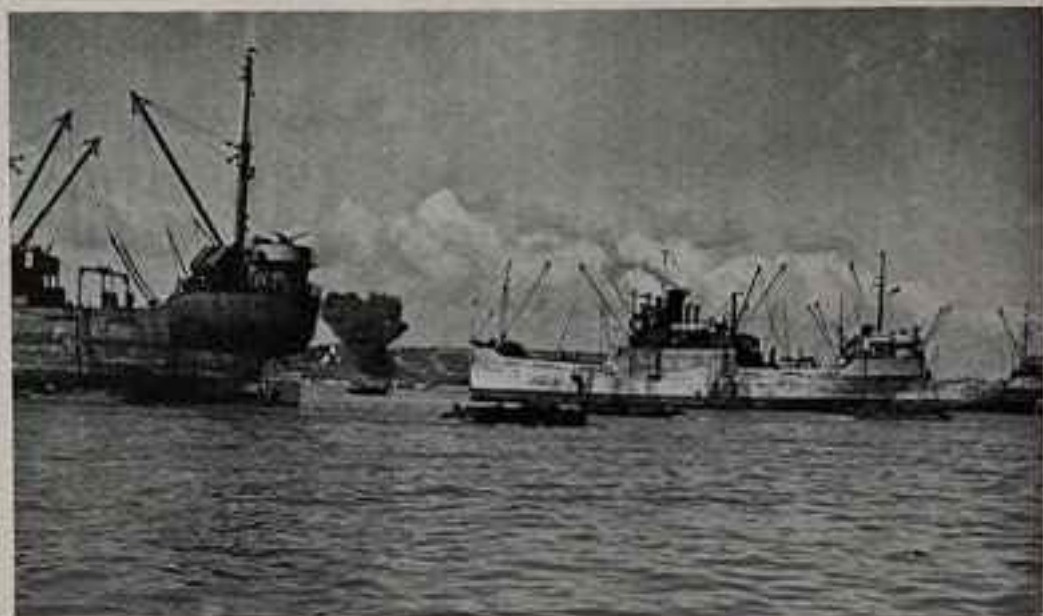
² See Appendix LX (iii), p. 380, in which the 'Sextant' budget is transcribed and which shows the allocations to the cross trades divided into two parts—ships permanently and temporarily abroad.

INVASION OF EUROPE



'Mulberry' harbour

INVASION OF EUROPE



Coasters discharging into D.U.K.W.S. in the 'Mulberry' harbour at Arromanches



Beached coasters discharging into D.U.K.W.S.

Because of the suspicions, which had been maturing for some time, the War Shipping Administration throughout the summer of 1943 had been taking the line that though it was morally obliged to fulfil the undertakings it had given in the spring to provide a specified amount of help to British programmes throughout the rest of 1943, it would fulfil these undertakings in the spirit in which (as it supposed) they had been exacted. The British had said that what they desired above all was certainty; they had demanded a 'schedule'; the 'schedule' had been drawn up and the War Shipping Administration proposed to observe it—to the letter but not beyond, and for 1943 only. After that, the legitimacy of all the claims must be reconsidered, and if the British chose to assert that the cross trades needed more ships than the War Shipping Administration held proper, even though it could not prove the point, then they must have fewer somewhere else.

There followed while this frame of mind persisted a troublesome period, which reached its most acrimonious phase round about the time of the 'Sextant' Conference, when a vast amount of labour on both sides of the Atlantic was applied to the task of 'keeping the score'. This proved a difficult undertaking. The amount of help to be accorded to the United Kingdom import programme had been expressed at the 'Trident' Conference in terms of a specified number of sailings a month, but the sailings had been designed to yield a specified volume of imports. When it came to keeping the score, which was the proper criterion—the imports, the sailings, or, since not all United States ships were the same size, the deadweight tonnage? And if it were the deadweight tonnage then allowance must be made for the fact that a ship's cargo-carrying capacity varies according to whether her summer or her winter load line is in use. Again it naturally turned out impossible to observe exactly the proportions in which American help had been distributed in the 'Trident' budgets among the various British services. More help, it emerged, was needed on some routes, and less on others, than the original bargain had laid down. But some routes were less attractive than others¹ and the War Shipping Administration in consequence often opposed the suggested switches. When the British arguments became too strong to resist, the switches had to be preceded and followed by elaborate calculations, for the rates of loss and the incidence of damage and the length of the round voyage varied from route to route. Again the help the British derived from the SAM ships had to be deducted from the help due to them from the

¹ For example, the Americans preferred employing their ships on the Atlantic to sending them to the Mediterranean which at this time was more dangerous and where the ports were congested. The British, on the other hand, found it difficult to switch ships from the Atlantic to the Mediterranean because most of them lacked the qualifications necessary for military operations.

'customaries',¹ but the SAM ships were on bareboat charter and in the 'customaries' the British only had use of the space, so that it was hard to get the calculations on to a common basis; from the help due to the United Kingdom import programme had to be deducted the cargoes on British account that came (at no cost to the Americans) in their military cargo-ships (the 'Bolero' ships) that carried the equipment for their forces in this country. These and a multiplicity of other problems arose to tease the people required to work out the sums. The complications and technicalities indeed became such that, as one official once observed, a whole treatise, 'equipped with a considerable glossary'² would be needed to explain them. No wonder that the Minister said that both sides found the whole state of affairs 'very trying'.

For the British indeed it was worse than trying. Since the end of 1941 there had never been such a period of expanding horizons for the civilian programmes as in 1943. United Kingdom imports were over 26 million tons, and for all the overseas territories the shipping services were increased—not in all cases to the desired extent but in all save India to an extent sufficient to avert the threat of disaster. This happy state of affairs was not to occur again before the war was virtually over. For the overseas territories, it is true, because the British won their point over the cross trades at the 'Sextant' Conference, it was to continue throughout the first half of 1944; for the United Kingdom, on the other hand, it appeared at 'Sextant' that one thing or another—the limitations set by port and transit capacity in the United Kingdom, or the claims of the United States Services which the War Shipping Administration could or would not resist, or each in succession, might reduce imports in 1944 much below 26 million tons.

At the time of the 'Sextant' Conference, and increasingly during the next six months, the scene in the United Kingdom was dominated by the D-day preparations, and it appeared that while the invasion fleet was being got ready, and for some time after the invasion had been launched, this country's ability to import must be limited, as in the winter of 1940-41, not by the supply of deep-sea dry-cargo ships, but by space in the ports and on the roads and railways.

It is true that the armada that set sail on the 6th June 1944 was the largest the world had ever seen. If every contrivance that sailed or was towed to France were counted in, the numbers of ships and craft of all descriptions amounted, it has been estimated, to some 7,000.³

¹ I.e. the ships carrying cargo for the British to the Indian Ocean area and the Mediterranean (see Appendices LX (iii), p. 380, and LXII, p. 384 above).

² He proposed that this treatise should be entitled 'The Art of Score Keeping'.

³ This is the naval estimate.

But this number included all the naval ships used in the bombardment, all the escort vessels, all the minesweepers, all the ships sunk to form the Mulberries, all the barges and other ferry craft, the 216 tugs, and a miscellany of other ships and craft needed for other purposes than to transport the troops and their equipment carried, apart from merchant ships, in landing-ships and landing-craft specially constructed for amphibious operations and under naval control.

No merchant ships need have been employed if there had been enough of these landing-ships and landing-craft. Many of the purposes they were designed to serve—particularly the transport of tanks and vehicles, always the most troublesome components of military cargo—were ones for which merchant ships were not well suited; for tanks when they break loose in a merchant ship's hold can stave in the ship's side, and until one of the technical staff of one of the firms of cargo-liner owners hit upon the device of placing them on pedestals, they proved extraordinarily hard to secure; the task of distributing the vehicles among the ships of an invasion fleet, and of stowing them properly, had always been particularly difficult, because both the ships and the vehicles were of different shapes and sizes (so that there were many ships into which many of the technical vehicles, with their troublesome projections, would not fit) and because the various vehicles had to come out of the ships, complete with drivers, petrol and batteries in working order, in the precise sequence required for battle.

To have provided enough landing-ships and landing-craft, however, was outside the bounds of possibility, though if fewer had been required in the Pacific more would have been available in the West. As things were, merchant ships were not merely an adjunct to the operation, they were an integral part of it. They carried, it appears, not only large numbers of troops¹ but nearly half the tanks, guns and vehicles delivered to the British forces,² and all the other supplies described in the current terminology by the omnibus term of 'stores'.³ Nevertheless, in spite of the vital part which merchant ships thus played, the ocean-going cargo-ships (that otherwise could have been employed in importing into this country or in performing similar functions abroad) were not used for the invasion in large numbers—as numbers went in those days.

For the division of functions between one class of ship and another

¹ Some in troopships flying the Red Ensign and others (in large numbers during the assault and early build-up phases) in troopships converted to L.S.I.s and flying the White Ensign.

² See Appendix LXIII, p. 408.

³ i.e. everything not on wheels or tracks apart from petrol in bulk supplied by pipe-line (PLUTO).

that military needs and the various shortages dictated, assigned an important role to coasting ships. The small coasters could beach themselves and float off with the tide (although the advent of the DUKW¹ made this difficult and hazardous procedure much less necessary than had been feared); they could discharge much closer in to shore, thus making a smaller demand on tugs and ferry craft than the deep-sea ships that had to anchor farther out; they could use the small ports, both in this country² and on the other side, which the deep-sea ships could not enter. From the start it had always been supposed that the whole of the stores lift must be assigned to the coasters until a port capable of accommodating deep-sea ships was available in Western Europe. Before then, the task of the deep-sea cargo-ships was to carry the tanks and vehicles for which the coasters were unsuitable and the landing-ships and landing-craft insufficient. The deep-sea cargo-ships thus employed accounted for considerably over a million deadweight tons at the peak of the movement and for an average of about 1 million deadweight tons between the beginning of June and the end of December.³

One million deadweight tons of shipping sounds, no doubt, a formidable figure, yet it was less than 5 per cent. of the British-controlled fleet at the beginning of the year, and (because the voyage to France was so short) only about 17 per cent. of the amount that had been required (excluding American help) to supply the Middle East, Persian Gulf and India when the Indian Ocean sailings reached their peak in the summer of 1942.⁴ It was less than one-third of the amount by which British-controlled tonnage in the second half of 1944 exceeded the tonnage that had been available in the second half of 1943,⁵ and even so it was considerably larger than the forecasts made at the 'Sextant' Conference.

It is true that at the 'Sextant' Conference it appeared that if all the military demands, and not merely those for 'Overlord', were considered, the amount of shipping required by the Services must increase during the first three quarters of 1944 to approximately the same extent as the British-controlled fleet was expected to increase in

¹ An amphibious lorry which, though it had to be shipped over the greater part of the distance, could swim to shore from the point where a coaster could anchor, and could then proceed in the ordinary way on land.

² Thus easing the burden on the major ports.

³ The only available figures show that the amount of merchant tonnage, of 4,500 deadweight tons and over, employed in carrying military cargo for 'Overlord', reached its peak at 8th July 1944, when it was 1.7 million deadweight tons. It had fallen to 1.6 million deadweight tons by 5th August 1944 and to 0.8 million by 2nd September 1944. These figures, however, appear for various reasons to be not entirely reliable.

⁴ Assuming 100 sailings a month.

⁵ See Appendix VIII, p. 69.

the same period.¹ In other words, roughly the same amount of American help as in the second half of 1943—or a little less²—would suffice to maintain all the civil programmes at the existing levels. But supposing the British were granted this amount of help would they be able to accommodate the cargoes that would be dispatched to the United Kingdom? This was the great conundrum.

Though all the ports in the United Kingdom would be open, it was realised that the D-day preparations, and the operation in its early stages, must place a burden on the port and transit system of this country far heavier than it had had to bear in the winter of 1940 to 1941 when it had nearly broken under the strain. A vast amount, it is true, had been learned since then about how to operate ports and inland transport in war conditions, nevertheless there is a limit to what efficient organisation can achieve. From the attempts that were made at the end of 1943 to gauge the demands on the port and transit system to which the invasion of the West must give rise it emerged that the limit might easily be overstepped.³ There were the Mulberries to construct, the hundreds of naval and merchant ships to fit out or repair, the ships to accommodate that brought the United Kingdom's imports, as well as the American ships that

¹ The amount of shipping required by the Services for the second half of 1943 (as estimated at 'Quadrant' in August 1943) and for the first three quarters of 1944 (as estimated at 'Sextant' in November to December 1943) was as follows:

	<i>million deadweight tons</i>		
	<i>Second half 1943</i>	<i>First half 1944</i>	<i>Third quarter 1944</i>
On a permanent basis	3.10	3.05	3.05
For maintenance	4.35	5.9	5.9
For operations	0.9	1.05	1.4
	<u>8.35</u>	<u>10.00</u>	<u>10.35</u>

The estimates for the average amount of tonnage available in total (after allowing for tonnage under repair) were as follows:

	<i>million deadweight tons</i>		
	<i>Second half 1943</i>	<i>First half 1944</i>	<i>Third quarter 1944</i>
	16.75	18.25	18.65

² A little less because, since maintenance requirements were scheduled to increase, more military cargo-ships would have been available to bring back imports—but by even more devious routes, and thus less economically, than usual, for lack of cargoes in the Indian Ocean area. Hence the troublesome problem of what were known as the Indian Ocean ballasters (i.e. the ships that had to leave the Indian Ocean in ballast).

³ A great deal of evidence exists on this point. It was said, for example, on 13th November 1943, that 'it is the considered opinion of Port and Transit Control that it is out of the question to anticipate (sic) the ports of this country to stage the forecast "Bolero" and import programme during the months April to June [at this date 100 'Bolero' ships were expected in each of the months April and May and 120 in June; and the United Kingdom import programme stood at 12.85 million tons for the first half of 1944]. It is not easy to indicate by a precise figure the reduction necessary in order to make the port position bearable, but on the assumption that the "Bolero" programme must come in as forecast it seems that the United Kingdom import programme should not exceed more than 1½ million tons per month during April, May and June'.

brought the supplies and equipment for the United States troops that were based in this country. Berths had to be found for all these purposes; the inland traffic movements—the movements of American equipment inwards to the depots and outwards to the invasion ports, the outward movements of British military cargo, all the domestic freight movements, the vast movements of troops—had to be so adjusted that ships were not delayed, and the number of available berths in consequence diminished, and so that, in general, the task of preparing for the assault was not impeded, nor the operation held up once it had been launched. Roughly half the coasting fleet ordinarily employed in carrying coal and other commodities round the coasts of the British Isles was earmarked for the invasion so that—except in so far as makeshift arrangements could be devised,¹ and no one ever supposed that they could completely make good the loss of the coasters—the commodities that ordinarily moved coastwise must, if they moved at all, be transferred to the already overburdened railways.

All these problems were taken into account when the invasion was being planned, for its fate turned on them as much as on the provision of the necessary ships whose numbers in fact they largely determined. Nevertheless it was impossible to assess them precisely. If in the end things should so work out that the demands on space in the ports and on the roads and railways should exceed the supply, then, it was always clear, the victim could not be 'Overlord', whose demands must have first claim, but this country's imports. For of the many shortages from which this country suffered throughout the war the most intractable was the shortage of space. Directly or indirectly labour, raw materials and ships could be provided from overseas, but when organisation had done its utmost nothing in the time available could substantially increase the amount of space. For this reason a reduction in imports below the minimum consumption level of 26 million tons had always been accepted as a possibility.

The Americans, knowing this, pointed out at the 'Sextant' Conference that the British could not justifiably ask for as much help for the United Kingdom import programme as they had received in 1943. Twenty-four million tons, the Americans said, not 26 million, was all that the United Kingdom's port and transit system would be able to distribute, and the budgets should be drawn up accordingly. If this were done the need for American help would be considerably smaller in 1944 than in 1943.

¹ e.g. requiring the deep-sea ships to discharge at more than one port and borrowing from the Americans coasting ships not suitable for military operations. By these means the loss to the domestic fleet of roughly 45 per cent. of its tonnage that must otherwise have occurred was reduced to a loss that, at the worst moment (15th May 1944), was only 32 per cent.

The British found this prospect disturbing. It was true that if they could not accommodate more than 24 million tons of imports there would be no point in allocating tonnage sufficient to bring in 26 million. But no one could say with certainty what feats the port and transit system might achieve; no one knew how long the strain would last, for this depended among other things on how soon a major port could be captured and American supplies shipped direct to the Continent; in any case the answer must turn to a considerable extent on the efficiency of American planning, for if the peak of the American movement into this country (the 'Bolero' movement) were to coincide—as in the event it did¹—with the peak of the outward movements, the strain would be much greater than if the 'Bolero' movement were properly timed—as the British, repeatedly but with no effect, asked that it should be;² if the United States Army authorities could be induced to load their ships with a proper regard for the destinations of the cargo, the strain would be much less than if they proved unable or unwilling, as they did for some time, to take this necessity into account.

Faced with all these imponderables the British refused to admit at the 'Sextant' Conference that the demand for 26 million tons was unrealistic, but they left the conference without knowing whether they would win their point, for the budgets were only drawn up for the first three quarters of 1944. Twelve and a half million tons were allowed for the first half of the year, with the proviso that if shortage of port capacity should make this impossible the Americans should be given due warning (so that their ships should lose no time in waiting to discharge). For the rest, as the Minister said: 'overall I am committed to a close examination of the 26 million figure with the object of getting it down substantially'. The Minister expected that by the time the burden on the ports had eased, the mounting claims of the Pacific war would be allowed to engulf the hopes of additional American help.

The British purchasing departments were accordingly instructed to programme to 24 million tons for 1944 since this seemed the only safe course. But a programme of 24 million tons meant eating into stocks. Food stocks, it is true, were plentiful—and virtually sacrosanct; but raw material stocks were neither. In the second half of 1943 they had been built up above the danger-level to which they had fallen during

¹ The months when the largest number of 'Bolero' ships arrived in this country were May (when 153 arrived) and June (when 150 arrived). The 'Quadrant' and 'Sextant' estimates had allowed for only 100 in each of these months, but for more in the earlier months than the Americans in the event could find cargoes to fill. On this, as on so many other occasions, in fact, the problem of marrying the ships and the cargoes defeated the United States Army authorities.

² The British, however, ordered many of the 'Bolero' ships into anchorages, telling the Americans flatly 'that we have no intention of accepting the surplus in port under any consideration'. This, it was said, 'created rather a flutter in the dovecotes'.

the crisis that followed the North African campaign. In 1944, it appeared, with a 24-million-ton programme, they must sink to it again. 'The overall stocks remaining at the end of 1944', the Ministry of Supply announced when the Minister of War Transport's edict was communicated to it, 'would provide insufficient margin to meet any sudden fluctuations and continued stringency in shipping in 1945, or alternatively the transition to a post-war economy.' These were the prospects when the most hazardous of all the military operations lay ahead and when, should it go wrong, it was clear that the American shipping authorities would not be in the mood to come to the aid of Britain even if the American Chiefs of Staff would permit them to do so.

Nevertheless the risk was taken. The disputes between the British and American civil shipping authorities, whose relations were described in the current jargon as having reached 'the all-time low' at the 'Sextant' Conference, were seen as parochial disputes that were not allowed to disturb the harmony at the highest levels and that it no doubt seemed could there be put right—as in the event they had to be—when the threat to the British economy, and therefore to Anglo-American harmony also, became too great to be endured.

Nor did they disturb the harmony at the working levels where, from the beginning of 1944 onwards, the representatives of both nations were amicably engaged together in drawing up the operational plans. The military demands for vehicles had to be translated into the numbers of ships required to carry them (for in the first stages only the vehicles had to be taken into account, on the principle that if there were room for them there would be room for everything else). The ships—merely abstractions at this point in the proceedings—then appeared in the budgets as so many million deadweight tons on military service for so many months. Afterwards ships suitable for the tasks had to be selected from the incoming convoys, their various functions allocated to them and crews and cargoes provided.

For the purpose of making the necessary arrangements, and making them with the necessary secrecy, the British civil authorities had to function after the fashion of military commanders. The means of providing crews which had been in operation since the spring of 1941 were no longer appropriate, and the Ministry of War Transport had to become the employer of all the seamen who volunteered¹ to take part in the invasion, for the ships engaged in it had to be kept continuously manned, and since very heavy casualties were expected (although in the event they were less than 1 per cent.) it was supposed that men might have to be transferred quickly from ship to

¹ See Chapter VII, p. 170 above.

ship. Moreover men had to be kept at the thirty or so invasion ports for some time before the operation started; they had to be housed, fed, paid, and provided with medical services. Arrangements had to be made to see that each man received his mails, although his whereabouts could not be publicly revealed and might often have to be changed. After the invasion started his relatives had to be informed if he became a casualty.

The enormous volume and variety of military cargo had to be properly distributed among the various ships, and since this required that all the ships and all the cargoes should be considered together, the task had to be performed on paper at headquarters with the aid of plans that showed the construction of every ship. These plans had to be in much greater detail and on a much larger scale than the plans which the builders provide when the ship is built; for they had to show every obstruction, so that the planners could make certain that they could get all the vehicles in and in the right order. They could in fact only do this by means of wooden models, made to scale for each vehicle, which they could manoeuvre about on the plans. These tasks were performed for the British invasion fleet by Military Cargo Branch of Sea Transport Division, under the control of a ship-owner who imported master mariners from many different companies, and so pooled the knowledge these men had gained in many years of planning the complicated operation of loading liners with general cargo.

In Military Cargo Branch, operating like the outward freight department of a single gigantic liner company, the arts of British ship-owners, who have a more varied experience than the ship-owners of any other nation, were combined to produce a masterpiece of the kind that, individually, they were accustomed to produce in peace, though what they now produced in collaboration was on a national scale and departed in many extraordinary ways from the peace-time models.

Thus, in the end, the abstractions in the budgets, which were necessary in order that the cost of the various military operations could be measured against each other and against the cost of the civilian services, were turned into concrete shapes—the *Empire Jonquil*, or the *Fort Crevacœur*, or the *Dunkery Beacon*, or the *Aridity*, due to start fitting out at such and such a berth on such and such a day, and to be ready on such and such another; due to load, at another berth, and to take so many days in the process; due then, perhaps, to sail to an anchorage (so as to leave space in the ports for the next batch of ships to load); due thence to sail to the convoy assembly point to join her comrades; due thence to proceed across the Channel to the beaches; due there to perform, under threat of enemy attack, her complicated and hazardous task of discharging her cargo overside

(unless she were one of the coasters that had to be beached or that could discharge at one of the Mulberry piers); due thence to return home, according to a schedule which it was hoped would work out right but which inevitably did not, in order to start the process over again.

In this operation the need to work to a schedule was more urgent, and the schedules themselves were far more complicated than in the earlier operations. Not only was there the problem of the tides, which do not exist in the Mediterranean; the numbers of troops and the volume of equipment to be transported was much larger; the objectives were much more heavily defended; the date when a major port could be captured and brought into working order was much more remote—indeed, apart from Cherbourg, which was allocated to the Americans, no port capable of accommodating a deep-sea ship existed until Antwerp was opened in the late autumn. The problem, therefore, of delivering to the troops, without any of the transportation facilities that normally serve a theatre of war, precisely those articles of equipment, at precisely the right times and places, that were needed for battle, was on a much larger scale than in the earlier operations and lasted much longer. It would not do, as in the North African campaign, to dispatch a convoy once every fourteen days; there had to be a continuous chain of movement—the ‘sustained movement’ as it was called, from the factories and depots in this country down to the ports and into the ships and, at the other end, from the ships to the ferry craft and from the ferry craft to the beaches. All this required planning so detailed and comprehensive, and, because of the shortages, within such narrow margins, that it must seem that there could be no place for flexibility. Yet when the forecasts proved wrong or the instructions were misunderstood, as inevitably sometimes happened at the beginning—when the losses were much lighter but the damage much heavier than had been expected; when ships turned up off the wrong beaches, or returned to the wrong ports; when the great storm broke on the 19th June, destroying the American Mulberry and bringing discharge everywhere to a standstill, so that the cargo piled up at home and the delivery schedules fell into arrears—all the arrangements had to be changed, and were indeed changed without ill-effects in the battle areas.¹

Many of the necessary techniques required for the management of the ships and for the loading, stowing and discharging of the cargo had been learned beforehand, but many new ones were required, particularly in connection with the coasters whose small endurance presented great difficulties. Many of the shipping problems were

¹ See footnote 1 on p. 405 below.

ones which ship-owners never ordinarily have to face, but ordinary shipping experience, reinforced by the war-time lessons, provided a basis on which to work, and the ship-owner's ordinary habit of mind, which sets store on ingenuity, adaptability and quick decisions, made it possible to rise to all occasions. The task of co-ordinating so huge a range of activities—not only those involved in 'Overlord' itself but in maintaining all the other services at the same time—was one for which the British Government had been increasingly preparing itself and which it now discharged successfully; for none of the other services broke down and there is no evidence that operations in Western Europe were at any time impeded for lack of sea-borne supplies.¹

In the early, crucial stages of the operation the burden of providing the shipping resources fell mainly on the British. The general understanding was that each side should supply the ships required by its own forces; the British forces slightly exceeded the American to start with, though by the end of July the American were larger; since, however, the British had to provide all the coasting ships, for the Americans had none suitable, and the bulk of the troopships, the British-controlled merchant tonnage engaged in supplying the armies of the two nations was much larger than that of the Americans who (with additional complications for the score-keepers) discharged their debt by providing ships for other services. At D-day + 28 roughly 3.4 million gross tons of merchant shipping was employed in operations in North-West Europe, of which roughly two-thirds was British or British-controlled.² As one of the British ship-owners had observed earlier: indirectly there was no denying that, to some extent, the British Army went to sea in American ships; directly, however, in all the amphibious operations in the West, as well as in the movement of American troops to this country, it was the reverse that was true.

¹ Considering the extent to which shipments fell into arrears after the storm (on the 30th June only 88,100 British and 85,600 United States vehicles had been shipped against programmes of 110,600 and 114,400 respectively) this must seem surprising. Nevertheless, Movement Control's comment was 'though the build-up suffered from these vicissitudes it is probable that the rate of advance on the far shore would have precluded shipment at the original maximum rate as it is understood that there is considerable congestion on the beaches'. This judgment accords with the recollections of Military Cargo Branch of the Sea Transport Division of the Ministry of War Transport.

² The figure given by Ministry of War Transport for British-controlled merchant ships flying the Red Ensign and employed in operations in N.W. Europe at D + 28 was 2.4 million gross tons. This figure is no doubt correct if the question is one of control. For the purposes of the present argument, however, there must be deducted from it 77,713 gross tons of cargo-shipping 'loaned by the War Shipping Administration to the Ministry of War Transport', and 93,600 gross tons in respect of cargo-ships converted into troopships and transferred to Ministry of War Transport on bareboat charter as part of the SAM ship deal. The proportion of British ships referred to above would be larger, though perhaps not significantly so, if the figures were adjusted to include the merchant ships allocated to the Royal Navy and flying the White Ensign. The writer does not know how many of these there were, but notes that they included about 20,000 gross tons of cross-channel passenger ships employed as L.S.I.(H.)s and for other purposes.

Equally—and inevitably since in the early days the bulk of the shipping was British-controlled and the base from which the invasion was launched was the United Kingdom—a higher degree of responsibility for planning the use of ships devolved on the British than on the Americans. It was common knowledge that the Americans excelled the British at certain kinds of tasks. More ruthless and impetuous and provided with better tools, they showed a genius for getting vital individual jobs done quickly—for restoring, say, a captured port to working order—with which the British could often not compete. But the wider the ramifications of a problem and the more it demanded the co-operation of a large number of different authorities, the more the rôles were apt to be reversed. When it came to the problems of what a harassed official struggling with the complexities of the sustained movement once aptly described as ‘administrative warfare’ the British, more patient and disciplined, excelled the Americans. It was the British who taught the Americans how to combine the cargoes in their ‘Bolero’ ships so as to make it possible for British railways to stand the strain of the simultaneous inward and outward movements; it was the British who had to work out for the Americans the immensely intricate sailing schedules required by the sustained movement;¹ it was the British who on countless occasions intervened (as they legitimately could when the ships were theirs) to prevent the Americans from doing all those things that inexperienced ship-owners are apt to do when harassed, and that at best waste shipping and at the worst hold up military operations—sending ships to ports that cannot accommodate them, loading food in ships that have carried heavy oil on the previous voyage, loading shells in one ship and their fuses and detonators in another.²

The British, too, paid the price that must be paid by those whose country provides the base for a major military operation. They paid it in many ways and particularly by forgoing some of the imported commodities for which they had hoped. In the first half of the year, it is true, they got something more than the 12·5 million tons that had at one time been in doubt. It seems clear that the shortage of

¹ This was not officially admitted. The writer, however, discovered in the files of the Ministry of War Transport a stock letter, sent out to the British Sea Transport Officers in the American sector of the United Kingdom, enclosing a ‘provisional schedule’, which, in effect, they were asked to proceed with tactfully, since ‘the executive responsibility lies with U.S.’. When questioned, the people concerned in the Ministry of War Transport admitted that the sustained movement plan worked out before the invasion was in fact worked out in Berkeley Square House by the Headquarters cargo superintendents and two or three officers from the Freight Movements Directorate at the War Office, for the combined United States/British stores lift. An officer from the American Transportation Corps was present, but to all intents and purposes in the capacity of an onlooker.

² A very large number of such instances are to be found in Ministry of War Transport’s files. The British complained that the Americans were unable even to keep to the Sustained Movement Plan, and that at one moment (15th June 1944) they were threatening it with ‘utter chaos’.

port and transit capacity would have prevented them from getting any more in this period, notwithstanding the reductions in the inland movements of iron ore and other bulky traffic.¹ On the other hand, it also seems clear that even if the necessary port and transit capacity had been available the ships would not have been, and afterwards, in the last quarter of the year, when the rate of build-up began noticeably to slacken, and more imports could have been accommodated, the fears the Minister had expressed at the 'Sextant' Conference proved, for reasons that will presently appear in more detail, to have been to a considerable extent justified. Imports for the calendar year of 1944 totalled only just over 25 million tons.

¹ A categorical statement to this effect was made by the Shipping Committee on 23rd June 1944.

APPENDIX LXIII

Approximate percentage of vehicles carried across the Channel by tank landing-craft and landing-ships and by merchant ships (M.T. ships) during 'Overlord', July 1944-May 1945 (inclusive)

	British sector		United States sector		British and United States combined	
		Approx. % of total		Approx. % of total		Approx. % of total
Total vehicles actually sent .	257,405		340,046		597,451	
Number carried by L.C.T. .	28,341	11	28,629	9	56,970	10
Number carried by L.S.T. .	93,280	36	165,330	49	258,610	43
Number carried by M.T. ships	121,365	47	130,680	39	252,045	42
Total	242,986		324,639		567,625	
Number unaccounted for .	14,419	5	15,407	4	29,826	5

The total number of sailings of L.C.T., L.S.T. and M.T. ships, together with the total number of vehicles sent, has been taken from the Progress Report of Personnel Movements. The average number of vehicles carried in each type of vessel has been taken from a MOVCO analysis, based on the actual numbers carried during the first seventy-six days of the operation, which was as follows:

- L.C.T. 9 vehicles
- L.S.T. 55 vehicles
- M.T. ships . . . 135 + vehicles (the figure of 135 has been used above)

The writer presumes that the term vehicle includes everything on wheels or tracks.

There are no figures for June, when a larger number of vehicles was carried than in any other month except July. For the first assault all vehicles were carried in landing-ships and landing-craft, but in the first months for which figures exist the proportion carried in M.T. ships was higher than in the later months, and this may also have been true of June as a whole. On the other hand, the above figures exclude all vehicles shipped in the movement (from the autumn of 1944 onwards) direct from the United States. The proportion carried in M.T. ships for the whole period as shown above is thus almost certainly too low.

CHAPTER XIX

THE 'UNMANAGEABLE DEFICITS' AND THE CRISIS OF THE ANGLO-AMERICAN ALLIANCE, SEPTEMBER 1944 TO FEBRUARY 1945

(i)

From the Quebec ('Octagon') Conference to the completion of the Washington Shipping Survey, September 1944 to January 1945

BETWEEN THE GREAT stocktaking in May 1943, and the invasion of Europe a year later, the amount of American help to British programmes, although it seems to have been tacitly understood that it should not change significantly, had been determined in detail at the two war conferences, and, as has been shown, it proved enough to meet the minimum needs. It is true that the arrangements made at the 'Trident' Conference in May 1943 for correlating demands and resources, produced neither a genuine survey of all demands nor an allocation of resources that by most interpretations might be said to have been fair, but nevertheless they served their essential purpose of preventing (as far as can be judged¹) the prosecution of the war from being held up by lack of ships for civil or military purposes. The defects in the arrangements only became alarming when, with the invading armies advancing across Europe, the allocations that had been the rule hitherto lost their relevance and it proved impossible for the time being to make any long-term plans. It then became clear that the fate of the various British shipping services had turned up to date on the shipping budgets which were produced at each successive war conference as an annex to the proposals of the Combined Chiefs of Staff, and which were sanctioned by the President and the Prime Minister. Once the compulsion to draw up and abide by the budgets was removed, all the British programmes were again exposed to the

¹ See Chapter XX, pp. 437-438 below.

hazards from which the invention of the budgeting procedure had temporarily rescued them.

The last war conference before the invasion of Europe was the Cairo ('Sextant') Conference of November 1943. The next (the 'Octagon' Conference in Quebec) did not meet until September 1944, and even then no shipping budgets were drawn up, ostensibly because the future was still too uncertain, in fact, it seems,¹ because the United States Services, who disliked the restrictions which the budgets placed on them, used the uncertainties as an excuse for not producing any figures. It was, it is true, decided in Quebec that the shipping situation should be surveyed in Washington soon afterwards. During the interval, however, the United States Services made good use of their opportunities.

In October, as the British Chiefs of Staff observed later, the volume of American shipping in the Pacific was 'very greatly increased by unilateral action'. In consequence other services had to suffer and British services were among the victims. On an average throughout the third quarter of 1944 American help to British programmes had represented the equivalent of, roughly, 4.1 million deadweight tons in continuous employment; in the last quarter of 1944 this figure fell to, again roughly, 3.5 million deadweight tons.² If the SAM ships are excluded from the reckoning—and having been transferred to the British flag for the duration of the war they could not be reclaimed—Britain received very little more help from the United States in the last quarter of 1944 than in the last quarter of 1942 when, equally, there had been a sudden large rise in the demands of the Pacific theatres but when British military commitments had been much smaller. Since the United States Chiefs of Staff based their demands for the Pacific theatres as much on their knowledge of the size of the American fleet, regardless of the other claims on it, as on reasoned assessments of need, it seems that in 1944 nothing but the SAM ships stood between the British and a crisis even more serious than that which had occurred in the winter of 1942 to 1943.

Even as things were in the autumn of 1944 the prospects were bleak enough. All the British programmes had to be cut—making a virtue of necessity the British cut them of their own free will knowing there was no escape—and plans had to be made for more cuts in the future since it seemed likely that American help in 1945 would decline still further. These misfortunes, moreover, occurred at the worst possible moment, when it first became clear that the war in the West would not be over by Christmas, but must continue into 1945, and when it

¹ So at least the writer infers from the fact that the British produced their budget at the 'Octagon' Conference.

² See Appendix LXIV, p. 419.

seemed that not only the American but also the British need for ships in the Pacific must increase.

When the British statistician produced the first draft of his budget at Washington, in November 1944, he found himself faced, even after he had allowed for the SAM ships and some customary help, with a deficit of nearly $4\frac{1}{2}$ million deadweight tons in the first quarter of 1945.¹ In the circumstances, as he realised, this was a hopeless proposition to put to the Americans, and the other members of the British delegation, searching about for commitments to jettison, could only conclude after, as they thought, they had lopped every possible ton from every possible programme, that United Kingdom imports, in the first quarter of 1945, would have to be cut by over a million tons, and thus reduced to a level barely 20 per cent. higher than at the worst moment of the crisis at the beginning of 1943.

It is true that these turned out to be only the first despondent reactions to a situation in which the misfortunes brought their own compensations. Among the mitigating circumstances was the lack of the other resources besides shipping required to prosecute the Pacific war, so that in the end it proved possible to cut the shipping programmes considerably without endangering any essential need. Nevertheless the British could not possibly cut enough to eliminate their deficit and the Americans, it appeared, could not meet the deficit even when it had been reduced as far as possible.

For while it emerged that as long as the war in the West went on the British requirement for ships in the Pacific could be reduced considerably, in America, or so it seemed, everything that was needed for the Pacific war, on a rapidly expanding scale, could be provided except the ships. As the investigations into shipping resources proceeded at Washington it became daily clearer, notwithstanding the tonnage already withdrawn from the West, that in the opinion of the United States Chiefs of Staff there were far too few ships to meet the requirements of the Pacific theatres. When the budgets of both nations were completed, each revealed alarming deficits, which argument could not reduce to manageable proportions, as it had done in the past at the various war conferences. As the Washington Survey put it on the 16th January 1945: 'While some deficiencies have, in the past, proved manageable, deficits of this order of magnitude must be regarded as unmanageable'. Since the invention of the budgeting procedure no such misfortune had ever occurred. The conclusion seemed to be that once again, as in the evil days when the task of surveying needs and resources had defeated the planners, the menace of the shipping shortage must threaten the military plans with disaster.

¹ See Appendix LXV, p. 420.

It seemed to the United States Chiefs of Staff that disaster could only be averted by cutting the civil programmes, of which the largest were the United Kingdom import programme and the programmes of the liberated territories now assuming huge proportions. By comparison, however, with the amount of tonnage allocated to the United States Services the civil demands which the Americans had to meet were only small. The Washington Survey put them at 18 per cent. of total military and civil demands combined. Since, however, all the demands were calculated in terms of sailings, and since the military sailings to the Pacific, which formed a high proportion of the total, involved a haul more than twice as long as the haul to this country and the Continent (the destination of most of the civil supplies), 18 per cent. seems too high a figure. Calculated in terms of tonnage in continuous employment, the civil demands appear not to have accounted for more than between 13 and 14 per cent. of the total.¹

The significance of this figure of, say, 14 per cent. was different from different points of view. To the civil authorities it was obvious that the civil programmes would have to suffer crippling reductions before the additions to the military programmes became perceptible; to the United States Services 14 per cent. (or as they put it, 18 per cent.) was a sizeable proportion, and it seemed that the need to meet the civil programmes was holding up all their plans. As they saw it, no civil demand, however small or however urgent, ought to be met without their consent, unless every military demand had been met in full.

It is true that the United States Chiefs of Staff appeared to believe that civil supplies for the liberated territories should be shipped in sufficient quantities to prevent disease and unrest, but only, it seemed, if this could be done without interfering with military operations. As they put it on one occasion in 1945: 'the basic truth is that the best help we can possibly give the populations of the liberated territories in Europe or elsewhere is to win the war as quickly as possible. . . . The vital military point involved to the United States Chiefs of Staff is the cost in American lives which would almost certainly result from placing non-military requirements in a priority where they could compete with military needs essential to ending the global war successfully at the earliest possible date. A definite but secondary consideration is the cost in money and resources to the United States resulting from any prolongation of the war. . . .'

To the British, as well as to many American civilians who were preoccupied with the political repercussions of hunger and unemployment, and who doubted whether the proposed military operations needed as many ships as were claimed for them, this seemed a

¹ See Appendix LXVIII, p. 428.

dangerous doctrine. The United States Chiefs of Staff defended it by asserting that the civil requirements were exaggerated. Particularly they said this about the requirements for stocks in the United Kingdom. They could not, it is true, openly challenge the amount of food and raw materials consumed in these islands, for by this time it was obvious, and had too often been accepted by the President, that health, morale and the necessary level of production could not be maintained with less; but why, they asked, now that the war in the West was nearly over, need the British carry such heavy stocks?

In asking this question they found a variety of supporters in Washington and indeed the question was hard to answer. Even in London many people had long suspected that the Ministry of Food's stocks were unnecessarily large. They do indeed seem to have been disproportionately large in relation to the stocks of raw materials. Nevertheless the figures suggest that even though the critics had a case it was a case with diplomatic rather than practical significance. The volume of food stocks in excess of what was necessary must almost certainly have been too small to affect the shipping situation materially. The figures, however, defied rational analysis and therefore provided a target for attack. The shipping authorities found this state of affairs exasperating, for even without it their legitimate claims were hard to justify. Before any attempt could be made to prove that British stocks were not too high it was necessary to distinguish between the minimum properly understood—that is the amounts that were needed to ensure orderly distribution and to keep the factories regularly supplied—and the contingency reserves required as an insurance against the various hazards of war. But even if this distinction had been established, and even if the minima had been properly computed, as it was supposed that they were not by the Ministry of Food, the question would still have been unanswered. For what was the proper level for the contingency reserves? The Ministry of Supply, it finally emerged, had stocks of most commodities, over and above the minimum (in the exact sense of the term), equivalent to 'two months' supply or less'. Was this too much?

All these problems defeated the American investigators who on several successive occasions attempted to solve them in the autumn of 1944. Some thought British stocks were not too heavy, others thought they were; one set of investigators concluded that at the 31st December 1944 British stocks were nearly a million tons less than prudence required; another set concluded that at the 30th June 1945, when according to the level of imports forecast at Washington they would have fallen considerably below the December level, they would still be nearly 2 million tons too high; according to one report the minimum levels had been wrongly computed; another

maintained that these calculations were correct but that the likely contingencies had been overestimated. Neither the British nor their American supporters considered it politic to point out that though admittedly the war in the West was nearly over, the war in the Pacific apparently was not, and that this was the contingency against which it was necessary to insure.

Thus in the winter of 1944 to 1945, as in the winter of 1942 to 1943, all the British shipping programmes went into the melting-pot, for now, as then and always, all were interconnected. If the American exponents of the thesis that British stocks were too high should win their case, and American allocations be reduced accordingly, it would follow, as in the spring of 1943 (since the Prime Minister was determined that stocks in this country should not be reduced further than had been allowed for in the Washington Survey) that the shipments of military supplies to India would have to be drastically reduced. In that event there would be consequences similar to those that had occurred before when this had been done; less civil supplies would move in the military cargo-ships outward bound from North America and the United Kingdom; there would be fewer ships in the cross trades, and the spectre of famine in the East would rise again, stretching its shadow across the Balkans, now freed from the Germans but dependent in part for their relief supplies on the stocks that had been accumulated for them, but that the native populations might now need, in the Middle East. Equally in Western Europe, dependent on Britain for help as well as on the United States, the withdrawal of American ships from British programmes might have disastrous consequences. In these circumstances it is not surprising that the British and American shipping authorities, contemplating the vast havoc that the ignorant could create by interfering with their complicated arrangements, concluded that the shipping situation was the worst of the war.

There were, however, mitigations which had not existed before. At the beginning of 1944 the British Shipping Mission in Washington and the War Shipping Administration had each been brought under a new management. The British and Americans who had been unable to agree with each other were removed. A fresh era opened in the relationship between the shipping authorities of both nations. The old grievances were given a solemn funeral and the new incumbents signed an undertaking to work together in 'full partnership'. This they proceeded to do, with a success unequalled, they both felt, by any other combined organisation. By the end of the year, united in a common purpose, and by a common consciousness of being the exponents of a mystique which no one else could understand, they set themselves jointly to find a way through the difficulties.

'*Cet animal,*' it might have been said of them, '*est méchant; quand on l'attaque il se défend.*' It was not only the United States Services who could pick holes in other people's programmes. The views held by many Americans outside as well as inside the War Shipping Administration, combined with the growing volume of information which that Administration was collecting about how American ships were employed, moved the President at the end of 1944 to make a serious protest about the way in which the Services were using the ships allocated to them.

On the 9th December 1944 he sent a message to the various United States theatre commanders in which he instructed them to put an end immediately to the more extravagant forms of waste.¹ These were enumerated and the catalogue shown to the British who, however, did not need to be told, having drawn their own conclusions from what they had themselves seen in Western Europe. It appeared from this document, and from others which the British also saw, that the United States theatre commanders were using ships extensively as warehouses and that they were employing vastly more ships than the ports at either end of the voyage could accommodate, so that on the American Pacific coast there were queues of ships waiting to load, and in the various theatres of war queues of ships waiting to discharge, none of which was serving any purpose at all. Shipping-space was being wasted besides in many other ways, all of them well-known pitfalls for the unwary, from which the experience of the ship-owners and the machinery in the United Kingdom for co-ordinating needs and resources had long ago saved the British if they had not prevented them from ever materialising.²

If one considers the various figures brought to light in the winter of 1944-45 to demonstrate the extent to which American shipping was being wasted it emerges that the Americans could have saved far more by good management than ever they lost from enemy action. This is true even if one allows, as one must, for the fact that losses from enemy action are cumulative whereas the losses from mismanagement are not. For in the whole course of the war until V.E.-Day the Americans only lost just over 3 million gross tons, say roughly $4\frac{3}{4}$ million deadweight tons, of dry-cargo ships from enemy action and marine causes,³ while it seems that at the end of 1944 the amount of tonnage that was being wasted was at an annual rate that may have been as high as, and was perhaps even higher than, 9 million deadweight tons.

¹ See Appendix LXIX, p. 429.

² See Appendix LXVII, p. 424.

³ See *ibid.*

The sinkings from enemy action and marine causes in the British-controlled fleet—as well as the proportion of tonnage under repair—were much larger than in the American. By the end of 1944 the dry-cargo tonnage sunk totalled just over 15 million gross tons. Even if American management had been as economical as the British it could not in 1944 or previous years have released a volume of tonnage, after meeting American demands at the existing levels, sufficient to make good such formidable losses. Nevertheless if at the end of 1944 the kinds of waste described in Appendix LXVII had been put a stop to, enough American ships must have been released to make good a very large part and quite possibly the whole of the *net* losses sustained up to date by the fleets of Great Britain and of the European nations who put their ships at her disposal. Given the limitations imposed by the shortage of supplies and port capacity, this represented an amount of shipping far greater than could have been used.

The very cause, however, responsible for this state of affairs—the control exercised by the various United States theatre commanders over the tonnage allocated to them—made the evils hard to remedy. The facts of the case could not be established precisely and comprehensively because much of the information was known only to the theatre commanders themselves; their power and prestige made them, if they chose to remain unrepentant, to a large extent proof against remonstrance.

Nevertheless by January 1945 the material for an impressive case had been assembled. The case had only to be won and the necessary remedies enforced to bring the shipping shortage to an end. If these tasks were to be attempted, however, it could only be by means of another war conference, since no other body could have the necessary authority.

(ii)

The 'Argonaut' Conference

The 'Argonaut' Conference, held at Malta and in the Crimea, opened on the 29th January 1945. Both parties to the shipping dispute—the United States Chiefs of Staff on the one hand, on the other the British and United States civil authorities, supported by the British Services who sided with the civilians against their opposite numbers, arrived at the conference convinced that a major principle was at stake. The United States Services adhered to the view, which they had expressed in the course of the Washington discussions, that every civilian programme must be 'cleared' by the

United States Chiefs of Staff before the ships required to meet it were allocated by the War Shipping Administration, 'so long as military requirements are not met in full'; their opponents were equally determined that this claim must be resisted, not merely in practice but in theory as well. After over two years of constant but fruitless struggle, they were convinced that while first things must be put first, if other things were not to be neglected to an extent that would jeopardise the political and humanitarian aims for which the United Nations had fought, it must be clearly asserted that the Services were not the proper authorities to determine shipping priorities. As the Minister of War Transport put it: 'a statement of principles in ambiguous language would only lead to continual argument . . . and would probably be a millstone round our necks in our attempts to eliminate waste of shipping'.

The Minister, however, did not win his point. From the arguments behind the scenes in which, in the Minister's opinion, various people were induced to make concessions they should not have made, the United States Chiefs of Staff emerged not, it is true, with all they had asked for but with much more than the Minister cared to see. In the final report of the Combined Chiefs of Staff, accepted by the President and the Prime Minister, it was stated that:

In the event of a deficit in shipping resources, first priority should be given to the basic undertakings in support of the over-all strategic concepts as agreed in 'Argonaut'.

So long as these first priority requirements are not adequately covered, shipping for other requirements will not be allocated without prior consultation with the appropriate Chiefs of Staff.

It is true that the phrases 'prior consultation with' and 'clearance by' were very different and that, in general, the form of words finally agreed on left many loopholes, as those who had made the concessions asserted in self-defence. Nevertheless the fact remained that in the matter of principle the United States Services had succeeded in winning their case. As the civilians concluded—though with considerable confidence that even if they had lost the shadow they might still win the substance—'basically . . . we must rely on continued pressure on the United States Army and Navy to stop wasting tonnage, as the main contribution to making the deficiencies manageable'.

At 'Argonaut', however, in the matter of the deficiencies, too, the United States Services largely succeeded in winning their case. At the beginning of the conference they were, admittedly, prevailed on to moderate their requirements. As a result they evidently reduced their deficiencies by a considerable amount,¹ but not to the point

¹ See Appendix LXVI, p. 421.

when, as they said, the deficiencies 'might be regarded as approaching the unmanageable, rather than [as] unmanageable'. This was not much help. A budget that shows deficits 'approaching the unmanageable' has failed in its purpose. The United States Services, however, asserted that the cuts they had already made represented the limit to which they could safely go. The gap, they concluded, must be closed by means of cuts in the civil programmes.

The British, however, would not agree. Between the first and the final draft of the Washington budget they had made one large cut; between Washington and 'Argonaut' they had made another.¹ Now they, too, were prepared to dig in their toes. At the end of the conference their deficit stood, in consequence, at 2 million deadweight tons,² of which the Americans professed to be able to cover not much more than two-thirds.³

Both sides, therefore, left the conference with deficits 'approaching the unmanageable' and this, it may seem, was no way to behave. It made nonsense of the whole budgeting procedure. For the British, one might suppose, the results must prove serious, yet no one was unduly perturbed. It had, it is true, proved impossible to defeat the United States Chiefs of Staff's arguments; as the conference had proceeded, however, it had seemed increasingly likely that they might in fact defeat themselves.⁴ There was a risk that this might not happen, but, encouraged by the War Shipping Administration, the British were prepared to take it. They would not cut their requirements, for experience had shown that if a decision to cut were once announced it was difficult to reverse. There was always the danger that people in America would ask, as indeed they had often asked before on such occasions, why, if the British could make do with the reduced allocations, it should be necessary to give them any more.

¹ See Appendix LXV, p. 420.

² See *ibid.*

³ In the 'Argonaut' budgets the uncovered portion of the British deficit over the months March to June was put at the equivalent of thirty-five sailings a month on the North Atlantic—i.e. roughly 600,000 deadweight tons in continuous employment throughout the half-year.

⁴ For how this happened see Chapter XX below.

APPENDIX LXIV

United States help to British programmes, by quarter-years, July 1944-June 1945¹

	Assumed round-voyage time	Third quarter 1944		Fourth quarter 1944		First quarter 1945		Second quarter 1945	
		Average number of sailings a month	Tonnage continuously employed	Average number of sailings a month	Tonnage continuously employed	Average number of sailings a month	Tonnage continuously employed	Average number of sailings a month	Tonnage continuously employed
	months		mill. d.w.t.		mill. d.w.t.		mill. d.w.t.		mill. d.w.t.
U.K. schedule	2.5	36.3	0.91	15.3	0.38	41.3	1.03	36.0	0.90
Eastern customaries:									
Indian Ocean area	5.5	18.3	1.01	15.7	0.86	17.0	0.94	23.3	1.28
Central Mediterranean and North Africa	3.0	4.7	0.14	7.3	0.22	7.0	0.21	6.0	0.18
Southern customaries:									
Australia	5.5	2.3	0.13	3.0	0.16	3.3	0.18	3.7	0.20
South and East Africa	5.5	3.0	0.16	3.3	0.18	4.3	0.25	4.7	0.26
West Africa	3.0	2.3	0.07	2.3	0.07	2.0	0.06	2.3	0.07
B.L.A. (for British relief programmes to N.W. Europe)	2.5	—	—	—	—	—	—	19.7	0.49
Total U.K. schedule and customaries	—	—	say 2.4	—	say 1.9	—	say 2.7	—	say 3.4
SAM ships	—	—	1.6	—	1.6	—	1.6	—	1.6
Grand total	—	—	4.0	—	3.5	—	4.3	—	5.0

Source: Table compiled by the author from data in the Ministry of War Transport

¹ For comparison, the amount of help received between the middle of 1942 and the end of the war (given in detail in Appendix LXIII) was as follows:

	<i>2nd half 1942 (annual rate)</i>	<i>Calendar year 1943</i>	<i>Calendar year 1944</i>	<i>1st half 1945 (annual rate)</i>
Allocations	1.9	3.4	2.5	3.0
SAM ships	—	0.2	1.4	1.7
Total	1.9	3.6	3.9	4.7

APPENDIX LXV

Scaling down the British deficit. Comparison between the British budgets of 20th November 1944 (Washington), 16th January 1945 (Washington) and 8th February 1945 ('Argonaut') for the first quarter of 1945

Million deadweight tons

	A 2.11.44	B 16.1.45	C 8.2.45
Estimated tonnage available after allowing for repairs	19.9	19.9	19.9
Estimated requirements for:			
U.K. coasting	0.6	0.6	0.6
Cross trades	4.1 ¹	4.1	4.1
Relief	1.85	1.0	0.85
Non-importing military	2.85	2.6	2.6
Maintenance I.O. area, Mediterranean, North Russia and N.W. Europe from the U.S.	5.5	5.05	5.0
North-West Europe from the U.K.	1.0	1.0	1.0
Internal Mediterranean shipments	0.8	0.85	0.8
Eastern movements	0.1	0.05	—
Tonnage exclusively employed on importing into United Kingdom	7.5 ²	6.95 ²	6.95 ²
	<hr style="width: 50%; margin: 0 auto;"/> 24.3	<hr style="width: 50%; margin: 0 auto;"/> 22.2	<hr style="width: 50%; margin: 0 auto;"/> 21.9
Deficit	4.4	2.3	2.0

Source: Table compiled by the author from data in the Ministry of War Transport

¹ This requirement, which included requirements for relief (see Chapter XX, p. 446, and Appendix LXX (ii), p. 454) was somewhat larger than appears above, as were also the British deficits, because United States southern customaries at 8.5 sailings a month (say, roughly, something under a half-million deadweight tons in continuous employment) were counted in before the budgets were drawn up.

² Assumed to yield imports of 6.5 millions in the first quarter of 1945.

³ Assumed to yield imports of 6 millions in the first quarter of 1945.

APPENDIX LXVI

United States budgets ('Argonaut' and Washington) in terms of tonnage continuously employed

The attached figures represent an attempt to translate the United States budgets drawn up in Washington in January and at the 'Argonaut' (Yalta) Conference in February 1945 (for the first six months of 1945 in the first case and for March to June inclusive in the second) into a form comparable to that of the British budgets—i.e. into terms of tonnage in continuous employment throughout the period. The figures put on the various round-voyage times are in a number of cases merely guesses arrived at on the basis of the distances involved and of the figures that are quoted, in other cases, in the files of the Ministry of War Transport. This method must seem likely to result in large errors, nevertheless it appears that the errors are only small, for the figures for the total amount of tonnage employed which the method has yielded (32.4 million deadweight tons in the case of the Washington budget and 33.2 million deadweight tons in the case of the 'Argonaut' budget) do not differ markedly from the amount that was actually employed, and that the compilers of the budgets are highly unlikely to have assessed wrongly. It appears from the statistics circulated to the Shipping Committee that the monthly average of United States dry-cargo tonnage in employment during the first half of 1945, allowing 6 per cent. for repairs,¹ was roughly 34 million deadweight tons, and that the figure for the last four months of this first half-year was 34.7 million deadweight tons. Even the difference between these figures and the totals in the attached tables could disappear if a lower figure were put on the average round-voyage time for the deficit sailings than the figure actually used (roughly the weighted average of all round-voyage times). The writer does not know what the proper figure is. The British took to estimating their deficit in terms of the tonnage that would be required for the United Kingdom import programme if all the other demands were met in full, though this was merely an accounting device. The Americans may—or may not—have followed a similar procedure, and when they spoke of a deficiency of *x* sailings have meant *x* sailings on the shorter routes.

¹ The proportion represented by the average amount of United States dry-cargo tonnage under repair in the months of January, March and June, 1945.

United States budget drawn up in Washington January 1945 for the first half of 1945

Requirements	Estimated round-voyage time	Average number of sailings a month	Tonnage continuously employed
	months		mill. d.w.t.
ATLANTIC AND GULF			
1. U.S. Army:			
E.T.O.—U.K. military	2.5	32.3	0.8
Continent—Military	2.5	185.8	4.6
Civil affairs	2.5	1.3	0.03
Southern France, United States and French military	2.5	50.0	1.25
Special French rearmament, Civil affairs	2.5	6.7	0.2
Civil affairs	2.5	5.8	0.1
M.T.O. and Azores:			
Military	3.5	66.2	2.3
Civil—Italy and Balkans	3.5	37.5	1.3
Persian Gulf	3.0	1.0	0.05
India—Burma and China	6.0	2.5	0.15
South-West Pacific	5.0	18.7	0.9
Pacific areas, incl. S.W. Pacific }			
2. U.S. Navy:			
Pacific areas	5.0	29.8	1.5
3. War-making capacity of Western Hemisphere			
	3.0	17.5	0.5
4. British programmes:			
North Atlantic sailings	2.5	37.2	0.9
Other British programmes:			
Military [I.O. and Mediterranean].	5.0	26.5	1.3
Civilian [South and East Africa]	5.5	3.8	0.3
5. Russian lend-lease			
	5.0	32.3	1.6
6. Desired National Government import programmes for liberated areas:			
French North Africa	3.0	5.5	0.2
Southern France	2.5	2.8	0.07
Italy	3.5	1.8	0.06
Balkans	3.5	4.7	0.2
Northern France	2.5	9.3	0.2
Belgium	2.5	7.3	0.2
Eastern Europe [Poland and Czechoslovakia]	3.5	1.5	0.05
PACIFIC			
1. U.S. Army:			
Pacific Ocean areas	5.0	93.3	4.7
South-West Pacific area			
India—Burma and China			
	6.0	20.5	1.2
2. U.S. Navy:			
Pacific Ocean area	5.0	156.2	7.8
South-West Pacific area			
3. Russian			
	5.0	8.2	0.4
4. British Empire programme [Australia]			
	5.5	3.3	0.2
5. Non-military ¹			
	3.0	9.5	0.3
LOCK-UPS			
	—	—	2.5 ²
TOTAL REQUIREMENTS.			
	—	—	say 35.9
ESTIMATED DEFICIT			
	(say 4.0)	86.8	3.5
TOTAL TONNAGE AVAILABLE			
	—	—	32.4

¹ No indication what this category means.

² Includes average of 70,000 deadweight tons per month War Shipping Administration coasters.

*United States budget drawn up at the 'Argonaut' Conference
February 1945, for March to June inclusive 1945*

Requirements	Estimated round-voyage time	Average number of sailings a month	Tonnage continuously employed
	months		mill. d.w.t.
ATLANTIC AND GULF			
1. U.S. Army:			
E.T.O.—U.K. military	2.5	30.0	0.75
Continent—Military	2.5	185.0	4.6
Civil affairs	2.5	1.0	0.025
Southern France—U.S. and French military	2.5	65.5	1.6
Civil affairs	2.5	6.25	0.2
E.T.O. and Azores:			
Military	3.5	45.0	1.6
Civil	3.5	42.25	1.5
Persian Gulf	5.0	1.0	0.05
India—Burma and China	6.0	1.0	0.05
Pacific areas, incl. S.W. Pacific area	5.0	20.0	1.0
2. U.S. Navy:			
Pacific areas	5.0	34.0	1.7
3. War-making capacity of Western Hemisphere			
	3.0	18.0	0.5
4. British programmes:			
North Atlantic sailings	2.5	34.5	0.7
Other British programmes:			
Military [I.O. and Mediterranean].	5.0	24.0	1.2
Civilian [South and East Africa]	5.5	5.5	0.3
5. Russian lend-lease			
	5.0	32.5	1.6
6. Desired National Government import programmes for liberated areas (assuming break-down as in Washington survey)			
		37.75	1.1
PACIFIC			
1. U.S. Army:			
Pacific Ocean areas, incl. S.W. Pacific	5.0	89.75	4.5
India—Burma and China	6.0	22.5	1.35
2. U.S. Navy:			
Pacific Ocean areas, incl. S.W. Pacific	5.0	164.5	8.2
3. Russian			
	5.0	3.75	0.2
4. British Empire programme [Australia]			
	5.5	3.0	0.2
5. Non-military ¹			
	3.0	9.0	0.3
LOCK-UPS			
	—	—	2.4 ²
TOTAL REQUIREMENTS.			
	—	—	35.64
ESTIMATED DEFICIT			
	(say 4.0)	61.0	2.4
TOTAL TONNAGE AVAILABLE			
	—	—	33.24

¹ No indication what this category means.

² Includes average of 70,000 deadweight tons per month War Shipping Administration coasters.

APPENDIX LXVII

(i)

Note on the extent of the waste of shipping in the British-controlled fleet

To estimate the extent to which shipping is being wasted at any given time is a difficult task because it is hard to find a criterion of what may properly be described as waste. This is so even if the argument is confined to questions of management and if there is excluded from it, as is done below, all question of whether the purposes for which the ships were used were legitimate—whether, for example, the British should have allocated as much tonnage as they did to the fleet train in 1945 when there were other and, as it was often believed, more urgent needs to be met, or whether the British or American armies needed as much supplies as they were sent.

Where the Americans were concerned, however, it seems possible to find a clear criterion. It is provided, as is shown below, by statements made by the War Shipping Administration and by the Minister of War Transport, from which it emerges that more ships were being used in various places than were needed for the tasks in hand, and that the tasks could have been performed equally well, and perhaps sometimes even better, had the amount of tonnage employed been reduced.

Similar charges were brought from time to time against the management of British ships. If anything went wrong it was sooner or later brought to the notice of the authorities in the Ministry of War Transport. Usually it was revealed by the statistics alone. The writer has taken particular care to note the cases. To the best of the writer's knowledge there were only two cases when shipping was wasted on an extensive scale over a significant period of time. Both occurred principally in 1942, the first through failure to crate the vehicles dispatched from this country to the theatres of war (see Chapters XIII and XIV above), the second through failure to take the appropriate steps to prevent or cure delays in ports abroad, principally in the ports of South Africa (see Chapter X above). In neither case is a statistical estimate of the extent of the waste possible. Getting on for half a million deadweight tons of shipping on an average was lying idle in South African ports throughout 1942, but though it is clear that mismanagement was to some extent responsible for this it is impossible to say how far efficient management could have improved matters. It seems highly unlikely that it could have eliminated all the idle tonnage. Again it is not possible to estimate how much shipping could have been saved if vehicles moving from this country to the Indian Ocean area had been crated in 1942. The estimate is impossible for a number of reasons, among others because if more vehicles had been carried per ship, ships would have had to be specially allocated to carry the cargoes which it would in consequence have become impossible to combine with the vehicles. Even if, however, one were to assume that the maximum practicable number of crated vehicles (i.e. 300) had been carried, or double the number that could be shipped on wheels, and that in consequence the number of ships required had been halved, the gain would only have been about $1\frac{1}{2}$ million

deadweight tons of shipping in 1942. This, however, for the reasons already given, is a larger gain than could in fact have been achieved. The waste that occurred in these two instances was thus on a very small scale if compared with the waste indulged in by the United States Services. Moreover, it had been brought to an end nearly two years before any attempt was made to moderate the American extravagances.

(ii)

Estimated extent of the annual rate of waste of United States dry-cargo tonnage at the beginning of 1945, as a result of the misuse of ships

The assertions on pp. 415-16 above are based on the following facts and deductions:

1. A statement by the War Shipping Administration that 'the United States Services then had 350 undischarged ships in various theatres which figure would have been doubled if stated requirements had been met in full'. These ships appear to have been what were known as 'commodity loaders', i.e. ships loaded with one commodity for use in operations, the ships going to an anchorage off a beach, or near a makeshift port, and remaining there for weeks or possibly months while the particular commodity was discharged to suit the requirements of the troops. Many of these ships were being used in Western Europe. Thus to use ships as floating warehouses was an undoubted convenience because it prevented congestion ashore, though the British always held that it was an unnecessary extravagance that could be dispensed with, as is proved by the fact that they themselves could never afford to indulge in it.

2. Three hundred and fifty undischarged ships is equivalent to a waste of 3.5 million deadweight tons.

3. A statement by Lord Leathers in a memorandum for the War Cabinet of 22nd January 1945.¹ This runs as follows:

If the 200-odd U.S. Army ships monthly which are programmed to Western Europe were loaded with mixed cargo on the system used for our own maintenance vessels from North America to India and the Middle East, they would lift additionally an average of approximately 300,000 weight tons monthly of civil cargo, which would go far to solve the liberated areas shipping problem for N.W. Europe. The wastes inherent in the powers given to the U.S. Chiefs of Staff over military shipping are becoming so great as to dominate the whole deficiency problem.

Assuming one ton of cargo per gross ton per round voyage and a round-voyage time of 2.5 months from North America to Western Europe, the failure to combine cargoes properly, to which Lord Leathers refers, would be equivalent to a waste of just over one million deadweight tons, if the cargoes had been available and the port and transit capacity in Europe sufficient to distribute them. Both these conditions seem to

¹ Lord Leathers made other statements to the same effect.

have existed at this time.¹ The writer assumes that shipping-space was being wasted in the same way, though not on so large a scale, in the other theatres, where, equally, there was a demand simultaneously for military and civil cargo.

4. The statements in the President's message (transcribed in Appendix LXIX) which refer to the 'selective discharge' of ships and the 'inefficient use of ocean tonnage for local small deliveries'. These forms of waste may be described under the heading of unduly slow turn-round. For lack of data it is impossible to put a figure on the loss of ships' time that resulted, but the chances are that it was considerable. It may be noted that when the delays in port in this country were at their worst, ships took on an average (as far as can be judged from the incomplete figures kept at the time²) about ten days longer to discharge than in the same months a year later when the difficulties had been overcome. The writer has the impression that delays of this order to ships working (as distinct from delays to ships immobilised because of port congestion as in South Africa) must have occurred in ports abroad within the British area of responsibility at various times until the causes of the trouble had been diagnosed and removed. If one were to assume comparable delays in the Pacific theatres (where in fact they may well have been much larger) they must, with demand at the level tabled at 'Argonaut', have involved a loss of about one million deadweight tons.³ At the same time turn-round was certainly unnecessarily slow in other United States theatres, and the delays were proportionately more significant since the length of haul was shorter.

5. The three statements quoted above thus show a proven waste of about 4½ million deadweight tons; further, they prove that the waste must have been a great deal larger than this. It seems highly likely that the degree of waste which cannot be estimated was at least as large as that which can, and that, in consequence, the annual rate of waste at the end of 1944 (i.e. the amount of tonnage in employment, over and above what would have sufficed, with British standards of management, to meet demands at the existing level) was of the order of 9 million deadweight tons or even more.

6. United States losses of dry-cargo ships from all causes throughout the period when the United States was in the war were 3·2 million gross tons, say 4·7 million deadweight tons.⁴ British and Allied (other than United States) net losses (i.e. losses minus British new building) throughout the

¹ See footnote 1 to p. 436 below.

² See Appendix XIX, p. 146.

³ The average round-voyage time to the Pacific has been estimated (see Appendix LXVI) at roughly 5 months, say 150 days. A decrease in turn-round of 10 days would thus have meant a decrease in round-voyage time of roughly 7 per cent. The amount of United States tonnage required in the Pacific was put at 'Argonaut' at roughly 16·8 million deadweight tons (see Appendix LXVI), of which 7 per cent. is 1·2 million deadweight tons. But some deduction may have to be made from this figure because of sailings to the Pacific accounted for by the undischarged ships already allowed for, although evidently a considerable proportion of these was in N.W. Europe (129 at 17th September 1944).

⁴ The Admiralty's estimate, made in October 1945, of United States losses of dry-cargo ships from all causes was 3·2 million gross tons, say (using the conversion factor of 1·48, the appropriate one of United States ships), 4·7 million deadweight tons.

whole war were roughly 7.7 million gross tons or, say, somewhere between 10 and 12 million deadweight tons.

7. It should be noted that all the statements in this appendix refer only to the misuse of ships. They take no account of the waste (by British standards) that occurred because United States scales of equipment were (by comparison with the British) unduly lavish, or because articles were shipped that could not be used either because they were inappropriate to the needs of the theatres in question or were shipped in excessive quantities.

APPENDIX LXVIII

Proportion of United States total requirements (Washington and 'Argonaut') accounted for by civil requirements

	<i>Washington</i>		<i>'Argonaut'</i>	
	<i>Average number of sailings per month</i>	<i>Tonnage continuously employed mill. d.w.t.</i>	<i>Average number of sailings per month</i>	<i>Tonnage continuously employed mill. d.w.t.</i>
<i>E.T.O.:</i>				
Continent	1.3	0.03	1.0	0.025
Southern France	5.8	0.10	6.25	0.2
<i>E.T.O. and Azores:</i>				
Italy and Balkans	37.5	1.30	42.25	1.5
War-making capacity of Western Hemisphere	17.5	0.50	18.0	0.5
<i>British programmes:</i>				
North Atlantic sailings	37.2	0.90	34.5	0.9
South and East Africa	5.8	0.30	5.5	0.3
Desired National Govern- ment import pro- grammes for liberated areas	32.9	0.98	37.75	1.1
<i>British Empire programmes:</i>				
Australia	3.3	0.20	3.0	0.2
Non-military	9.5	0.30	9.0	0.3
<i>Total civil requirements</i>		<hr style="width: 50%; margin: 0 auto;"/> 4.61		<hr style="width: 50%; margin: 0 auto;"/> 5.025
<i>Total requirements</i>		<hr style="width: 50%; margin: 0 auto;"/> 35.9		<hr style="width: 50%; margin: 0 auto;"/> 35.64
<i>Proportion of total require- ments accounted for by civil requirements</i>		12.8%		14.1%

Source: Table compiled by the author from data in the Ministry of War Transport (see Appendix LXVI, p. 282)

APPENDIX LXIX

'Message [from the President] dispatched by United States Chiefs of Staff to United States Theater Commanders', 9th December 1944

1. The President, in a memorandum to the Joint Chiefs of Staff 20th November, noted the congestion of shipping in the several theaters, and in view of the critical overall shortage of shipping stated that "with due allowance for the delays inevitable in wartime it nevertheless seems to me that the most urgent representation should be made by the Chiefs of Staff to the theater commanders to improve this situation".

2. The present critical shortage of ships is due primarily to the retention of large numbers of vessels in the four major theaters of war and to the inability of the theaters to discharge and release ships promptly. This immobilisation is largely the result of overestimation of discharge capacity, partial rather than complete discharge of vessels once berthed, and the use of ocean ships as warehouses on a large scale.

3. While there is presently congestion in all theaters, it will be considerably alleviated through implementation of these policies. This relief will result in a demand for much shipping by the theaters who have relieved their congestion. Such additional shipping will be diverted from those theaters where congestion still exists.

4. Therefore, in order that there may be a uniform approach to the solution of this pressing problem, it is directed that the following policies be followed by all United States commanders of areas under executive direction of the United States Chiefs of Staff and shall be a guide to U.S. commanders in other areas:

- (a) The use of ocean-going ships for storage purposes whether loaded in the U.S. or in the theater, is prohibited.
- (b) In arriving at shipping requirements, a realistic appreciation of port and discharge capacity is imperative. Factors of safety applied to supply requirements which result in wasteful banks of idle ships awaiting call to an operational area will be reviewed and scaled downwards and provide safety and economy. Theater shipping schedules for, and employment of, both locally loaded vessels and those arriving from the U.S. will conform to port and discharge capacities. Schedules will be altered promptly by responsible commanders as experience modifies estimates of discharge capacities. Theater and area calls for supplies will be adjusted to conform to revised shipping schedules.
- (c) Selective discharge of ships, resulting in a partial unloading of a number of vessels, save in the early stages of amphibious operations, or urgent operations, will be discontinued.
- (d) The misuse of large ocean-going vessels by diversion or delay to discharge or load small tonnages; by partial or selective unloadings of cargo; or by the inefficient use of ocean tonnage for

local small deliveries will be discontinued except in case of emergency which the theater commander cannot meet by other means.

- (e) Detailed ship position and employment reports to Washington shipping authorities as prescribed by the War and Navy Departments will be submitted expeditiously by responsible commanders.
- (f) It is considered that the most effective way to implement the above policies is through the designation by the theater or area commander of a single theater agency for the control of shipping.

5. The War Department is charged with supervising the utilization of U.S. Shipping by Commanding General, European Theater of Operations; Commanding General, Mediterranean Theater of Operations; and Commander in Chief, Southwest Pacific Area, and the Navy Department (Chief of Naval Operations) is charged with supervising the utilization of U.S. shipping by Commander in Chief Pacific Ocean Areas in accordance with the above policies. Allocations of shipping shall be made with due regard to capacity of ports in the terminal area to the end that vessels in excess of the number that can be unloaded (with allowance for reasonable detentions) shall not be despatched.'

CHAPTER XX

CONCLUSION: THE END OF THE CRISIS AND THE ACHIEVEMENTS OF ANGLO-AMERICAN SHIPPING CONTROL

THE BRITISH left the 'Argonaut' Conference with, on paper, a deficit during the first half of 1945 that amounted to roughly 600,000 deadweight tons in continuous employment—an amount, that is, that could in this period have carried about a million tons of imports to the United Kingdom across the North Atlantic.

The Prime Minister, however, had decreed that United Kingdom imports were not to be reduced below the level—13·2 million tons for the half-year—fixed in the budget. The deficit, in other words, if it materialised, was to be distributed among the remaining services. There must be less fertilisers for the Southern Dominions, or less grain for the Indian population, or less war material for the armies in India, or some combination of these and other possible reductions. But as usual, and indeed not without reason, for there had rarely been any surpluses anywhere since Pearl Harbour, every potential victim started to protest, and it was hard to decide which should be sacrificed.

The War Shipping Administration, however, had for some time suspected that there need be no substantial sacrifices. It foresaw that at the last minute the United States Services might, for lack of military cargo, be forced to refuse the ships they had asked for and been allocated, and when in the event this happened it allocated the ships to Britain. The arrangement was not what anyone would have chosen; it involved a constant changing of plans at the last moment; sometimes, and increasingly, it resulted in lack of the desirable cargoes and even of any useful cargoes at all, nevertheless it was a great deal better than nothing, and as a result of it American help in the first quarter of 1945 was considerably in excess of the 'Argonaut' forecasts and indeed at an annual rate as high as that reached during the first half of 1944.

The shipping crisis, therefore, which in the autumn of 1944 had been pronounced the worst of the war and had been expected to

reach its peak in the second quarter of 1945, began to seem a myth. By the end of the first quarter of 1945 it was clear that the deficits, so far from being unmanageable, were not going to exist at all, and various exalted personages in consequence started to complain about the unnecessary alarm they had been caused. The statisticians, they concluded, must have done their sums wrong.

The statistician who drew up the British budgets had sometimes, it is true, expressed surprise at the 'impossible' estimates he had been required to make, covering as they often did periods of a year or more ahead and relating to programmes many of which were continuously in a state of flux. It occurred to him, at the time he became an object of suspicion, to investigate how far the results had corresponded to his forecasts. He discovered that in six estimates, made between November 1943 and November 1944, for the last half of 1944, the error had never been as much as $1\frac{1}{2}$ per cent.¹ Admittedly it was not only statistical skill that had kept the error so small. The achievement was the result of marrying the arts of the statisticians and of the people who allocated the ships. The statisticians could only estimate the likely results of the various projects that were proposed. If the projects that were agreed on had afterwards to be altered the people who allocated the ships saw to it that the necessary adjustments were made. They gave a little more to one set of claimants within a particular group, and a little less to others, while keeping the total demands stable. If, for example, military operations needed more ships than had been allowed for, the forces not actually engaged in fighting got less; if there were not enough ships to bring the scheduled volume of imports to this country on a particular route, then these imports were allowed to diminish, while the departments concerned had recourse to their stocks, and other imports were carried in quantities larger than the prescribed ones, the excess being put to reserve against the day when the positions would be reversed.

This was the British way of doing things and if the budgets

¹ To be precise: the statistician when he had drawn up his budgets had been required, among other things, to work out the amount of United States help that would be needed for the United Kingdom import programme if the target were to be reached. In making his check he looked to see how much help he had asked for, and how much had been received, and how actual imports stood in relation to the target. The error was the difference between actual imports (adjusted for any shortfall or increase in United States help) and the target, expressed as a percentage of the total inventory. It may seem, therefore, that the smallness of the error may have been accounted for because services other than the importing services of the United Kingdom were adjusted to achieve this result. It seems, however, that this did not happen in the period in question, at least to any significant extent. What evidently did happen, however, was a good deal of alteration among the various military programmes, although the total amount of tonnage allocated to the Services remained more or less as in the forecasts, and also a good deal of alteration in the component parts of the other two main groups of programmes—the United Kingdom import programme and the cross trade programmes.

appeared to have failed in their purpose at the end of 1944 it was not from mistakes of British making but because of the state of affairs in America where military demands, and the use of ships for military purposes, were less subject to scrutiny and control than in this country. When the United States' commanders made large, unnecessary demands they caused a crisis. When they changed their minds the crisis disappeared.

At the beginning of 1945 besides not taking up all the ships they had asked for, the United States theatre commanders, or some of them, in response to the President's message began to release ships in large numbers. The result, as the statistician said, was 'a sudden flush of tonnage . . . of a volume which could hardly have been foreseen'; and many of the ships which came back from the Far East round about March 1945, as well as those which the United States theatre commanders never claimed, found their way into British services (including those services for the liberated territories for which the British were responsible) under the friendly direction of the War Shipping Administration. In the second quarter of 1945, in consequence, American help to British programmes reached the unprecedented level of about 5 million deadweight tons.¹

As things turned out this did not benefit the United Kingdom import programme. In spite of it, imports in the first six months of 1945 fell short by 800,000 tons of the target of 13.2 millions because the necessary cargoes were not available. Though the difficulties of finding these cargoes at the last minute contributed, the principal reason, particularly in the second quarter, was a world shortage of raw materials and foodstuffs.

This was a possibility that had been foreseen since the spring of 1943. It had then seemed that the vast output of American ships must exceed the means of filling them. Because, however, of the extent to which the United States Services wasted shipping-space the danger did not materialise. Even in the first half of 1945, supplies would evidently have been much less scarce than they were if the Americans had not concluded in 1944 that the war in the West would be over by Christmas and, in consequence, reduced food production and taken off a number of domestic controls so that, in the words of an American writer, 'United States civilian consumption rose to unprecedented heights',² at the same time that supplies diminished. As a consequence, the United Kingdom import programme, exposed in the past to the hazards created by the shipping shortage and the shortage of port and transit capacity, now

¹ See Appendix LXIV, p. 419.

² See S. M. Rosen, *The Combined Boards of the Second World War*, p. 241.

fell a victim to the shortage of cargoes. The annual rate of importation in the first half of 1945 was only 24·8 million tons, and stocks had therefore to be still further reduced. They were, it is true, no longer needed as an insurance against war risks, but because of Britain's shortage of dollars and the world shortage of supplies they were badly needed to make up for the many lean years.

The other British civil programmes did not suffer to a comparable extent because the most urgently needed supplies—grain for India and the Middle East, nitrates from Chile for the Middle East, phosphates for South Africa and the Southern Dominions—were still available in quantities as large as British ships could carry.¹

Even in the period immediately preceding and following the 'Argonaut' Conference when cuts had been imposed or threatened there had, except in India, and among the liberated territories of Western Europe, been no immediate prospects of disaster. In India, however, even as late as this it proved impossible to overcome the heritage of mistakes, misconceptions and physical shortages. Though in 1944 imports of grain had been vastly larger than in 1942 and nearly three times as large even as in 1943,² reserves were still inadequate. The belief, however, that the Indian public and the provincial administrations were not doing all they could to help themselves, gave rise to a permanent distrust in London of all the warnings uttered in India from time to time that another famine was imminent. The Government of India could not dispel this distrust, for since it proved impossible to gain control of the supplies of home-produced grain, it also proved impossible to make a convincing statistical case for the needs. In consequence, when in moments of crisis it appeared that even India's minimum demands could not be

¹ This is a somewhat oversimplified account; the facts appear to have been as follows:

Apart from the requirements of the United Kingdom, the main requirements for fertilisers were from Egypt who required nitrates, and from South Africa, Australia and New Zealand who all required phosphates. The only sources of nitrates ever mentioned are the United Kingdom and the United States, where artificial nitrates are manufactured, and Chile where natural nitrates are produced. Supplies of the former were always inadequate, and at the end of the war it was supply and not shipping that limited the amount that Egypt received from these sources. However, it was always shipping that set the limit to the supply of nitrates from Chile. There is no suggestion that there was not always plenty of nitrates in Chile.

After the Japanese capture of Nauru and Ocean Island, Australia and New Zealand obtained their phosphates during 1942 and the first part of 1943 from Makatea, in the Pacific, and, together with South Africa, from the Red Sea. From the middle of 1943 onwards there were also supplies available in North Africa. At various times the quantities received from these sources were limited by the amount that could be produced there. But there were always plenty of phosphates in Florida. Although supplies of phosphates from Florida were the subject of allocation by the Combined Food Board, at no point during the war was it found possible to ship the full quantity that had been allocated. The supplies that could be received by South Africa were subject to a potential limitation set by the capacity of her plant for processing rock phosphate to superphosphates, but this capacity was not filled.

² See Appendix LIX, p. 356 above.

met except at the cost of severe sacrifices elsewhere, India was harshly treated.

Nevertheless, however unsatisfactorily the Indians managed their affairs it seemed obvious to the British officials in the country, and equally to those sent out from home to examine the problem, that there could not be any immediate improvement. These were facts of life that had to be accepted. Unless there were to be grave risks of another famine, India, it seemed, must have at least 70,000 tons of imported grain a month. This opinion, however, was only half-believed or not believed at all by the War Cabinet, and it was disregarded when the British shipping budgets showed unmanageable deficits at the end of 1944 and the beginning of 1945. In the six months September 1944 to March 1945 an average of only just over 34,000 tons of grain a month was loaded for India. It is clear that more than this amount could have been provided had the British Government believed that the alternative was the death from starvation of another 1½ million people,¹ but it is equally clear that the Government did not believe this. As the Minister of War Transport said to the War Cabinet after the 'Argonaut' Conference, 'failing a windfall, he thought he ought to warn the War Cabinet that it would be necessary to cut various programmes . . . he felt that he would have to ask for a cut in the Indian food grain requirements. He could not believe that India would need so much as 70,000 tons a month . . .'.²

As things turned out, the prophets of doom were confounded; there was not another famine, though opinions evidently differed about whether this was due to good luck or good management. Equally, in the liberated areas, though there was hardship, there were

¹ See footnote 2 below.

² The Minister added that 'in any event the shipping for this would not be available'. The truth of the assertion, however, depended on what was held to be the relative importance of the other programmes. It may, particularly, be noted that though there had been much talk of cutting the fertiliser programmes for the Southern Dominions it appears that in the first quarter of 1945 (when the Indian loading programme suffered a cut of over 60 per cent.) about 145,000 tons of fertilisers were shipped to the Southern Dominions, principally from the Red Sea and North Africa. This seems to have been about the quarterly average in the last half of 1944 and for the fertiliser year, July 1944 to June 1945. Most of these fertilisers were carried, at no cost in tonnage, in ships that had to proceed in any case from the United Kingdom to the Southern Dominions via the Red Sea. Three ships a month, however, were laid on for the purpose, the cost being 120,000 deadweight tons, in continuous employment. Roughly about 300,000 deadweight tons would have been required to ship to India from North America (whence the grain had to come at this time because none was available in Australia) the difference between the requirements and what was actually loaded. Clearly there can be no point in shipping fertilisers in order to ensure against food shortages in the future if the price is starvation in the present, and indeed this was the view the Ministry always took. Again, and here it might be held that the argument was even more cogent, tonnage at the time was being allocated to the fleet train, for the war in the Far East, on a considerable scale. The writer does not wish to suggest that the decision was not difficult, but only to assert that had it seemed to the War Cabinet that a famine was imminent they could and must have acted differently from the way they did.

no disasters;¹ and after the American ships released by the United States theatre commanders began to return from the Pacific about March 1945, all the programmes were met, in India, North-West Europe and elsewhere, as far as meeting them was a question of ships and not of supplies. Indeed, many more ships were allocated to the relief programmes, both British and American (for their claims on supplies had a high priority), than those which had been tabled in the 'Argonaut' budgets and which, because of the unmanageable deficits, it had been supposed could not all be provided.

Thus the civil programmes for which the British were responsible survived the final crisis of the war as they had survived the earlier crises. Except in India there is no evidence that civil needs were ever denied to an extent that either held up the war-effort or inflicted a serious degree of hardship on the populations concerned.² Many people in many lands went without things to which they were accustomed and which in other circumstances they might have counted as necessities. There were many narrow squeaks. The United Kingdom particularly was forced to run down its capital equipment with dismal prospects for the future. The comprehensiveness and efficiency of the controls there, though they secured a more equitable distribution of sacrifice than was possible elsewhere, probably, in the aggregate, reduced standards of living to a greater degree than in any of the other territories within the British sphere of responsibility, although admittedly in many of these territories standards were far lower to start with. On the other hand, even in the United Kingdom,

¹ According to Ministry of War Transport 'the liberated areas programming has been extremely bad'. The writer has not examined the question in any detail, because, except in broad outline, it is principally significant in connection not with the war, with which this book is concerned, but with the peace. It is clear that drawing up the programmes presented great difficulties, among other reasons because of the large number of different authorities concerned, as well as because the fulfilment of the programmes was a combined Anglo-American responsibility. For a long time it proved hard if not impossible to see which of the three possible shortages—port capacity, shipping and supplies—would prove the determining shortage. In the event it appears that, broadly speaking, port capacity set the limit in Western Europe until the end of 1944, for Antwerp was not opened till the beginning of December; it may have been the limiting factor in the Balkans for longer. In the first quarter of 1945, though occasionally in Western Europe imports appear to have been limited by shortage of supplies, they seem generally to have been limited by shortage of shipping. From March onwards the limit seems to have been set by supplies.

² It may be asked whether the great decline in the shipments of fertilisers had serious results on food production. To answer this question would require an investigation of a scope it has been impossible to attempt here. A large number of contradictory statements on the matter in the cases of South Africa and the Southern Dominions exist in the Ministry's files. The statistics of production, however, for these countries do not show any significant decline, and in a number of cases show a rise, throughout the war years, if one excludes wheat production in Australia where the significant reductions are clearly attributable to causes other than lack of fertilisers—i.e. to the shipping shortage which made it impossible to ship wheat from Australia to this country after Pearl Harbour, so that the acreage under wheat was reduced, and to the drought of 1944. On the other hand, there seems incontrovertible evidence that lack of fertilisers reduced grain production in Egypt.

and to a greater extent in the primitive communities in the Middle East, the *bellum Britannicum* assured to many humble people a degree of protection against hunger and disease that they had not known before.

These advantages were the by-products of war. The purpose of the civil programmes in the Eastern Hemisphere, inspired by self-interest, a sense of justice and humanity in proportions it would be impossible to evaluate, was to enable enough ships to be released for the Services without undue hardship to civilians and civil economies. Can one say of the military as of the civil demands that they, too, were always allocated sufficient ships to meet the needs—sufficient, that is, to ensure that victory was never delayed for lack of ships?

This is a vexed question about which there has been much debate and on which opinions differ. There can never have been a maintenance or an operational programme—certainly none in connection with 'Overlord', the most important of the combined operations, to which the highest priority was attached—that did not at some time or other seem endangered by the shipping shortage. Every strategic plan that was ever seriously considered appears at some time or other to have run into difficulties on shipping grounds and many projects were written off straight away because it was obvious that the necessary ships could not be provided. Strategy, it must seem at first sight, was always circumscribed, and the planning and carrying out of operations constantly interfered with, by the lack of ships.

Yet this would be a superficial judgment. As soon as one starts to consider how far strategy was influenced by the shipping shortage it emerges that one is in danger of asking the kind of question that philosophers say should not be asked—the kind of question, for example, that T. H. Green put in the nineteenth century when he asked if a man was free to control his will and concluded that the problem was misconceived because, as he said, a man's will is not something outside himself over which he can exercise control, but an integral part of himself. There were senses, equally, in which the shipping situation was an integral part of the strategic situation and cannot, therefore, properly be described as a limitation on it for, as was shown earlier, the German conquest of Europe not only made the task of attacking ships much easier, it enormously reduced the carrying-capacity of the fleet, notably by closing the Mediterranean; and at the same time it made victory dependent on satisfying an enormously increased demand for ships in the future, since the only possibility of attacking the enemy on land was by means of amphibious operations launched, to start with, from far-distant bases.

These facts were obvious, and thus one of the principal tasks assigned to the British Merchant Shipping Mission, sent to Washington in March 1941 after the passing of the Lend-Lease Act, was to induce the Americans to embark on a programme of new

building. After Pearl Harbour, when a situation analogous to that in the West was created in the Far East, the Americans immediately saw the need on their own account to build large quantities of ships. From the early days of the war, therefore, in the sphere of ship construction an attempt was made to relate the volume of shipping to the needs, though necessarily by means of hit-or-miss calculations, since a building programme takes time to develop and needs are apt to change in the interval.

Equally, when it came to considering what operations should be carried out, and to planning their execution, the amount of available shipping had always to be taken into account. Admittedly, this was only very imperfectly done before the spring of 1943, but until then the resources other than shipping were sufficiently limited, and the strategic necessities sufficiently few and obvious, to make the somewhat haphazard proceedings tolerable. When they became intolerable they were revised. From the middle of 1943 onwards the invention of the world shipping budgets insured (except when the United States Chiefs of Staff deliberately proceeded regardless of them) that strategy and the available amount of shipping were always considered in conjunction.

It could nevertheless have happened that some unexpected turn in the fortunes of war might have changed the strategic objectives and made it impossible to provide the ships required, or that some serious miscalculations in the budgets might, equally, have produced unmanageable deficiencies. Misfortunes of this sort did indeed arise. As things turned out, however, the Americans built many more ships than they would have needed if they had used them less extravagantly and so, when disaster threatened, there was slack to pull in.¹

Again it might have happened—and indeed it invariably did—that when the plans for operations came to be worked out in detail they proved more expensive in ships than the forecasts. As far as the

¹ It must be made plain that these statements do not include landing-craft and landing-ships. Many writers when they refer to the shortage of shipping (for example, Mr Chester Wilmot) seem to be meaning landing-craft and landing-ships as well as merchant ships. This is often legitimate since for certain purposes and in certain areas (i.e. to carry vehicles and tanks, etc., over relatively short distances) landing-ships and merchant ships were interchangeable. Landing-craft and landing-ships, however, were not under the control of the Ministry of War Transport but flew the White Ensign. The writer has concluded that, as far as appears, the shortage of merchant ships neither interfered significantly with the planning or execution of military operations nor (in the senses in which it is legitimate to use the phrase) limited strategic planning. This opinion is endorsed by the military historians whom the writer has consulted. On the other hand it is subject to the qualification that if, presumably, more merchant ships could have been made available, the shortage of landing-ships (which the writer understands from the military historians did undoubtedly on occasions prevent the execution of operations that would otherwise have been possible) would have been less serious. The writer's assertions, therefore, can only be understood to mean that when combined operations were being planned certain quantities of merchant ships and, equally, of landing-craft and landing-ships, were assumed to be necessary, and, given these assumptions, the merchant ships proved sufficient.

British were concerned, however, it also invariably happened that the demands for maintenance were overestimated so that, taking the military programmes as a whole, the pluses and minuses tended to cancel out.

In contemporary opinion, however, they never completely cancelled out. Most people in the Ministry of War Transport and many outside believed that the shipping shortage always impeded the fulfilment of the tactical plans. As the Director-General of the Ministry said in a lecture delivered after the war: 'In the end, with the assistance of our American and other allies we were able to assemble the necessary quantity of shipping for every major operation, but every major operation was, notwithstanding, either curtailed in scope or delayed in time as a result of the limitations imposed by a shortage of the suitable shipping'.

But was the shipping shortage the only reason for the delays and reductions and, if so, did these delays and reductions have significant consequence? It is easy to see why the merchant shipping authorities should have assumed that the answer was yes, at least in the first case if not in the second; for they were always being asked for more ships than they could provide, and there were always hair-raising difficulties while operations were being planned, and hair-breadth escapes while they were in progress. Nevertheless, it does not follow that the authorities were right. If they were to prove their case they would have to prove that all the necessary resources were available except the ships and, in that case, that operations would have taken a significantly different turn if the ships that were asked for had been supplied. In the cases the writer has examined it would be impossible to provide these proofs;¹ in general, since there are evidently no indisputable instances (for if there had been they must have come to light) the matter seems incapable of proof; to attempt to prove it would involve a series of conjectures, becoming progressively more remote from the facts, about what might have happened in circumstances different from those which existed.

The available evidence, therefore, seems to show that the shipping authorities' record of success in the military sphere was even greater than in the civil, for there was not even one clear exception to it. Yet many more hazards attended the task of providing ships for military than for civil purposes; for at least at the end of the war the civil programmes were relatively stable, and, except in moments of acute crisis, as in the spring of 1943 when the planning was inadequate, never had to be met to a rigid time-table; all the military programmes on the other hand were constantly changing with the changing fortunes of war, and the operational programmes were of the utmost urgency. Equally co-operation with the Services was,

¹ See particularly Chapter XVI above.

or easily might have been, far more difficult than with the civil departments. As the shipping shortage grew more acute, the authority of the Ministry of War Transport increased; in its dealings with civilian claimants, both in the United Kingdom and abroad, it was in a strong position. With the Services, however, it was another story. What happened in America is an extreme illustration of the kind of thing that might have happened in the United Kingdom in other circumstances. The harmonious, intimate and fruitful relationship between the shipping authorities and the Services that finally prevailed there would have been impossible if the shipping authorities had been unable to win the Services' confidence and respect, and to establish their own right to be treated as equals where merchant ships were concerned.

The success, in fact, with which British ships were controlled, and which appears in the light of the evidence to be greater than the Ministry of War Transport claimed, must largely be attributed to the happy relations that prevailed between all the parties concerned.

In its very nature the control of ships in war must be a work of collaboration. The achievements during the Second World War in the spheres of civil and military planning would have been impossible without parallel successes in the allocation of ships; equally, on the other hand, ships cannot be allocated in the most economical way or even, in times of acute scarcity, in such a way as to permit even the most urgent needs to be met, without plans for production, consumption, and distribution, as well as for military operations, that are made in the light of the shipping situation and—as far as circumstances permit—adequately carried out.

It follows in consequence that the achievements of British shipping were not those of the Merchant Navy and the Ministry of War Transport alone but, in proportions impossible to assess, of an enormous number of different authorities, and indeed of the whole British people and Commonwealth. They were enacted on a stage as large and by actors as many and diverse as Tolstoy liked to portray. The actions, however, were not unplanned, directed by chance and wholly inexplicable,¹ as in *War and Peace*, but in a large degree disciplined and co-ordinated, and often demonstrably inspired not only by a great cause but by a great leader.

Particularly in their dealings with the Americans, the British were apt to attribute their successes to the excellence of their institutions of government which increasingly permitted all the relevant facts of a situation to be considered together and the appropriate authorities to make decisions without the danger, always present in the United

¹ Inexplicable, that is, in the opinion of Tolstoy who believed that there are no great men, that those in authority do not control events, and that nothing in war ever proceeds according to plan.

States, that other authorities would later deliberately override them. The various requirements were surveyed at successive inter-departmental levels, and the controversial matters settled one after another in the upward progress through the hierarchy of committees, until only an increasingly small residuum reached the War Cabinet.

It was indeed true that the British machinery of government was much more suited to the task of world planning than that of the Americans whose exuberant vitality (albeit with advantages not possessed here in an equal degree) made them at all levels averse from discipline. The British, however, it is sometimes said, take credit to themselves for their virtues in the wrong proportions; they exaggerate the merits of their system of government and underestimate those of their national character. Certainly the efficiency presupposed by the immense feat of co-ordination which successful shipping control involves was more apparent when the parts of the system were seen in their relations to each other than when they were considered individually. Then it sometimes emerged that the British character—its tolerance and common sense, its level-headedness and ingenuity in times of danger, its pertinacity in getting on with the job regardless of the distractions of a precarious future and personal or professional rivalries—played a larger part in the achievements, and well-contrived methods of administration a smaller part, than might have been supposed. This was so in the Ministry of War Transport, the lynch-pin in the planning machinery.

The Ministry was built up round the nucleus of the Mercantile Marine Department of the Board of Trade and the highest posts were held by professional Civil Servants, yet a large part of the shipping industry was to be found within its precincts, and ship-owners were the heads of a number of divisions; there were also lawyers, actuaries, university dons and representatives of other trades and professions. This curious assemblage settled down to live together and created for itself its own peculiar atmosphere in which the points of view of the predominant groups—the Civil Servants and the ship-owners—were ultimately so blended that it was said that outsiders often could not tell who was which; it evolved its own language, with a large number of different dialects, full of technical terms—some the general currency of the shipping world and some of its own invention—that were wholly unintelligible outside; it became a community, conscious of its corporate existence, proud, by the end of the war, of its traditions of six years' standing, and with its own ways of doing things that were often highly unconventional.

As new tasks constantly presented themselves, and new techniques were required, new people were recruited, new divisions were grafted on to the old ones, new methods superseded or were superimposed

on the old. Similar transformations occurred in the Ministry's empire overseas, where its representatives, in increasing numbers—in Montreal, New York, Buenos Aires, Gibraltar, Capetown, Basra, Bombay, Sydney and all the other principal ports of the free world, as well as in the ports of the conquered territories as the liberating armies moved in—were required to superintend the loading, discharging, repairing and servicing of the ships amid all the emergencies and dislocations of war. The largest and most important of the shipping organisations abroad—the British Ministry of War Transport, New York—was employing 80 people when France fell but nearly 2,000 in 1944. Like Topsy, its members were fond of saying, it 'just grewed'. After the United States entered the war it incorporated within itself a large body of Americans—in effect a whole American government agency—employed in forwarding cargo to the ports. Towards the end of the war it was dispatching an average of 2½ million tons of cargo a month to all the four quarters of the globe.

At headquarters in London and often abroad people lived in an atmosphere of perennial crisis; they worked themselves to the bone; there rarely seemed time to reflect on, still less to record on paper, the lessons taught by experience, or even to preserve a proper order among the files or to ensure that functions were not duplicated. It always seemed unnecessary and for long would have been impossible to keep a central record of the sequence of the main events—of the events, that is, that determined the shipping situation at different dates. For the shipping situation—the relation of supply and demand—was determined by such an enormous number of causes, often so hard to establish and evaluate, that until 1943 no one could have given a comprehensive account of it. After 1943, however, the shipping budgets, and the huge array of statistics on which they were built up, provided all that was necessary for practical purposes.

In the purchasing departments that were claimants on shipping-space, and even in the Ministry itself, people were often heard to observe that the Ministry's right hand did not know what the left was doing, and to ask how so extraordinary and amorphous an organisation could manage to do its job; its various customers argued with it and grumbled at it—and yet got on very well with it; for the grumblers always ended by admitting that somehow or other, and at some time or other, but not too late, almost invariably the job *was* done. There was no denying it; no other civil department in the world had so vast and intricate a task or, notwithstanding, a greater record of success. The papers, admittedly, were in a state of confusion—the ship-owners, it was always said (but they were not the only offenders) were unaccustomed to keeping elaborate records and found the task distasteful; nevertheless the necessary papers were

always produced when required; the right hand might sometimes not know what the left was doing; indeed because of the need for secrecy (though this was not the only reason) it could not be told; nevertheless it was always told enough for all essential purposes; people might on occasions spend their time and lose their tempers in an endeavour—that in other circumstances might not have been necessary and as things were did not always succeed—to co-ordinate their colleagues' activities, but in relation to the nation's manpower budget the waste of labour was infinitesimal and the lack of success without obvious ill-effects.

The defects were known. In the next war, it was sometimes said, they must not be permitted to recur; but meanwhile, or so the argument, it appears, must have run, there was not time, nor was it the British habit, to interfere with arrangements that worked, however haphazard and illogical their appearance. When it seemed urgently necessary the anomalies as far as possible were removed; otherwise they were left alone.

There were occasions, it was clear in retrospect, when things might have been done better; the effects of earlier miscalculations sometimes remained to impede the workings of the machine; but they did not prevent it from fulfilling its functions, and as time went on it continuously improved. By the end it was operating in accordance with a whole body of principles, justified by experience though rarely explicitly formulated; for as the need for control developed in one area of the Eastern Hemisphere after another, the same types of problems cropped up again and again though with an infinite number of local variations.

Broadly speaking these problems fell into two categories: In the first category were the problems that related to the United Kingdom and that, for this or other reasons, had to be dealt with there except when it was necessary to deal with them in Washington or at the various war conferences. These were the problems involved in managing the ships (both the ships under the British flag and the foreign ships on time-charter) and providing for the crews; the problems involved in negotiating with the civil and Service departments so as to ensure that the demands for civil imports and for military cargo were of a size and presented in a form suitable from the shipping point of view; the problems involved in estimating the capacity of the United Kingdom ports and planning for such increases as were necessary and possible; the problems involved in estimating the amount of tonnage available for the various services in the short and the long term and in allocating the tonnage in accordance with the various decisions on requirements. Into the second category came all the problems that originated in the overseas territories within the British sphere of responsibility and that, to a

greater or less extent, had to be dealt with locally. These were, principally, the problems involved in estimating the civil demands, in putting such pressure as was practicable on the authorities concerned to ensure that the demands were kept down to the minimum, and, when tonnage had been allocated to meet them in conjunction with the military demands, in arranging that the fruits of planning were not snatched away by trouble in the ports. The problems in this second category all had their counterparts among those in the first. Yet all differed from area to area and from their prototypes.

The need to keep civil demands down to the minimum in the overseas territories, and to ensure that they were put forward soon enough, and in a volume over the months that was constant enough, to prevent undue disturbances in the pattern of shipping employment, involved the need for import programmes, as it had done in the United Kingdom. Since the shipping authorities had to meet the programmes¹ they had an interest in seeing that they were properly compiled, but the extent to which they could interfere varied. In the Middle East, for example, the import programme was drawn up by the Middle East Supply Centre which submitted it to the Ministry. The Ministry, when it had accepted it, sponsored it at whichever committee might be called on to determine the degree of priority it should be accorded. The programmes of India and of the Colonies and the self-governing Dominions were drawn up and sponsored by the governments concerned, though all were vetted by the Ministry. Since it was rarely possible to supply evidence of need in the form of statistics of stocks and consumption-rates, the Ministry enlisted the help of the British supply departments and, on their advice, requested the importing countries to justify any demand that seemed unusually large.

The problems involved in compiling the programmes were, in general terms, the same problems everywhere, but, in detail, there were many differences. Everywhere there was the need for stocks, but the relationship between stocks and consumption, and even the precise purposes for which stocks were required, varied from place to place. Everywhere there was the need for Government purchase and import licensing but in greatly varying proportions; everywhere there was the need to ration but the extent to which rationing was practicable varied from the extreme, at one end of the scale, represented by the United Kingdom, where everyone and almost everything was rationed, to the extreme represented by India at the other, where it was virtually impossible to ration anything outside the major towns, accommodating only a minute proportion of the total population.

¹ To be precise the Ministry accepted programmes 'as targets for which . . . it will endeavour to provide tonnage on a long-term basis'.

Equally in the ports abroad in the theatres of war the problems, stated in the broadest terms, were the same as those already described in the story of the United Kingdom ports; and this was also true of the ports in many countries far removed from the battle areas, including, particularly, the United States, where failure to make proper arrangements for the huge volume of cargo moving on British account might have created a confusion comparable to that which arose in this country in the winter of 1940 to 1941. Again stated in the broadest terms, the reasons why the problems emerged were everywhere the same—the movements of cargo of unprecedented types or in unprecedented quantities, the dislocation of the ordinary routines for this and other reasons for which the war was responsible, the conflicts of a variety of competing interests and the lack of the necessary equipment and organisation. The equipment had to be provided, mainly by this country and the United States, and allocated according to need; the necessary organisation had to be set up by people with the necessary experience (whom the shipping and port industries in this country could providentially supply in large quantities); the lessons learned in the United Kingdom ports served as a guide, but often not as a guide that could be closely followed; for nowhere abroad could the Ministry exercise the unchallenged power which it wielded here; it had to co-operate, without even any statutory powers except in the colonies, with a variety of authorities—the local authorities of the governments concerned and the British and United States military authorities—and to induce them to settle their disputes and to take the other appropriate measures of which they themselves were often ignorant. Every area had its own peculiar physical difficulties and its own peculiar personal relationships; so that though all the problems were variations on a theme, the theme was often less apparent than the variations. Yet many of the problems in the overseas ports were related one to another by the claims on scarce equipment, and all by the part the ports played in the lives of the ships, to which port congestion can cause delays of enormous proportions, and whose voyages were organised to form a pattern that could not anywhere be significantly disturbed without a general confusion.

If observed from a height sufficient to obscure the vast complexity of the details—as, for example, a country's coast may be observed from an aeroplane, when the configuration of the coast-line, invisible from the ground, is revealed as on a map—there was thus a unity in the Ministry's many and various tasks. But there were, nevertheless, problems that until very late in the day appeared entirely *sui generis* and proportionately flummoxing. This, as has been shown, was particularly so in the cross trades. How, it was often asked, could the ships and the cargoes be married in the Indian Ocean cross trades,

as they could be in the two main services—the military services and the importing services to this country? How could the demands be forecast with the necessary precision when so many fluctuated with the varying yields of the harvests? How could the supply of tonnage be forecast when it consisted not only of the ships which could not be taken out of the Indian Ocean and which were insufficient, but of ships which, for the greater part, sailed to India and elsewhere with military cargo, and could perform cross voyages before they returned to their base, but whose numbers were determined not by the cross trades' needs, but by the changing needs of the military programmes?

Yet even this conundrum—which the statisticians sometimes liked to demonstrate by saying that where you have two equations and three variables you may have an infinite number of answers—proved soluble in the light of experience. By means of stocks and other arrangements it proved possible to make the demands reasonably stable, and the amount of tonnage required, divided into the two categories, could then be estimated. By these means the demands of the cross trades could be incorporated, reasonably firmly, in the budgets, and the necessary dispositions made, provided the shipping shortage were not too severe, if the supply of military cargo-ships seemed likely to prove insufficient. Experience came to show that something over 3 million deadweight tons of shipping in continuous employment was enough to meet the cross trade programmes, excluding those for relief.

To describe this sort of arrangement as expressing a principle is perhaps to misuse words, and indeed many of the so-called principles were of this type—rules evolved from experience and applied in a flexible way in the light of common sense. Indeed, the only principle that it seems that the Ministry was prepared to admit should always be applied was the principle that there should be no inviolable principles, but that times and circumstances must be taken into account and that logic and consistency have no value except as means to practical ends. Admittedly, like other human institutions, the Ministry had its moments when it disregarded its own philosophy and sought to apply its rules in an unreasonable way, but this only seems to have happened rarely; in general it did not need the professors to tell it that rules of thumb are dangerous.¹

This attitude brought it into conflict from time to time with the

¹ There is a school of modern historians that makes a great to-do about this matter. To the Ministry it was always obvious. But while these historians go so far as to assert that historical analysis, and particularly the type provided by official historians, is dangerous, because it may be applied in a rule-of-thumb way, the writer has met large numbers of people in the Ministry who regret that more analyses of the war-time experiences were not made. In effect, if not specifically, they admit that while there is no knowledge that cannot be misapplied, wise judgments are unlikely to be reached on a basis of ignorance about the past and that as Bolingbroke said at the beginning of the eighteenth century, 'the study of history anticipates, as it were, experience'.

British politicians and military authorities and, pre-eminently, with the United States Chiefs of Staff. The United States Chiefs of Staff always wanted things cut and dried. They appear to have believed that they could dispose of the shipping difficulties by establishing a set of priorities for shipping programmes, with their own programmes as priority 1. A variant of this idea was put forward by the War Shipping Administration in the summer of 1944, apparently with the purpose of stealing the Chiefs of Staff's thunder and protecting British interests, then particularly menaced by the expanding needs of the Pacific war. The idea was accepted by the British Merchant Shipping Mission and transmitted to London. There the sinister implications rather than the good intentions were what first caught the eye, and immediately there was a storm of protest. 'As an Englishman', said the statistician who drew up the budgets, 'I dislike written constitutions'; the professional Civil Servants marshalled an array of impressive facts; it was true, they said, that on occasions certain civil programmes were backed by a Cabinet directive; operational programmes, equally, were in effect always in this position; in general, however, there were no priorities; the manner in which British ships were employed made them impossible among British services and, *a fortiori*, among British and American services considered together. It was left to the ship-owners—always more prone than the rest of the community to express things in terms of moral issues—to have the final word. 'I share very fully', one of them said, 'the dislike of written constitutions . . . circumstances change so rapidly, and are likely to do so more markedly as the war draws to its conclusion, that wisdom would seem to lie in broad principles admitting of reasonable flexibility, based upon a system of agreement between partners whose aim is to promote the best interests of the common venture, rather than to score points over each other in an atmosphere of mutual suspicion.'

The advocates of flexibility won their case on this as on almost every other occasion, and the proposal was dropped. When it came up again later in the year and at the 'Argonaut' Conference—sponsored on these occasions by the United States Chiefs of Staff with the War Shipping Administration on the British side—the Chiefs of Staff, as has been shown, won a merely Pyrrhic victory. In general no priority rulings ever governed the allocations of merchant ships as they did those of landing-craft, which in consequence appear often to have been in the places where they were not needed instead of in those where they were.

The fact that allocations were thus kept flexible (while the formulation of requirements proceeded increasingly according to rule) was of cardinal importance. In other circumstances the success not only of British shipping control, but of the combined Anglo-American

control on which both the British and the combined programmes depended, would have been impossible. It was no small achievement thus to have kept the United States Chiefs of Staff in check, and it was a combined Anglo-American achievement—the achievement of the two shipping organisations whose friendship came to transcend the bounds of national interests narrowly conceived, as did that of the heads of the governments they served, and that withstood the changing currents of popular opinion; that was based on a common expertise and endowed with the strength that this provided.

The Anglo-American shipping alliance never worked as it was intended to work. The idea that institutions have only to be established and they will fulfil their purpose came to grief here as on other occasions. The principal organ of the alliance had been intended to be the Combined Shipping Adjustment Board—a body superior to the two national departments that controlled their respective nations' fleets, and having as its chief task, according to the 'Memorandum of Organisation'¹ drawn up on the 19th February 1942, 'to adjust and concert [their activities] in one harmonious policy'. This task, however, was not fulfilled.

A shipping board in war cannot legitimately decide international shipping policy in one sense of the term, for shipping is a service which exists to meet needs, and the needs are determined by the grand strategy drawn up by the heads of the States concerned. In the sense used in the Memorandum of Organisation, by policy was meant, primarily, principles in accordance with which help should be allocated by one ally to the other. But thus understood there can be no policy if the principal user of ships in the principal shipbuilding country can take what it wants without consulting anyone or submitting to any checks on how it uses the ships it has acquired.

This is, however, what usually happened during the war and the Anglo-American shipping alliance was in consequence never based on anything that can properly be called a policy. Thus the Combined Shipping Adjustment Board, denied for this and other reasons² the functions with which it had been proposed to endow it, died in all but name an early death.

In place of it came the allocations to British programmes at the various war conferences, and the innumerable and excessively complicated arrangements made among themselves in the intervals by the British and American shipping authorities; for though the kind of score-keeping insisted on in the early days was given up, the War

¹ Quoted in S. M. Rosen, *op. cit.*, pp. 102 ff.

² See Rosen, *op. cit.* The chapter in this book on the Combined Shipping Adjustment Board is mainly devoted to the other reasons, but the case seems comparable to that of one of Napoleon's marshals (to the best of the writer's recollection of the story) who when asked why he had not removed his guns, as instructed, to a certain position, replied that he had twenty reasons, of which the first was that he had no guns.

Shipping Administration still had to keep the score, not in order to hold the British to a bargain—as was shown, it gave them at the end of the war far more than the agreement drawn up at the 'Argonaut' Conference required—but in order to safeguard itself in case it should be challenged. Indeed, in the end, the principal purpose of all the complicated arrangements was to see as much justice done as possible with no greater a cost in American ships than could be made to look plausible if enquiries were set on foot. If this had happened the arrangements would doubtless have had the further merit of bamboozling the critics with a vast array of unintelligible terms and figures.

By all sorts of ingenious devices, therefore, the British and American shipping authorities worked things out for themselves at the end of the war, to their mutual satisfaction, in a way that no one else could hope to understand. In the process they developed an affection for each other; the British Merchant Shipping Mission and the War Shipping Administration evolved, as had been done in London, their own language (of which parts were added as an additional dialect to the Ministry of War Transport's London stock); they became endowed as it were with a sense of family solidarity which, however much they might bicker among themselves, made them present a united front against outsiders, whether British or American, who sought to interfere with them;¹ and knowledge, when combined with proved efficiency, is power; the shipping mysteries, except to those who professed them, were so incomprehensible, that though their respective governments could dictate to the shipping authorities, they could not out-argue them on their own ground. The shipping authorities had to be left to work things out in their own way.

The civilian interests in the free world—both in those parts of it that were never conquered and in those that were liberated—owed much to the War Shipping Administration, which, at the end of the war, constituted itself their champion against the United States Chiefs of Staff and (by providing the ammunition which the President used to extract ships from the Pacific and by allocating to their needs the tonnage released in consequence) thus ensured their preservation.

It is true that the War Shipping Administration's effective sphere of influence was always small; it never acquired any control over the movements of its ships once it had allocated them to the United States Services, and at the beginning of 1945 between 80 and 90 per cent. of the United States fleet was employed in meeting Service needs; nevertheless to have managed, with virtually no previous experience of shipping in peace or war, to man and operate 40 million deadweight tons of dry-cargo ships, as well as a large number of

¹ The last head of the British Merchant Shipping Mission informed the writer that the British Merchant Shipping Mission and the War Shipping Administration used to send a joint representative (either British or American as convenience dictated) to attend meetings, to the scandal of their respective compatriots.

tankers, was a formidable achievement. Moreover, starting from scratch had its—somewhat belated—advantages. It preserved the American organisation from the defects from which its British counterpart suffered because of its haphazard growth and because of the need to harmonise so many different and ancient traditions. Some of the British who worked with the War Shipping Administration in Washington fervently maintained that within the narrow limits where it was permitted to operate it discharged its functions more expeditiously, and with a smaller staff, than the same functions were discharged in Britain.

Nevertheless the Americans who knew the facts never denied that the control of ships had presented far more complicated problems and, on balance, had yielded far more impressive returns in Britain than in America; the British had borne the burden and heat of the day after the fall of France and during 1942 and 1943 while the War Shipping Administration was learning its job; even at the beginning of 1945 they were supplying the United Kingdom, the theatres of war and all the overseas territories in the Eastern Hemisphere by means of a volume of tonnage (including United States help) that was only about 18 per cent. greater than what the Americans were using in the Pacific theatres alone:¹ the British fleet was not a standardised fleet like the American; the complications of the cross voyages, thrust on the Ministry of War Transport by the geographical distribution of the Commonwealth territories and the need to economise in shipping-space, had virtually no counterpart in the War Shipping Administration's scheme of things for their ships mainly operated on shuttle services; the lack of need for economy, the comparative unimportance of sea-borne trade in the Western Hemisphere and the large degree of self-sufficiency of the United States, whose small needs for imports could easily be met by her returning military cargo-ships, made it, with one or two exceptions, unnecessary for the Americans to produce any programmes of requirements for their sphere of responsibility. The burden of programming thus fell on the British, and it was the British civil programmes, combined with the machinery for allocating tonnage, that (with one exception on one occasion) preserved the civil economies from collapse not only in this country but, except where the enemy was in control, throughout the vast areas of Africa, the Middle East, Australia and a large part of Asia.

At the end of the war besides the United Kingdom import programme and all the military programmes there were between thirty

¹ The United States figures are taken from the 'Argonaut' budget, allowing (as is stated in the text) 1.7 million deadweight tons for the lock-up in the Pacific. The British figure for the total fleet is also taken from the 'Argonaut' budget plus 2.6 million deadweight tons for United States help in the first quarter of 1945, i.e. United States allocations without the SAM ships, counted in in the 'Argonaut' budget.

and forty import programmes for the territories in the British sphere of responsibility and the Ministry was operating nearly 3,000 ocean-going dry-cargo ships, as well as large numbers of tankers and coasting ships; no ton of cargo moved by sea to any destination in the Eastern Hemisphere without the consent of the British shipping authorities; their 3,000 ships were scattered about all the seas, oceans and ports of the world; notwithstanding the hazards of war and weather, and the further hazards resulting from the harsh treatment they had received throughout the war; notwithstanding the peculiar characteristics of different ships which confined some to particular oceans and prevented others from carrying certain kinds of cargo, the movements of each ship and her allocation to the tasks for which she was most suited had to be so planned that she turned up at the right place at the right time, provided with all the equipment she needed for her job; the movements of blocks of tonnage had to be forecast, area by area, for periods up to several months ahead, so that the authorities in London, surveying the existing and prospective pattern of shipping employment, could make the necessary dispositions; the deployment of the whole fleet, up to a year or more ahead, had to be forecast so as to permit strategy to be formulated in both the civil and military spheres. These tasks, never before imagined let alone attempted, were achieved with a degree of success that must seem miraculous and that might well be unrepeatable.¹

'In the shipping industry', the ship-owners are fond of saying, 'we are always ready to learn.' This seems to be true, and the frame of mind—which has usually, though in different degrees at different times, characterised the trading communities of the modern world for whom shipping is a vital source of wealth—was evidently infectious. It spread among all the people, outside as well as inside the Ministry of War Transport, who came into close contact with shipping problems. Sailors, and those who own their ships, need to be resourceful; if things cannot be done one way they must be done another; ship-owners need open minds and ready wits; there is no place in their philosophy for doctrinaire ways of thinking; they dislike regimentation; their calling makes them good mixers. All these qualities were to be found in the Ministry of War Transport and among those people with whom it associated in other departments and for whose education it was sometimes responsible; and in the war in the West between land and sea-power it was sea-power that won, among other reasons because of these very qualities; for though the organisation that controls merchant ships can do nothing directly to win a war it can very easily cause one to be lost.

¹ For the benefit of suspicious readers who think that authors like to make the tasks they describe seem more difficult than they were, the writer has included in Appendix LXX a collection of documents to illustrate the main planning problems.

APPENDIX LXX

Documents to illustrate the problems of planning the use of deep-sea dry-cargo ships

(i) THE PROGRAMMES OF REQUIREMENTS¹

The United Kingdom import programme, by sources of supply, 23rd June 1944.

The programmes of the overseas territories by sources of supply, 22nd February 1944.

(ii) ALLOCATION OF TONNAGE, 1,600 GROSS TONS AND OVER

A. *Statistical data on the deployment of the fleet.*

Analysis of tonnage by area, 30th April 1944.

Estimate (projection) of tonnage by area for six months ahead, 7th January 1944.

Analysis of the port position in a theatre of war.

B. *Relating the programmes of requirements and the tonnage.*

(i) *Overall estimate of the relationship between demand and supply for nine months ahead.* (The British budget drawn up at the Cairo ('Sextant') War Conference, 7th December 1943.)

(ii) *Estimates of the tonnage required for individual services for various periods ahead.*

For the cross trades.

For the United Kingdom import programme.

For military maintenance.

For military operations.

¹ The writer is unable to provide any specimens of programmes of military requirements.

(i)

United Kingdom import programme—sources of supply for 1944 and achievement to end June

Million tons

	Ministry of Food		Ministry of Production		Munitions, etc.		Totals						
	(a)	(b)	(a)	(b)	(a)	(b)	(a)			(b)	(c)	(d)	(e)
	Programme	Percentage of food total	Programme	Percentage of production total	Programme	Percentage of munitions total	Programme			Percentage of total	Imports first half-year	Percentage fulfilment on year's progress from each area	Balance for second half-year
First half-year on 12 million tons basis							Second half-year	Total					
North America (Atlantic)	5.134	47	4.783	41	2.150	86	5.742	6.325	12.067	48	6.030	50	6.037
North America (Pacific)	0.025	—	0.357	3	—	—	0.110	0.272	0.382	2	0.120	31	0.262
Gulf	0.050	—	0.394	3	0.150	6	0.280	0.314	0.594	2	0.330	56	0.264
West Indies	1.048	10	0.020	—	—	—	0.492	0.576	1.068	4	0.460	43	0.608
South America	1.653	15	0.649	6	—	—	1.147	1.155	2.302	9	1.090	47	1.212
Spain and North Africa, etc.	0.247	2	2.344	20	0.050	2	1.139	1.502	2.641	11	1.530	58	1.111
West Africa	1.032	10	1.134	10	—	—	1.253	0.913	2.166	9	1.250	58	0.916
South and East Africa	0.213	2	0.572	5	0.050	2	0.363	0.472	0.835	3	0.430	51	0.405
Middle East	0.114	1	0.208	2	0.025	1	0.180	0.167	0.347	1	0.220	63	0.127
India and Persian Gulf	0.514	5	0.625	5	0.025	1	0.647	0.517	1.164	5	0.640	55	0.524
Australasia	0.601	6	0.458	4	0.050	2	0.525	0.584	1.109	5	0.620	56	0.489
Miscellaneous (Iceland and Russia)	0.219	2	0.106	1	—	—	0.122	0.203	0.325 ¹	1	0.090	28	0.235
Totals	10.850	100	11.650	100	2.500	100	12.000	13.000	25.000	100	12.810	51	12.190

¹ Includes 100,000 tons of timber from North Russia to be lifted during the second half-year.

Source: Ministry of War Transport

(i)

Programmes of the Overseas Territories

(Programmes of essential civil requirements for the period January-June 1944 of territories (other than the United Kingdom) for which the Ministry of War Transport have programming responsibility)

All figures are in long tons

Importing country	Source of supply									Total
	United Kingdom	North America	South and East Africa and Madagascar	India and Ceylon	Australia and New Zealand	Mauritius	Middle East (including Palestine, Persian Gulf, Egypt, Red Sea and Eritrea)	South America	Miscellaneous sources (with sources where known)	
Australia	229,000	695,000	43,000	135,000	—	—	84,000	—	—	1,221,000
New Zealand	133,000	100,000	5,000	23,000	206,000 (Australia)	—	—	—	—	667,000
India	195,000	407,000	94,000	38,000 (Ceylon)	134,000	—	980,000	4,000	—	1,252,000
Ceylon	15,000	37,000	700	80,000 (India)	191,000	49,000	73,000	5,000	—	453,700
Persian Gulf	5,000	21,000	1,000	20,000	44,000	—	—	—	—	92,000
Middle East	32,000	242,000	67,000	57,000	39,000	60,000	—	152,000	—	685,000
Turkey	11,000	6,000	7,000	8,000	4,000	—	—	—	—	36,000
North Africa	10,000	180,000	—	5,000	—	—	—	—	—	195,000
Gibraltar	13,000	—	—	—	—	—	—	—	—	13,000
Madagascar	3,000	8,000	2,000	3,000	2,000	—	—	100	100	18,200
Reunion	800	3,000	5,000	300	6,000	—	—	—	300	13,000
Seychelles	100	100	2,000	400	—	400	—	—	—	3,000
Mauritius	11,000	6,000	9,000	10,000	24,000	—	3,000	100	—	66,200
British East Africa and Nyasaland	25,000	25,000	20,000 (S. Africa & Mad.)	21,000	100,000	—	5,000	400	—	199,400
Northern Rhodesia	14,000	14,000	—	400	—	—	—	—	—	20,400
Southern Rhodesia	19,000	24,000	600	3,000	11,000	—	7,000	—	—	73,600
South Africa	96,000	410,000	31,000 (E. Africa & Mad.)	75,000	45,000	—	59,000	34,000	—	840,000
St. Helena	600	—	1,000	—	—	—	—	—	—	1,700
Belgian Congo	10,000	30,000	1,000	5,000	—	—	—	300	21,000	67,300
French Equatorial Africa	6,000	8,000	1,500	800	—	—	—	100	3,000	19,400
Cameroons	12,000	7,000	600	1,000	—	—	—	100	3,000	23,700
French West Africa	18,000	37,000	100	8,000	—	—	—	—	—	63,100
British West Africa	124,000	37,000	13,000	13,000	—	—	—	3,000	22,000	212,000
Total	982,500	2,397,100	305,500	542,800	806,000	109,400	611,000	202,100	289,600	6,246,000

Note. Neither the writer (nor, incidentally, Statistics and Intelligence Division, Ministry of War Transport, who did not compile the table) is responsible for the fact that some of these figures have been incorrectly added up.

Source: Ministry of War Transport

(ii) A

*Analysis of tonnage by area at 30th April 1944¹**Thousand deadweight tons*

	British control		
	From U.K.	To U.K.	Total
I. <i>Between North and Central America and the United Kingdom</i>	1,195	1,339	2,534
II. <i>Between United Kingdom and areas other than North and Central America:</i>			
A. <i>U.S.S.R., Iceland, etc.:</i>			
(1) <i>North U.S.S.R. and U.S.S.R. Pacific</i>	31	56	87
(2) <i>Iceland, etc.</i>	26	28	54
Total of A	57	84	141
B. <i>Western Mediterranean, etc.:</i>			
(3) <i>North Africa, etc.</i>	543	322	865
(4) <i>Spain, etc.</i>	22	136	158
Total of B	565	458	1,023
C. <i>West Africa</i>	244	413	657
D. <i>Indian Ocean areas:</i>			
(5) <i>South and East Africa</i>	148	208	356
(6) <i>Red Sea and Eastern Mediterranean</i>	116	48	164
(7) <i>Persian Gulf</i>	64	11	75
(8) <i>India</i>	345	302	647
Total of D	673	569	1,242
E. <i>Pacific areas:</i>			
(9) <i>Alaska</i>	—	—	—
(10) <i>Central Pacific</i>	—	—	—
(11) <i>South-West Pacific</i>	231	339	570
Total of E	231	339	570
F. <i>South America</i>	184	469	653
Total of II	1,054	2,332	4,286

¹ In the text the table includes similar analysis for United States ships and for ships (of a total tonnage of nearly 2 million deadweight tons) outside enemy control and not controlled by either the United Kingdom or the United States.

(ii) A

*Analysis of tonnage by area at 30th April 1944¹ (continued)**Thousand deadweight tons*

	British control		
	From N. America	To N. America	Total
III. <i>Between North and Central America and areas other than United Kingdom:</i>			
G. <i>U.S.S.R., Iceland, etc.:</i>			
(12) North U.S.S.R.	—	—	—
(13) U.S.S.R. Pacific	—	—	—
(14) Iceland, etc.	—	3	3
Total of G	—	3	3
H. <i>Western Mediterranean, etc.:</i>			
(15) North Africa, etc.	336	456	792
(16) Spain, etc.	—	10	10
Total of H	336	466	802
J. <i>West Africa</i>	—	31	31
K. <i>Indian Ocean areas:</i>			
(17) South and East Africa	123	10	133
(18) Red Sea and Eastern Mediterranean	76	106	182
(19) Persian Gulf	63	—	63
(20) India	501	63	564
Total of K	763	179	942
L. <i>Pacific areas:</i>			
(21) Alaska	8	4	12
(22) Central Pacific	—	—	—
(23) South-West Pacific	201	79	280
Total of L	209	83	292
M. <i>South America</i>	—	—	—
Total of III	1,308	762	2,070
IV. <i>Other overseas routes:</i>			
N. <i>Between North and Central American areas</i>			270
O. <i>Between Western Mediterranean, etc., and areas other than North and Central America and United Kingdom</i>			1,312
P. <i>Between Pacific areas and areas other than North and Central America, United Kingdom and Western Mediterranean, etc.</i>			434
Q. <i>Between Indian Ocean areas</i>			1,266
R. <i>Between Indian Ocean areas and South America and West Africa</i>			459
S. <i>Other voyages</i>			21
Total of IV			3,762
Grand Total			12,652

Source: Ministry of War Transport

¹ In the text the table includes similar analysis for United States ships and for ships (of a total tonnage of nearly 2 million deadweight tons) outside enemy control and not controlled by either the United Kingdom or the United States.

(ii) A

*Estimate (projection) of tonnage by area for six months ahead,
7th January 1944¹**Tonnage in cargo deadweight of 1,000 tons*

Area		January 1944		February 1944		March 1944	
		Ships	Cargo d.w.	Ships	Cargo d.w.	Ships	Cargo d.w.
North Atlantic . . .	Area 1	139	1,024	145	1,034	108	807
North Pacific . . .	Area 2	4	35	4	35	2	17
West Indies and Guiana (incl. Gulf) . . .	Area 3	7	42	14	103	22	174
South America (East Coast) . . .	Area 4	37	290	33	281	31	239
South America (West Coast) . . .	Area 5	6	48	1	8	4	30
West Mediterranean . .	Area 6	236	1,802	126	815	129	936
West Africa . . .	Area 7	30	214	38	253	37	255
South and East Africa and Mauritius . . .	Area 8	42	330	37	304	39	306
Indian Ocean . . .	Area 9	149	1,207	111	875	108	853
South Pacific . . .	Area 10	37	288	37	304	36	298
North Russia . . .	Area 11	16	142	7	62	8	71
United Kingdom . . .	Area 12	322	2,261	355	2,525	302	2,129
Totals		1,025	7,683	908	6,599	826	6,115

Source: Ministry of War Transport

¹ The figures also include estimates of the availability of tramp tonnage which was not allocated at the time when the document was drawn up, but which was expected to become available in January and February in the United Kingdom, North Africa and the Indian Ocean area and whose subsequent employment was assumed on the basis of estimated requirements. In the text the table covers the months January to July inclusive, though in the later months the volume of tonnage whose position could be forecast diminished. The figures exclude ships in the Middle East coal shuttle service and the Indian coastal tonnage and make no allowances for losses or slip (i.e. for ships becoming available in a month later than the expected one—as they frequently did, so that a reasonably accurate allowance for the occurrence could be made). These estimates in contradistinction to the overall estimates contained in the budgets were never very successful. On (as far as the writer is aware) the only occasion when a check was made—for the months May to October 1944—the average error, over these six months, in the estimates made by Allocation of Tonnage Division in the month before that in which the ships presented to load was usually between 10 per cent. and 20 per cent. A somewhat cursory survey suggests that the similar estimates made independently by Statistics and Intelligence Division were not any better.

(ii) A

Port position in a theatre of war
(*Port position in Western Mediterranean*)

The following figures include dry-cargo ships and tankers. They exclude troopships

Port (1)	Number of berths		Daily capacity in and out (tons) (3)	Date (4)	Waiting discharge (5)	Waiting loading (6)	Waiting orders (7)	Waiting convoy (8)	Discharging (9)	Loading (10)	Working		Total (13)
	Dry cargo (2)	Other									Repairing (11)	Bunkers (12)	
Oran	20	3 tanker		21.10.43	5	—	3	20	15	11	5	—	59
Algiers	25	3 collier 3 tanker	6,000	28.10.43	22	9	17	5	6	12	4	—	75
Bougie	6	1 collier	1,200	28.10.43	—	—	1	—	1	1	1	—	4
Philippeville	7	1 collier	1,100	28.10.43	—	—	1	—	2	2	—	1	6
Bone	8	1 collier 1 tanker	2,500	25.10.43	7	1	5	—	9	3	1	—	26
Bizerta	4			28.10.43	—	—	15	5	2	2	15	—	39
Tunis	3			21.10.43	—	—	—	2	3	—	—	—	5
Sousse	2			14.10.43	—	—	—	2	—	—	—	—	2
Malta				25.10.43	—	—	12	18	1	4	6	—	41
Catania	11			21.10.43	—	—	1	1	1	1	3	—	7
Augusta	Convoy port			21.10.43	—	—	8	—	1	—	—	—	9
Syracuse				21.10.43	—	—	—	—	—	4	—	—	4
Naples	6		3,400	21.10.43	2	—	17	5	27	—	1	—	52
Taranto	7		4,000	17.10.43	3	1	—	2	2	1	9	—	18
Brindisi	10		4,000	28.10.43	—	1	—	7	7	1	—	—	16
Total					39	12	80	67	77	42	45	1	363

Source: Ministry of War Transport

(ii) B

The British budget drawn up at the Cairo ('Sextant') War Conference,
7th December 1943

(See Appendix LX iii. B)

(ii) B

Estimate of 24th April 1944 of deep-sea dry-cargo tonnage required in
the cross trades in the second half of 1944¹

A. Vessels permanently employed abroad:

	(A) Vessels registered at Dominion ports	(B) Other British-controlled vessels (incl. Allied vessels chartered to Dominions)
	million d.w.t.	
(i) <i>Coasting and local services:</i>		
Australia	0.44	0.21
North America	0.20	0.17
India	0.06	0.12
South and East Africa	0.04	0.03
E. Mediterranean	0.03	0.05
(ii) <i>Australasia—India/Middle East</i>	0.77	0.58
(iii) <i>Other Indian Ocean routes:</i>	0.03	0.17
Coal shuttle	—	0.18
India—Persian Gulf	—	0.06
India—South and East Africa	—	0.06
India—Middle East	0.02	0.07
South Africa—Middle East	0.01	0.02
(iv) <i>Miscellaneous</i>	0.03	0.39
Australasia—South Africa	0.17	0.06
Australasia—North America		
Canada—South Africa		
Others		
	<u>1.00</u>	<u>1.20</u>

B. Vessels temporarily on cross routes:

(i) *Cereals from Australasia:*(a) *To Middle East and Indian Ocean area*
(British commitment)

	Monthly cargo requirement tons	Million d.w.t.
Middle East	6,000	
Ceylon	30,000	
East Africa	nil	
Persian Gulf and Mauritius	10,000	
India	say 40,000*	
	<u>86,000</u>	
Estimated average tonnage requirement		0.27

*This includes an allowance to make good arrears

¹ The above is an abbreviated version of the text.

(b)	<i>To Italy and Mediterranean</i>		
	The monthly British cargo requirement is 25,000 tons		
	Estimated average tonnage requirement		0.12
(ii)	<i>Coal</i>		
(a)	<i>South Africa to Middle East, etc., incl. Colombo</i>		
	The monthly cargo requirement is 180,000 tons of which 45,000 is estimated to be carried in tonnage permanently employed abroad		
	Estimated average tonnage requirement		0.42
(b)	<i>South Africa and India to Mediterranean</i>		
(1)	<i>South Africa</i>		
	The monthly British cargo requirement is 40,000 tons		
	Estimated average tonnage requirement		0.12
(2)	<i>India</i>		
	The monthly British cargo requirement is 15,000 tons		
	Estimated average tonnage requirement		0.02
(iii)	<i>Indian Ocean area</i>		
(a)	<i>South Africa to Middle East</i>		
(b)	<i>South Africa to India</i>		
(c)	<i>India to Middle East, etc.</i>		
	The amount of tonnage on each of these routes in recent months has been about 0.15 million deadweight tons. It is thought that the requirements of the areas will necessitate the continued employment of 0.45 million deadweight tons		
	Cross routes		0.44
	Relief (sugar)		0.01
(iv)	<i>Chile—Middle East (Nitrates)</i>		
	It is anticipated that the tonnage requirement will fall from the present level of about 0.15 million deadweight tons and that an average allowance of 0.05 million deadweight tons should suffice		0.05
(v)	<i>North America—South Africa</i>		
	The present requirement is about four ships a month		
	The tonnage requirement is assessed at about 0.10 million deadweight tons		0.10
(vi)	<i>Coal from North America to Mediterranean</i>		
	The British share of the requirement is five ships a month		
	[Note: It is possible that part of this commitment will be shipped from South Africa instead of from North America. This requirement was formerly included in the military programme]		
	Estimated average tonnage assessment		0.17
(vii)	<i>Miscellaneous</i>		
	This covers rice from Brazil to Ceylon and other minor requirements		0.10
			<hr/> 1.82

Summary:

<i>Temporarily on cross routes for British programmes</i>	<i>Temporarily on cross routes for British share of relief</i>	<i>Permanently abroad for British programmes</i>	<i>Total</i>
(say) 1.35	(say) 0.45	2.2	4.0

Source: Ministry of War Transport

The disposal of tonnage to meet United Kingdom import programmes from various loading areas

Loading area	Average loadings required from July onwards (approx.)		Method by which tonnage made available
	Cargo d.w. (million tons)	No. of ships of average size for route	
1. N. America Atlantic	1.010	165	(a) Returning troopships—average something over 10,000 tons a month. (b) New building Ports ex E. Canada 2-3 ships a month, say 18,000 tons. (c) Park ships ex E. Canada—5-6 ships a month, say 40,000 tons. (d) British-controlled tonnage ex U.K. with parcels of cargo and anthracite and occasionally ex Med. in ballast. (e) W.S.A. aid for residual deficiency.
2. Gulf	0.000 Amount of cargo available varies considerably	3	(a) W.S.A. aid up to 4-5 ships a month, say 30,000 tons. (b) British-controlled tonnage ex U.K. in ballast up to 4 ships a month, say 30,000 tons.
3. West Indies	0.100	14	(a) British-controlled tonnage ex U.K.—some with cargo ex U.K. balance loading in New York en route for Puerto Rico, etc. On W.S.A. account. (b) Possibly some W.S.A. aid during second half-year.
4. N. America Pacific	0.120	15	(a) New building 'Forts' ex W. Canada now very few and far between—no returners. (b) Park ships under informal agreement with C.S.B. to provide average of 2 per month from pool of new building plus returners. <i>Note:</i> Programme from this area is still under discussion and some cargo may be switched to N. America Atlantic and cargo railed over land.
5. S. America	0.190	34	(a) Returning troopships—average less than 2,000 tons a month. (b) British-controlled tonnage ex U.K.—principally reefer vessels—average about 60,000 tons a month. (c) British-controlled tonnage ex S. Africa with coal and ex India with gumies—average 6-7 ships a month, say 50,000 tons. (d) British-controlled tonnage ex W. Med. in ballast—average 10-15 ships a month, say up to 100,000 tons. (e) Very occasional W.S.A. reefer aid.
6. Spain and N. Africa	0.250	33	(a) British-controlled tonnage ex U.K. with coal—vessels of type suitable for homeward loading from small Iberian ports—average say 50,000 tons a month. (b) British-controlled tonnage released from military service in Med. either directly on completion of outward voyage from U.K. and N. America or after retention for Sea Transport service within the area. <i>Note:</i> Tonnage is also moved in ballast from this area (see 5 and 7).
7. West Africa	0.210	30	(a) British-controlled tonnage ex U.K. with military and civil cargo and coal—not all ships fully loaded—vessels selected for palm oil tank capacity—average 12-14 ships a month, say 80,000 tons. (b) British-controlled tonnage ex Med. in ballast—average 12-15 ships a month, say 100,000 tons. (c) British-controlled tonnage ex S. Africa or North America—occasional vessels—average 2 ships a month, say 10,000 tons.
8. S./E. Africa	0.090	11	(a) Returning troopships—average under 2,000 tons a month. (b) British-controlled tonnage made available in the area principally as a result of: (i) sailings with military and civil cargo ex U.K.—average 6-7 ships a month. (ii) sailings with military and civil cargo ex N. America—average 3 ships a month. (iii) vessels in ballast ex I.C.A. chiefly M.E. <i>Note:</i> This pool of tonnage also has to meet cross-route requirements from the area.
9. India and P.O., incl. Ceylon	0.080	12	(a) Returning troopships—average 2,500 tons a month. (b) British-controlled tonnage made available in the area principally as a result of: (i) military programmes ex U.K. and N. America—present average 35-40 ships a month. (ii) sailings ex Australia chiefly with cereals. (iii) military and civil programme ex M.E. and S.E. Africa. <i>Note:</i> This pool of tonnage also has to meet cross-route requirements and some is moved in ballast to other areas.
10. Middle East	0.000	3	(a) British-controlled tonnage ex U.K. and N. America with military and civil cargo—present average 20-25 ships a month. (b) British-controlled tonnage ex Indian Ocean area principally cereals ex Australia and coal ex S. Africa. <i>Note:</i> This pool of tonnage also has to meet certain cross-route requirements (e.g. see 9 (b) (iii) and some tonnage is moved away in ballast—see 6 (b) (iii) and 1 (d)).
11. Australasia	0.080	11	(a) Returning troopships—average under 2,000 tons a month. (b) British-controlled tonnage including reefer ships ex U.K. and N. America with military and civil cargo average 10-15 ships a month. (c) British-controlled tonnage ex I.O.A. (principally India) in ballast or with phosphates ex Red Sea. <i>Note:</i> This pool of tonnage also has to meet certain cross-route requirements to the I.O.A.
12. Miscellaneous	0.060	9	This includes N. Russia fed by tonnage carrying protocol supplies to Russia and Ireland fed by small tonnage ex U.K.
All Areas	2.210	330	

(ii) B

Military maintenance loading programme for Indian Ocean and Mediterranean

'Quadrant' and 'Sextant' figures and subsequent amendments compared for January-June 1944

Theatres	'Sailings'												Totals	
	January		February		March		April		May		June			
	U.K.	U.S.A.	U.K.	U.S.A.	U.K.	U.S.A.	U.K.	U.S.A.	U.K.	U.S.A.	U.K.	U.S.A.		
India and Ceylon.	(a)	12	18	12	18	12	18	13	20	13	20	13	20	189
	(b)	13	22	13	22	13	22	14	24	14	24	14	24	219
	(c)	11	16	14	22	14	19	14	24	14	24	14	24	210
Mediterranean theatres	(a)	70	39	65	44	65	44	60	49	50	49	50	49	634
	(b)	60	39	60	39	60	39	50	44	50	44	45	44	574
	(c)	49	28	52	25	47	26	45	29	45	29	39	29	443
Russian aid.	(a)	10	—	10	—	10	—	10	—	10	—	10	—	60
	(b)	10	—	10	—	—	—	—	—	—	—	—	—	20
	(c)	3	—	1	—	1	—	1	—	1	—	1	—	8
Turkish aid.	(a)	2	3	2	3	2	3	2	3	2	3	2	3	30
	(b)	1	4	1	4	1	4	1	4	1	4	1	4	30
	(c)	1	4	1	4	1	4	1	4	1	4	1	4	30
Persian Gulf	(a)	2	4	2	4	2	4	2	4	2	4	2	4	36
	(b)	2	3	2	3	2	3	2	3	2	3	2	3	30
	(c)	2	1	2	3	2	2	2	3	2	3	2	3	27
Totals	(a)	96	64	91	69	91	69	87	76	77	76	77	76	949
	(b)	86	68	86	68	76	68	67	75	67	75	62	75	873
	(c)	66	49	70	54	65	51	63	60	63	60	57	60	718

Note: (a) Original 'Quadrant' figures, without previous allowance for nitrate to Middle East from Chile of one ship a month.

(b) Original 'Sextant' figures without previous allowance for nitrate to Middle East from Chile of one ship a month.

(c) Amendments to (b) to date.

Source: Ministry of War Transport

(ii) B

*A military operational programme
(Schedule of dry-cargo sailings to the Western Mediterranean¹)*

Dry-cargo sailings from United Kingdom to Western Mediterranean											Dry-cargo sailings from North America to Western Mediterranean														
1	2	3	4	5		6		7	8		9	10	11	12	13	14	15	16	17	18	19	20			
Sailing convoy	Sailing date	Approx. arr. date in North Africa	Discharging ports—Number of ships								Coasters to remain in area	Total	Monthly total sail- ings	Convoy	Sailing date	Approx. arr. date in North Africa	British pro- grammes	U.S.A. Army	French L/L	Total	Monthly total sail- ings	Total K.M.S. and U.G.S. per month of sailing			
			Cassa- blanca	Gibraltar		Fr. N. African ports within Med.		Malta	Italy/Sicily																
				Liners	Colliers	M.T. stores	Colliers		M.T. stores	Colliers															
K.M.S. 29	7.10.43	20.10- 20.10	2	2	1 For orders	6 All W.S.A.	8	—	5 Inc. 1 W.S.A.	4	2 Inc. 1 collier	31	89	U.G.S. 20	5.10	25.10	3 incl. 2 W.S.A.	29	1	33	94	185 October			
K.M.S. 30	17.10.43	30.10- 1.11	—	—	3 Inc. 2 for orders	9 Inc. 1 part loaded for Sicily	3 Also carrying vehicles	1	2 (see also Col. 6)	4	2	24		U.G.S. 21	15.10	4.11	4 W.S.A.	28	1	33					
K.M.S. 31	27.10.43	9.11- 11.11	1	1	2 For orders	7 1 part loaded Gib. inc. 3 W.S.A.	7 Inc. 3 carrying vehicles	1 W.S.A. ship	7 Inc. 3 W.S.A. ships	4 Inc. 1 water tanker	5 Inc. 1 water tanker	35		U.G.S. 22 ^a	25.10	14.11	4 Inc. 1 W.S.A.	23	1	28					
K.M.S. 32	5.11.43	18.11- 20.11	—	—	2 For orders	4 Inc. 2 W.S.A. ships	4	—	10 Inc. 7 W.S.A.	4	3	27		U.G.S. 23 ^a	4.11	22.11	1	26	1	28					
K.M.S. 33	16.11.43	29.11- 1.12	1	1	2 For orders	5	6	1	9	4	3	31		89- 90	U.G.S. 24 ^a	14.11	4.12	—	27	1			28	Say 86	Say 175-176 Nov.
K.M.S. 34	25.11.43	8.12- 10.12	1	1-2	2 For orders	5	6	1	9	4	1	30-31		U.G.S. 25 ^a	24.11	14.12	No forecast yet available			Say 30					
K.M.S. 35	6.12.43	19.12- 21.12	1	1-2	2 For orders	5	6	1	8	4	?	28-29		U.G.S. 26 ^a	4.12	24.12	No forecast yet available			Say 30					

Source: Ministry of War Transport.

¹ In the text, too large to transcribe, all the K.M.S. and U.G.S. convoys are given from K.M.S.20, which sailed 4th July 1943, and U.G.S.13, which sailed 27th July 1943.

² These convoys are as yet only in the planning stage.

Glossary of Technical Terms

GLOSSARY OF TECHNICAL TERMS

CARGO

Bulk Bulk cargo is cargo that is shipped in large homogeneous quantities, and that usually is not packed—e.g. timber, ore, coal. It is principally carried in tramps.

General General cargo is miscellaneous or assorted cargo usually carried in liners. (See Thornton, *British Shipping*, Chapter IX, for an admirable description of it.)

Measurement Measurement cargo is cargo that stows at or over 40 cubic feet to 2,240 lb., i.e. cargo that is bulky in relation to its weight, e.g. tobacco, cotton, vehicles on wheels or in crates.

Weight Weight cargo is cargo that stows at under 40 cubic feet to 2,240 lb., i.e. cargo that is heavy in relation to its bulk, e.g. iron ore, steel ingots.

CHARTER

Time A form of charter in which the charterer, in return for payment for hire, acquires the use of the ship for a period stipulated in the charter party, the owners being responsible, among other things, for providing the crew and doing the repairs.

Bareboat A form of charter principally distinguished from time-charter by the fact that the charterers provide the crew and are responsible for all running expenses, for insurance and for repairs.

CROSS TRADES

Generally used to mean trades between two ports neither of which is in the country where the ship is registered. More frequently used during the war to mean trades between two ports neither of which was the port on which the ship was based (e.g. British ships based on North American ports and trading between there and the Indian Ocean area were excluded in the statistics of the Ministry of War Transport from the category of ships in the cross trades).

LINER

A liner is a ship that is built for a particular service or trade and that runs to a schedule. In 1939 the liners in the British merchant fleet were of three kinds: cargo-liners built to carry cargo and carrying less than twelve passengers (the number for which a passenger certificate is required); passenger-cargo liners that carried both cargo and a substantial number of passengers; passenger liners that carried only a negligible amount of cargo. Before the war the only ships in this last category were the small number employed on the transatlantic ferry service.

- LOADLINE** A ship's loadline is not one line but several lines, cut and painted on the hull to show the depth in the water to which the ship can be loaded with safety under various specified conditions: i.e. (apart from certain special cases) in summer, in winter, in winter on the North Atlantic, in the tropics and in fresh water.
- TONS**
- Gross (register)* The gross (register) tonnage of a ship is arrived at by measuring the cubic capacity of the enclosed spaces of the ship and allowing 1 gross ton for every 100 cubic feet.
- Net* The net tonnage of a ship is the gross tonnage minus the allowance for the spaces without earning-capacity—e.g. crew's quarters and engine and boiler room spaces.
- Deadweight* The deadweight tonnage of a ship is the weight (in tons of 2,240 lb) of the cargo she can carry on her appropriate mark (see under loadline) including fuel, stores and water.
- The ratio of gross to deadweight varies from ship to ship. In the average British tramp at the beginning of the war it was roughly 5 tons gross to 8 tons deadweight. In passenger-cargo liners, on the other hand, the gross tonnage was larger than the deadweight, and in ships constructed primarily to carry passengers it was very much larger.
- In the British-controlled fleet, including troopships, the average ratio throughout the war was 1 gross ton to 1.3 deadweight tons. Excluding troopships it was 1 gross ton to 1.4 deadweight tons. In translating gross tons into deadweight or vice versa, the writer has thus not been able to use a constant ratio but has used whatever seemed as nearly as possible the appropriate ratio for the ships under consideration.
- TRAMP** A tramp is a general carrier built primarily to carry bulk cargo. Unlike the liner she does not in peace sail to a schedule, but wanders from port to port picking up suitable cargo wherever it is available. In general tramps are slower and of less complicated construction than cargo-liners and the organisation required to operate them is much simpler.
- TRANSIT SHEDS** Sheds on the quay used for sorting general cargo. Not to be confused with warehouses. See illustration facing p. 14.
- 'TWEEN DECKS** Generally used to mean the space between any continuous decks below the main deck. See diagram facing p. 314.

Index

INDEX

(The suffix letter 'n' denotes a footnote)

- Aden, 225, 227, 279, 280, 342
—See *Middle East*
- Admiralty, 33, 39, 53, 135, 144, 148, 158, 159n, 173n, 207, 212, 217, 224, 275, 342, 361n, 426n
regulations for merchant ships attacked by enemy, 173, 174
First Lord of (Mr. Churchill), 54n, 63
First Lord of (Mr. A. V. Alexander), 220, 386
—See *Convoys: Escorts; Royal Navy*
- Agriculture
effects of shipping shortage on, 39, 50, 199
- Air attack
—See *Bombing*
- Air Ministry, 25
—See also *Royal Air Force; Secretary of State for Air; Services: shipping requirements of*
- Aircrews
transport of, for training overseas, 219
- Alexandria, 36, 210, 211, 212, 215, 257, 341, 342
—See *Egypt; Middle East*
- Alexander, Mr. A. V. (now Lord)
—See *Admiralty: First Lord of*
- Allies
—See *Anglo-American shipping collaboration; Anglo-French collaboration; France; Russia; Shipping, Belgian; Shipping, Danish; Shipping, Dutch; Shipping, foreign; Shipping, French; Shipping, Greek; Shipping, Yugoslav; Shipping, Norwegian; Shipping, Polish; Shipping, Scandinavian; Shipping, United States; United States of America*
- Amery, Mr. L. S.
—See *Secretary of State for India*
- 'Anakim' Operation
—See *Burma road, operation to reopen*
- Anglo-American shipping collaboration
achievements of, 448, 449
division of responsibility for programmes of overseas territories, 262, 287, 288
pooling theory, 286, 288, 289, 364, 448
mechanism for, 288, 289, 345, 448
—See *Combined Shipping Adjustment Board*
- shipping budgets
at Washington Conference ('Trident'), May 1943, 366-377, 378, 380n, 382, 383, 386, 392, 393, 394, 395, 409
at Quebec Conference ('Quadrant'), Aug. 1943, 380n, 391n, 392, 394, 399n
at Cairo Conference ('Sextant'), Nov.-Dec. 1943, 380, 381, 392, 393-402, 407
at Quebec Conference ('Octagon'), Sept. 1944, 410
in Washington, Nov. 1944-Jan. 1945, 411, 420, 421, 422
at Yalta Conference ('Argonaut'), Jan. 1945, 416-418, 420, 421-422, 423, 431, 436, 447, 449, 450n
achievement of, 374, 392, 394, 406, 407, 409, 410, 430, 432, 433
British achievement, 403, 432, 433
dependence of United Kingdom on, 409-410
need for, 288, 329, 332, 334, 359, 438, 442
procedure at Conferences, 370-372, 393
shortcomings of, 373, 374, 376, 409
statistical difficulties of constructing and interpreting, 335, 360
British difficulties, 360, 361, 362, 432
United States difficulties, 360, 362, 368, 369
- shipping control, 192, 193, 228, 235, 238, 262, 345, 447, 448
—See also *Ministry of War Transport: control, nature of; Shipping, United States: control over demands for and allocations of*
- United Kingdom help to U.S.A., 329n, 384, 390
invasion of Europe, 405
invasion of N.W. Africa, 306, 316
troopships, 275, 276, 277, 279, 280, 284, 316, 329n, 333, 384, 405

- Anglo-American shipping collaboration, *contd.*
 United States help to United Kingdom
 help generally with dry cargo shipping
 up to Pearl Harbour, 5, 80, 101, 113, 114, 115, 116, 117, 118, 154, 190-195, 199, 204, 206, 210, 224, 228, 234, 235, 250, 251, 252, 264, 284, 285, 291
 level of, 251, 264, 284
 after Pearl Harbour, 252, 263, 264, 284-296, 298, 300, 301, 302, 303, 304, 305, 308, 314, 316, 317, 321, 329, 331, 332, 345, 362-365, 366, 369, 374, 375, 376, 377, 380, 382, 384, 385, 395, 396, 399, 400, 402, 405, 409-418, 419, 422, 423, 428, 431, 432n, 433, 448
 degree of dependence of United Kingdom on, 376
 level of, 291, 316n, 320n, 363, 370, 410, 433
 record-keeping of, 251, 395, 396, 405, 448
 tables showing, 294, 384, 385, 419
 help for specific purposes
 United Kingdom import programme, 191, 193, 199, 250, 251, 264, 291, 294, 317, 318, 319, 321, 329, 330, 332, 362-365, 366, 369, 371, 375, 380, 382, 385, 395, 396, 400, 412, 419, 422, 423, 432n, 433
 import programme queried by United States, 318, 334, 335, 363, 371, 413
 Indian Ocean sailings, 291, 294, 296, 300, 317, 318, 321n, 345, 365, 385, 398, 419, 422, 423
 Middle East, 193, 203, 204, 206, 210, 228, 234, 235, 264, 285, 296, 350, 355, 376
 military programmes, 380, 384, 385, 391n, 419, 422
 overseas territories, 285, 287, 291, 294, 375-377, 380, 385, 395, 419, 422, 423
 sales of old ships to United Kingdom, 143, 191
 tankers, 191, 194
 transfer of ships to United Kingdom flag on bareboat charter, 374, 375, 380, 384, 385, 394n, 395, 396, 405n, 410, 419
 troopships, 224, 225, 244, 250, 257, 269, 275, 277, 284, 316n
 —See also *Shipping, United Kingdom controlled; Shipping, United States; United States of America*
- Anglo-French collaboration
 generally, 73
 shipping, 39, 72-80
 sharing of neutral tonnage, 73, 76
 Anglo-French Co-ordinating Committee, 73, 76
 Shipping Executive, 73, 77n
 —See also *France; Shipping, French; Shipping, foreign; help to France*
- Antwerp, 404, 436n
 —See *Ports abroad: (a) invasion of Europe and, (b) relief for liberated territories and*
- Aqaba, Gulf of, 257
 —See *Ports abroad*
- Aquitania, 273, 279
 —See *Cunard White Star; Shipping, United Kingdom controlled: troopships*
- Archangel, Gulf of, 253, 254
 —See *Russia: ports in*
- Argentine, 321
 'Argonaut' Conference
 —See *Yalta Conference*
- Armed merchant cruisers, 39, 51n, 217, 223
- Army
 relations with M.E.S.C., 349
 size of, 198, 199
 —See *Chiefs of Staff; Secretary of State for War; Services: (a) co-ordination with Ministry of War Transport, (b) shipping demands of; War Office*
- Athenia, 38
- Australia, 202, 203, 204, 224, 245, 288n
 civil supplies to Middle East from, 248
 effects of shipping shortage on, 236, 238, 239, 240, 298, 299
 entrances and clearances of overseas shipping, 249
 fertilisers for, 205, 239, 240, 261, 298, 300, 301, 342, 344, 431, 434, 435n, 436n
 Japanese threat to, 256
 meat from, 220, 236

- troops from, 218, 219, 274, 278, 279, 281
 troops to, 272, 278, 279, 281
 troops, return to, in 1942, 256, 320
 troops to and from, 275
 wheat exports, 205, 235, 344, 346, 352, 355, 356, 435
 wheat production, 436n
 —See also *Dominions; Import programmes, overseas territories; Indian Ocean area; Overseas territories*
- Balance of payments, 47n
 —See *Dollars, shortage of*
- Baltic, 58, 94, 99
 timber trade, 37, 56
- Battle of the Atlantic, 144, 193, 194, 195, 202
- Bay of Bengal
 closing of, 257, 261
 —See *India, ports in*
- Belgium
 Government of, 95, 99
 —See also *Shipping, Belgian*
- Bevin, Mr. Ernest
 —See *Minister of Labour*
- Blockade
 Allied blockade of Germany, 5, 37, 58, 59, 96, 98, 192, 237
 German blockade, 43, 58
 —See also *Ship warrant scheme*
- Blue Funnel Line, 49n, 160
- 'Bolero' Operation
 —See *United States: movement of United States forces to United Kingdom*
- Board of Trade
 import programmes, i.e. miscellaneous imports, 48, 71, 105, 198
 President of (Sir Andrew Duncan), 67
 —See *Food (Defence Plans) Department; Mercantile Marine Department*
- Bombay, 36, 109, 225, 257, 347
 —See *India*
- Bombing
 British bombing of Germany, 263
 British bombing of submarines, 263
 German bombing
 effect on inland transport, 13, 28
 of ports, 15, 16, 24, 25, 28, 30, 31, 43, 44, 80, 82, 84, 104, 119, 126, 128, 138,
 139, 140, 141, 142, 148, 163, 202, 219
 of shipping, 24, 25, 35, 58, 80, 84, 110, 126, 155, 211
 Russian convoys, 254
 pre-war expectations of, 6, 24, 25, 26, 28
- Bristol Channel, 149
 bombing of, 138
 peace-time trade through, 11, facing p. 22
 Regional Port Director in, 130, 132, 137
 war-time trade through, 147
 —See also *Newport; Ports, United Kingdom; Swansea; Cardiff*
- British Expeditionary Force, 38
- British Government
 system of, 440, 441
- British Merchant Shipping Mission, 191, 194, 224, 291, 317, 318, 335, 337, 393, 414,
 437, 447, 448, 449
 —See also *Anglo-American shipping collaboration; Salter, Sir Arthur; United States of America: War Shipping Administration*
- British Supply Council in North America, 224
- Broadcasting
 British, 93, 94
 German, 93
 Danish shipping agents in New York, 95
- Brooke, Sir Alan (now Lord Alanbrooke)
 —See *Chief of the Imperial General Staff*
- Bunkers, 60, 96, 217, 299, 341
 at Freetown, 208, 209

- Bunkers, *contd.*
 in South Africa, 259
 —See *Coal, overseas*
- Burma
 rice exports, 205, 342, 347
 troops to, 278
 —See *Indian Ocean area*
- Burma road, operation to reopen ('Anakim'), 329, 331, 332, 334n, 336, 338, 339, 368, 381
- Cairo, 258
 —See *Egypt; Middle East*
- Cairo Conference ('Sextant'), Nov. 1943, 145n, 380, 381, 392, 393-402, 407, 410
- Calcutta, 257, 260, 261, 348
 —See *India*
- Canada, 219, 270
 Canadian ships purchased by United States for transfer to United Kingdom, 384
 effects of shipping shortage on bauxite trade, 289, 321
 import programming, 288n, 289
 shipbuilding in, 252
 timber from, 37n
 troops from and to, 223, 224, 277
 —See *Dominions; Middle East: supplies from North America*
- Capetown, 260, 279, 280, 281
 —See also *South Africa*
- Cardiff, 147
 —See *Bristol Channel; Ports, United Kingdom*
- Cargoes
 availability of, 303n, 331n, 399n, 431, 433, 434, 436
- Casablanca, 98, 219
- Casablanca Conference, 328, 329, 330, 331, 332, 333, 334, 336, 337, 338, 339, 343, 345, 346, 362, 366, 367, 368, 370, 372n
- Casey, Mr. R. G.
 —See *Middle East: Minister of State in*
- Census of Seamen, 163n, 179
 —See *Crews*
- Ceylon
 grain supplies, 230, 261, 342, 343, 344, 345
 troops from, 278
 troops for, 245
 —See *Indian Ocean area*
- Chamber of Shipping, 21n
- Chatfield, Lord
 —See *Minister for Co-ordination of Defence*
- Cherbourg, 404
 —See *Europe, Allied invasion of*
- Cherwell, Lord (Personal Assistant to Prime Minister), 304n, 308, 319, 326
 (Paymaster-General), 334, 338, 363, 386, 392
- Chief of the Imperial General Staff (Sir Alan Brooke), 328n, 329, 339
- Chiefs of Staff, United Kingdom, 219, 220, 223, 224, 269, 271, 275, 285, 324, 330, 331, 332, 336, 337, 339, 360, 361, 410
 Joint Planning Staff, 337, 338, 339,
 —See *Combined Chiefs of Staff*
- Chiefs of Staff, United States
 —See *United States of America: Chiefs of Staff*
- Chile, 205n, 230, 235, 254, 434
 —See *Nitrates*
- Christmas Island, 239, 261
 —See *Phosphates*
- Churchill, Mr. (now Sir Winston), 18
Second World War, 191n, 200n, 224n, 254n, 256n, 263n, 273n, 312, 313n, 324n, 328n
World Crisis, 26n
 —See *Admiralty: First Lord of; Prime Minister*
- Civil Defence Act, 30
- Clyde
 bombing and, 138
 diversion of shipping and, 130, 134, 136, 137
 dock labour in, 136, 137

- emergency port, 134
 peace-time trade through, 11, facing p. 22
 Regional Port Director in, 130, 131, 132, 133, 134, 135, 136, 137
 war-time trade through, 147
 —See *Glasgow; Greenock; Ports, United Kingdom*
- Coal, United Kingdom**
 crisis in United Kingdom, 76
 exports, 2
 to France, 72, 74-76, 77, 78, 79, 80, 85
 to Middle East, 225, 235
 output, 76, 78
 transport of, 108, 127, 136, 400
- Coal, overseas**
 Indian Ocean area requirements, 204, 205, 225, 226, 230, 237, 239, 247, 250, 261, 299, 341, 376
 —See *Bunkers; India: coal exports; South Africa: coal exports*
- Colonies, 231**
 exports to United Kingdom, 50
 export surpluses, 50, 238
 troops for, 218, 219
 —See *Ceylon; East Africa; Import programmes, overseas territories; Indian Ocean area; Mauritius; Overseas territories; Shipping, foreign: in the safe trades; Shipping, United Kingdom controlled: in the cross trades; Shipping, United States: in the cross trades; West Africa*
- Combined Chiefs of Staff, 329, 331n, 371, 409, 417**
- Combined Food Board, 434n**
- Combined Munitions Assignment Board, 386**
- Combined operations**
 equipment for merchant ships for, 389
 place of merchant shipping in, 334, 337, 387, 389, 390, 437, 438n
 —See *Europe, Allied invasion of; Italy, Allied invasion of; North West Africa, Allied invasion of; Sicily, Allied invasion of*
- Combined Shipping Adjustment Board, 288, 289, 366n, 448**
- Commissioners for Wreck, 156, 175**
- Committee of Imperial Defence, 25, 27, 28, 30, 35, 38**
 Sub-Committee on Distribution of Imports in Time of War, 26-30, 33
 —See *Pre-war planning*
- Commonwealth, 203**
 crews from, 179, 187
 export surpluses in, 237, 238
 ship repairs in, 143, 144
 training of aircrews, 219
 —See *Colonies; Dominions; Shipping, United Kingdom controlled*
- Conrad, Lord Jim, 175**
- Convoys, 15, 24, 33, 53, 58, 92, 167, 189, 217, 221n, 271, 275, 276, 307, 403**
 effects on carrying capacity, 7, 19, 44, 51, 110, 121, 196
 escorts for, 92, 97n, 108, 155, 195, 217, 222, 254, 263, 271, 273, 307, 313, 321, 331, 333, 334, 368n
 —See *Royal Navy*
 French (Vichy) convoys, 98
 Indian Ocean routes, 206-211, 217, 218, 219, 220, 222, 223, 225, 244, 245, 307
 invasion of North West Africa and, 307, 313
 rescue ships for, 171
 Russian convoys, 254
 —See *Russia, help to*
 United States' introduction of, 263
 United States Navy and, 195
 vulnerability of, 155
 W.S. convoys, 207n, 208, 209, 217n, 218, 219, 220, 222, 223, 225, 244, 245, 269, 270, 271, 273, 275, 276, 282, 298, 315
 —See *Ports abroad; Services: shipping requirements of; Shipping, United Kingdom controlled*
- Court, W. H. B., Coal, 74n, 76n, 78n**
- Cranes, 12, 15, 128**
 —See *Ports, United Kingdom*
- Crews, foreign ships', 92, 93, 94, 98, 102, 103, 124, 157, 158, 168, 186**
 payment of, 103
 —See *Shipping, foreign; United States of America: foreign shipping and*

- Crews, United Kingdom ships', 5, 100, 154-187, 188, 402-403, 443
 availability of, in 1943, 374
 boys, 175
 casualties and shipwrecks, 154, 155, 157n, 158, 171, 172, 174, 176, 178, 181, 182, 184, 186, 402
 civilian status of, 162, 172, 174
 combined operations and, 176, 389, 402
 Ministry of War Transport as employer of seamen who volunteered for invasion of Europe, 402-403
 continuous employment introduced, 170
 demands for, 158, 159, 167, 171, 172, 186
 distribution of, 168
 Essential Work Order applied to, 170, 182, 186, 187
 drunkenness among, 164, 165, 166, 175
 engineers, 161, 167, 171
 fluctuating nature of employment, 159, 160, 161
 gallantry awards, 173, 174
 indiscipline, 164, 165, 166, 167, 175
 penalties, 165, 166, 167
 industrial conscription and, 162, 163, 170
 invasion of Europe and—*See Crews: combined operations and*
 labour relations in shipping industry, 16, 162, 176
 Lascars, 157, 175
 leave for, 163, 164, 170, 186
 lifesaving equipment, 155, 171, 182
 masters, 164, 165, 166, 171, 172, 173, 175
 morale, 158, 168, 171, 176
 nationality of, 168, 179, 180
 officers, 159, 160, 161, 167, 171, 179, 212
 pension schemes, 38
 pool for, 170, 175, 182
 port delays through crew difficulties, 165, 166, 167, 169, 185
 pre-war reserves, 158, 159
 recruitment for Armed Forces, 158, 159, 163, 167
 registration of former merchant seamen, 170, 186
 ships' articles, 164
 training schemes, 171
 transfers to R.N., 38
 unions, 162, 170, 171, 176
 wages, 163, 174
 war pension, scheme, 174
 war-time recruitment to, 168, 169, 170, 175, 183n, 186, 187
 wastage after outbreak of war, 163, 164, 168, 169, 170, 182, 186, 187
 welfare, 170, 171
 —*See also Anglo-American shipping collaboration: United States help to United Kingdom: transfer of ships to United Kingdom flag*
- Cross, Mr. R. H.
 —*See Minister of Shipping*
- Cunard White Star, 273
 —*See also Aquitania; Mauretania; Queen Elizabeth; Queen Mary; Shipping, United Kingdom controlled: troopships*
- Customs and Excise, 13
- Dakar, 98, 207, 219
- Denmark, Government of, 95, 97, 102
 —*See also Shipping, Danish*
- Department of Overseas Trade, Secretary of (Mr. Harcourt Johnstone), 304
- Dill, Sir John, 334
 —*See also Combined Chiefs of Staff*
- Dock labour
 —*See Ports abroad: labour in; Ports, United Kingdom: labour in*
- Doenitz, Admiral, 43
 —*See Shipping, United Kingdom controlled: enemy attacks on*
- Dollars
 United Kingdom shortage of, 47, 50, 55, 57, 59, 62, 80, 109, 143, 191, 434
 Norway's shortage, 99, 192

- Dominions
 Dominion Governments and foreign shipping, 61
 export surpluses, 50, 237, 238
 —See *Australia; Canada; Import programmes, overseas territories; Indian Ocean area; New Zealand; Overseas territories; Shipping, Dominions; South Africa; Shipping, foreign: in the safe trades; Shipping, United Kingdom controlled: in the cross trades; Shipping, United States: in the cross trades*
- Douglas, Mr. Lewis, 289
 —See *Anglo-American shipping collaboration; United States of America: War Shipping Administration*
- Durban, 279, 280
 —See *South Africa*
- Durmitor, 96
- Duncan, Sir Andrew
 —See *Board of Trade, President of*
- E-boats, 110, 122, 126
 —See *Shipping, United Kingdom controlled: enemy attacks on*
- East Africa
 food supplies, 261, 342, 343, 344
 —See *Indian Ocean area*
- East London, 260
 —See *South Africa*
- Eastern Group Supply Council, 205
- Economic controls generally, United Kingdom, 7, 8, 9, 49, 51, 106, 231, 259, 436, 440, 444
 —See also *Food, United Kingdom: control of; Overseas territories: economic controls in; Raw materials, United Kingdom: control of*
- Economic Policy Committee, 105, 107, 129, 196, 197
 Sub-Committee on Port Clearance, 130, 132
- Eden, Mr. (now Sir Anthony)
 —See *Secretary of State for Foreign Affairs*
- Egypt, 203, 210, 211, 226, 227
 coal requirements, 204, 225, 230, 247, 299, 341, 376
 fertiliser exports (phosphates), 205
 fertiliser requirements (nitrates), 205, 230, 234, 247, 299, 344, 345, 349, 355, 376, 434n, 436
 grain exports, 205, 230, 231, 344, 345
 grain output, 230, 349
 imports, 202n, 230, 247
 —See also *Alexandria; Cairo; Middle East; Port Said; Suez*
- Eisenhower, *Crusade in Europe*, 270n, 334n
- Elderton, Sir William, 181, 182, 183
Shipping Problems 1916-1921, 10n, 38n, 62n
Merchant Seamen during the War, 157n, 172n, 181n, 182n, 187n
- Essential Work Order, 163, 170, 186, 187
- Europe, Allied invasion of ('Overlord' operation), 372n
 crews for, 176, 402-403
 shipping requirements, 304, 369, 381, 393, 396, 397, 398, 402-407, 408, 437
 planning of, 402-407
 proportion met by United Kingdom shipping, 405
 —See *Services: shipping requirements of; Strategy: shipping as a limitation on*
- Evasive routing, 7, 19, 313
- Exports, United Kingdom
 ports and, 29, 82
 shipping for, 3, 222, 298
- Export surpluses, 50, 237, 238
- Far East
 troops to, 218, 269, 272, 275, 278, 279, 301
 —See *Shipping, United States: Services' demands for: Pacific theatre*
- Fayle, *Seaborne Trade*, 9n, 10n, 35n
- Feeding-stuffs imports, facing p. 22, 50, 106, 199, 364
 —See *Import programmes, United Kingdom*
- Fertilisers
 effects of Pearl Harbour on supplies, 261, 301
 requirements of overseas territories, 204, 205, 230, 234, 239, 240, 247, 259, 261, 298, 299, 300, 301, 342, 344, 345, 349, 431, 434, 435n, 436n

Fertilisers, *contd.*

—See also *Australia: fertiliser requirements; Egypt: fertiliser requirements; Indian Ocean area: fertiliser requirements; New Zealand: fertiliser requirements; Nitrates; Phosphates; South Africa: fertiliser requirements*

First World War

imports in, 10, 38, 190, 301, 363
import programming in, 48, 50, 62
Ministry of Shipping in, 44
ports in, 6, 7, 10, 11, 14, 139
shipping in, 4, 7, 10, 53, 57
control over, 8, 9, 35, 38, 39
French requirements, 4, 9

Fleet train, 435n

Food, United Kingdom

control of, 49, 51, 55, 66, 81, 444
—See also *Economic controls, United Kingdom*
home production of, 39, 50, 199
imports, United Kingdom, 1, 3
consumption rates, 46, 47, 55, 105, 106, 190, 197, 304, 305, 308, 316, 321, 363, 364, 413
distribution of, between different ports, 11, 12, facing p. 22
diversion of shipping and, 29, 128
—See *Ports, United Kingdom*
level of
peace-time, 47, 48
before the fall of France, 55, 56, 57, 70
after the fall of France, 197
—See *Imports, United Kingdom: level of*
programmes
pre-war planning, 29, 36-40
before fall of France, 44, 47-52, 54-57, 65-68, 71
fall of France to Pearl Harbour, 105-108, 196-199
after Pearl Harbour, 304, 305, 308, 362-365, 401-402
—See *Import programmes, United Kingdom*

stocks

dispersal of, 32
level of
pre-war policy, 45, 46
outbreak of war, 46
before fall of France, 56, 66
after fall of France, 105, 196, 325, 401
level queried in 1945, 413
storage of, 31
—See *Cargoes: availability of; Meat; Minister of Food; Ministry of Food; Oilseeds; Stocks, United Kingdom; Sugar; Whale oil; Wheat*

Food (Defence Plans) Department (Board of Trade), 29, 37, 49

Food, world shortage of, 433

—See *Cargoes: availability of*

Foreign Exchange

—See *Dollars*

France

coal exports to, 72, 74-76, 77, 78, 79, 80, 85
economic controls in, 9, 39
fall of, 80, 91, 92, 108, 109, 121, 199, 206, 217, 437
effects on French economy of German advance, 78-79
imports of, 72-80, 98
internment of British ships by, 98
overseas Empire, 227, 238
ports in, 98
ports in First World War, 6, 14, 139
pre-war preparations of, 39
shipping requirements of
First World War, 4, 9
Second World War, 4, 9, 39, 72-80, 85, 86, 91, 104, 122
Vichy Government, 95, 98, 102, 207, 256
—See *Shipping, foreign: help to France; Shipping, French*

Freetown, 202, 206, 207, 208, 209, 210, 217, 219, 221n, 225, 307

- Freight rates
 in First World War, 8, 9
 control over, 52, 53, 54ⁿ, 75
 foreign ships, 5, 59, 96, 103, 192, 206, 230, 235, 237, 238, 240
 —See also *Shipping, foreign*; *Shipping industry, United Kingdom: control over*
- Germany
 acquisition of foreign shipping by, 91, 92, 93, 112
 attack in west, 72, 78, 80, 83, 84, 91, 92, 93, 99, 101, 108, 109, 121, 199, 206, 217, 437
 attacks on Allied shipping
 —See *Shipping, United Kingdom controlled: (a) enemy attacks on, (b) size of fleet: losses*;
Shipping, United States: losses
 coal exports (pre-war), 74, 225
 New Order in Europe, 228, 229
 scales of equipment, 304
 —See also *Shipping, enemy and hostile*
- Gibbon, *History of Decline and Fall of Roman Empire*, 232, 233
- Gibraltar, 98
- Gilmour, Sir John
 —See *Minister of Shipping*
- Glasgow, 15, 83, 134, 136, 137, 147, 166ⁿ
 —See also *Clyde; Greenock; Ports, United Kingdom*
- Grain, United Kingdom imports
 —See *Wheat*
- Grain, overseas territories' requirements, 204, 205, 226, 230, 231, 232, 233, 234, 235, 239, 261, 298, 299, 300, 301, 342, 343, 344, 345, 346, 347, 348, 349, 351, 352, 353, 354, 355, 356, 376, 431, 434, 435
 —See *Australia: (a) wheat exports, (b) wheat production; Burma: rice exports; Ceylon: grain supplies; East Africa; Egypt: (a) grain exports, (b) grain output; India: grain; Indian Ocean area: grain; Middle East: grain; Rice*
- Greece, 227
 operations in, 220
 shipping requirements for civilian demands, 226
 —See *Middle East; Shipping, Greek*
- Greenock, 134, 147, 167
 —See *Clyde; Glasgow*
- Grigg, Sir James
 —See *Secretary of State for War*
- Hammond, R. J., *Food*, 37ⁿ, 46ⁿ, 48ⁿ, 49ⁿ, 51ⁿ, 55ⁿ, 56ⁿ, 105ⁿ, 140ⁿ, 197ⁿ
- Hancock, W. K., and Gowing, M. M., *British War Economy*, 37ⁿ, 39ⁿ, 80ⁿ, 170ⁿ, 327ⁿ
- Hankey, Lord
 —See *Minister without Portfolio*
- Headlam Committee, 26–30, 33
 —See *Committee of Imperial Defence; Ports, United Kingdom*
- Henneker, *Transportation Problems on the Western Front*, 139ⁿ
- Hoare, Sir Samuel (now Lord Templewood)
 —See *Lord Privy Seal*
- Holland, 240
 Government of, 95, 99
 —See *Netherlands East Indies; Shipping, Dutch; Shipping, foreign*
- Hull, 12, 81
 bombing of, 139
 —See *Humber*
- Humber
 diversion of shipping from, 126
 peace-time trade through, 11, facing p. 22
 —See *Hull*
- Hunter, Guy, *Middle East Supply Centre*, 229ⁿ
- Hurstfield, J., *The Control of Raw Materials*, 46ⁿ, 49ⁿ, 51ⁿ, 67ⁿ, 68ⁿ, 105ⁿ, 126ⁿ, 199ⁿ
- 'Husky'
 —See *Sicily, invasion of*
- Iceland, 218, 270, 277, 288
- Ile de France*, 273, 279
 —See *Shipping, United Kingdom controlled: troopships*
- Import Executive, 197, 304

- Imports, French
—See under France
- Imports, overseas territories'
—See *Overseas territories: shipping requirements of*
licensing of, 234, 235, 444
- Imports, United Kingdom
consumption of, 46, 47, 55, 67, 105, 106, 190, 197, 199, 201, 302, 304, 305, 308, 316,
321, 363, 364, 400, 413
war years compared, 201
dependence on, 1, 3, 47, 231, 232, 362
distribution of trade between different ports, 11, 12, facing p. 22, 107
distribution of, from ports, 11, 12, 13, 15, 26-34, 107, 138
effects of 'Anakim' in terms of, 331
effects of assistance to France on, 79, 86
effects of decision to cut Indian Ocean sailings on, 319, 321, 328
effects of employment of shipping in cross trades on, 302
effects of improved packing of military vehicles in terms of, 326, 327
effects of North West African invasion on, 307, 308, 313, 314, 361n, 402
effects of port delays abroad in terms of, 260, 261
effects of port bombing in United Kingdom on, 139, 140
effects of port delays in United Kingdom on, 10, 128
crew difficulties, 185
effects of overseas territories' civilian requirements on, 234, 235, 236, 248, 376
effects of Services' shipping requirements on, 51n, 189, 220, 221n, 222, 223, 303, 315
effects of supplies to Russia on, 255
effects of United States shipping help in 1941 expressed in terms of, 251, 264
effects of United States shipping help in 1942 expressed in terms of, 291
—See also *Anglo-American shipping collaboration: United States help to United Kingdom: help for specific purposes: United Kingdom import programme*
Government purchase of, 81
level of
in First World War, 10, 38, 190, 301, 363
before Second World War, 38, 47, 51, 363
up to fall of France, 36, 44, 51-58, 70, 77, 79, 86, 104n, 109n, 110, 121
summer of 1940, 104
fall of France to Pearl Harbour, 104n, 109n, 110, 111, 188, 196, 197, 201, 301,
315, 363
after Pearl Harbour, 301, 315, 316, 321, 340, 363, 364, 396, 406, 407, 433, 434
war years compared, 201
licensing of, 49, 57, 71
products economical of shipping space, 363n
sources of supply, 19, 37, 47, 50, 55, 56, 57, 61, 109, 121, 122, 126, 127, 159n, 195,
196, 220, 236, 238, 303n, 307, 313, 320, 361, 399n, 453, 459
volume brought in foreign ships, 5, 37, 44, 52, 58-64
—See also *Food, United Kingdom: imports; Raw materials, United Kingdom: imports*
- Import programmes, overseas territories', 62, 205, 227-235, 238, 239, 240, 252, 253, 258,
259, 261, 298, 299, 300, 302, 305, 317, 436, 444, 450, 451
returns for, 18n
specimen programme, facing p. 454
world-wide programming, 239, 240, 262, 288
—See *Middle East: centralised purchase and programming of imports; Overseas territories*
- Import programmes, United Kingdom
definition of, 50n
pre-war plans, 29, 36-40
until fall of France, 44, 47-52, 54-57, 65-68, 71, 77, 78, 86
fall of France to Pearl Harbour, 104-108, 121-125, 188-190, 196-200
after Pearl Harbour, 106, 301, 302, 304, 305, 306, 308, 315, 316, 321, 330, 336,
340, 360, 362-365, 379, 380, 381, 394, 396, 399n, 400, 401, 411, 412, 413, 420,
431, 432, 433
import programme becomes irreducible commitment, 315, 316, 330, 336, 340,
361, 363-365, 368, 375
port capacity as limitation on, 400, 401, 407
programme compared with fulfilment, 454
returns for, 18n
table showing disposal of tonnage to meet, facing p. 460
United States assistance to—See *Anglo-American shipping collaboration: United States help to United Kingdom: help for specific purposes: United Kingdom import programme*

—See also *Food, United Kingdom: imports: programmes; Raw materials, United Kingdom: imports: programmes; Shipping, United Kingdom controlled: demands upon: (a) allocation of shipping between main categories of demand, (b) co-ordination of; Shipping, United Kingdom controlled: management of*

India, 238

- Central Provision Office, 205
- civil supplies to Middle East from, 248
- coal from, 205, 225, 261, 299, 341, 376n
- economic controls in, 297
- See *India: grain; Overseas territories: economic controls in*
- effects of shipping shortage on, 236, 238, 239, 240, 299, 346, 352, 353, 396, 414, 435, 436
 - effects of invasion of North-West Africa, 346, 352, 353
- famine in, 240, 345-353, 356, 394, 396, 434, 435
 - Famine Inquiry Commission, 345, 347, 356
- Government of, 92, 351, 352, 434
- Government administration in, 350, 351, 434
- grain
 - control of distribution, 348, 350, 351, 444
 - control of supplies, 350, 351, 353, 434
 - difficulty of substituting wheat for rice, 348, 353
 - exports, 226, 235, 344
 - imports, 239, 261, 298, 300, 342, 346, 347, 348, 351, 352, 353, 356, 431, 434, 435
 - production, 346, 347
 - stocks, 239, 434
 - supplies generally, 346, 347
- import programmes, 444
 - See also *Import programmes, overseas territories*
- inflation in, 350, 351
- Japanese threat to, 256
- population of, 346
- ports in, 257, 258, 259
 - delays in, 259
 - organisation in, 259
 - See also *Bombay; Calcutta*
- troops for, 218, 223, 245, 256, 272, 275, 278, 279, 280
- troops from, for Middle East, 218, 219, 275, 278, 279, 280
- vehicles from, to Middle East, 297, 310
- vehicles to, 297, 298
- See also *Bay of Bengal; Bombay; Calcutta; Indian Ocean area; Secretary of State for India; Services: shipping requirements of*

Indian Ocean area

- coal requirements, 204, 205, 225, 226, 230, 237, 239, 247, 250, 261, 299, 341, 376
- definition of, 202-203
- demands of
 - civilian, 62, 203, 204, 205, 206, 214, 217, 225-242, 259, 261, 298, 299, 300, 301, 302, 307, 314, 341-353, 414, 446
 - military, 203, 205, 206, 211, 214, 216, 217, 218, 250, 256, 269, 272, 273, 275, 276, 295, 296, 297-302, 307, 309, 314, 315, 336, 340, 345, 371, 382, 387, 398, 414, 431, 446
- economic controls in
 - See *Overseas territories: economic controls in*
- effects of invasion of North-West Africa on, 340, 346, 352, 353
- famine in, 261, 322, 342, 343, 344, 414
- fertiliser requirements, 204, 205, 230, 234, 239, 240, 247, 259, 261, 298, 300, 301, 342, 344, 345, 349, 431, 434, 435, 436
- grain production in, 204, 230, 231, 232, 240, 346, 347, 348, 349
- grain requirements in, 204, 205, 226, 230, 231, 232, 233, 234, 235, 239, 261, 298, 299, 300, 301, 342, 343, 344, 345, 346, 347, 348, 349, 351, 352, 353, 354, 355, 356, 376, 431, 434, 435
- inflation in, 342
- Japanese victories in, 256
- pattern of trade and shipping services in peace-time, 204, 240
 - war-time reorganisation of, 205, 206, 225, 300, 446
- ports in, 202, 203, 204, 206-216, 217, 219, 221n, 225, 235, 237, 257, 258, 259, 260, 261, 307, 389, 424, 426
- Pearl Harbour's effects on, 262

Indian Ocean area, *contd.*

sailings to

- civilian and military cargoes combined, 235, 236, 375, 376
- help from United States, 291, 294, 295, 296, 300, 317, 318, 321n, 345, 365, 385, 398, 419, 422, 423
- sailings cut in January 1943, 260, 319, 320, 327, 328, 329, 340, 345
 - effect on civilian economies of area, 320, 321, 322, 328, 340, 341, 342, 343, 344, 346
 - effect on military activities, 319, 320, 340, 345, 371, 388
 - effect on United Kingdom imports, 319, 321, 328
- demand for increased sailings 1943 and 1944, 336, 368, 371, 379, 382

transport in, 206

United Kingdom imports from, 189n, 236, 399n

—See also *Australia; Bay of Bengal; Bombay; Burma; Burma road: operation to reopen; Calcutta; Cape Town; Ceylon; Convoys: W.S. convoys; Durban; East Africa; East London; Eastern Group Supply Council; Egypt; Far East; Freetown; Import programmes, overseas territories; India; Iraq; Japan; Madagascar; Malaya; Mauritius; Middle East; Netherlands East Indies; New Zealand; South Africa; Southern Rhodesia; Sudan; Suez Canal*

Inland sorting depots, 13, 14, 139, 148-150

—See also *Ports, United Kingdom; Storage space*

International law, 58, 97

Invasion of United Kingdom, 91, 92, 106, 108

Iraq, 203, 219, 220, 227, 245, 320

—See also *Middle East*

Iron ore

- imports, 50, 52, 56, 109, 126
 - discharge of, 12
 - port diversion and, 12, facing p. 22, 81
 - stocks, 45, 46, 57

Ismay, General (now Lord), 324

Isserlis, article in *Journal of the Royal Statistical Society*, Vol. C1, Pt. 1, 1938, 87n

Italy, Allied invasion of, 368, 390, 391

—See also *Mediterranean: combined operations in; Sicily: Allied invasion of*

Japan, 96, 224, 239

- attacks by, 256
- offensive against, 329
- See also *Burma road, operation to reopen; Far East; Indian Ocean area: Pearl Harbour's effects on; Shipping, United States: Services' (U.S.) demands for*

Yugoslavia, 227

—See also *Shipping, Yugoslav*

Kendall, Professor, 5n

King, Admiral, 336

—See *Shipping, United States: Services' (United States) demands for; United States of America: Chiefs of Staff*

Komet, 239

Landing ships and landing craft, 408

- allocations, 447
- shortages of, 328, 329, 372, 393, 397, 438n
- See also *Combined operations*

Leathers, Lord

—See *Minister of War Transport*

Lend-lease, 144, 191, 203, 204, 206, 228, 234, 251, 284, 294, 298, 437

—See *Anglo-American shipping collaboration: U.S. help to United Kingdom; United States of America*

Liberated territories

- shipping for relief supplies to, 354, 412, 414, 419, 420, 422, 423, 428, 433, 434, 435, 436, 449

Liverpool, 11, 12, 13n, 15, 147

- bombing of, 138, 139, 140, 141, 142, 151, 152
- Port Emergency Committee, 28
- See *Mersey; Ports, United Kingdom*

Lloyd, E. M. H., 226n, 227n

- Lloyd George, *Memoirs*, 26n
 Lloyd's List, 167n
 Lloyd's Register, 17n, 23n
 London
 coal supplies to, 127, 136
 port of
 bombing of, 31, 82, 126, 138
 dispersal of stocks from, 31, 32
 overside discharge in, 134
 peace-time trade through, 11, 12, facing p. 22, 81
 Port of London Authority, 31n, 132
 Assistant General Manager, 132
 restrictions on use of, 14, 15, 26, 81, 126, 135, 142, 333
 number of ships using, 152
 storage in, 31
 —See *Ports, United Kingdom*
 Lord President's Committee, 149
 Lord Privy Seal (Sir Samuel Hoare), 54, 65, 66, 68, 86
 (Sir Kingsley Wood), 71
 Lyttelton, Mr. Oliver (now Lord Chandos)
 —See *Middle East: Minister of State in; Minister of Production*
- Maclay, Lord (Shipping Controller in First World War), 10n
 Madagascar, 98, 256, 277n, 279, 280, 306
 Makatea, 240, 301n
 —See *Phosphates*
 Malaya, troops to, 223, 245, 278
 Malta, 210, 225, 226, 227, 245, 416
 Marine insurance, 60, 61, 94, 96, 97
 Mauretania, 273, 279, 280
 —See *Cunard White Star; Shipping, United Kingdom controlled: troopships*
 Mauritius, food shortage, 343
 Meat imports, 220, 321
 port diversion and, 12, facing p. 22, 81
 Mediterranean
 closing of, 36, 44, 109, 110, 121, 122, 203, 207, 218, 225, 259, 304, 331n, 341, 367, 368, 437
 effects of reopening, 367, 368
 French (Vichy) shipping in, 98
 operations in, 255, 343, 378, 381, 390, 391
 —See also *Italy, Allied invasion of; Middle East; Sicily, Allied invasion of*
 Medicott, W. N., *Economic Blockade*, 60n
 Mercantile Marine Department of Board of Trade, 34, 35, 36, 37, 38, 39, 44, 60, 75, 158, 161, 162, 163, 441
 Sea Transport Division, 38
 Merchant Navy, British
 —See *Crews, United Kingdom ships; Shipping industry, United Kingdom; Shipping, United Kingdom controlled*
 Merchant Navy Officers' Federation, 92
 Merchant Shipping Acts, 161n, 165, 167, 389
 —See *Crews, United Kingdom ships*
 Mersey
 bombing, 138, 139, 140, 141, 142, 151
 diversion of shipping and, 130
 Docks and Harbour Board, 140n
 labour troubles, 137
 peace-time trade through, 11, 12, facing p. 22
 Regional Port Director, 130, 131, 132, 133, 134, 137
 war-time trade through, 147, 152
 —See *Liverpool; Ports, United Kingdom*
- Middle East
 Anglo-American co-operation in, 228, 229, 350
 C.-in-C., 228, 341
 Middle East Command, 388, 390
 economic controls in, 190, 204, 205, 227, 228, 229, 230, 231, 232, 238, 258, 259, 261, 342, 436, 437, 444
 famine in, 231, 232, 240, 342, 343

Middle East, *contd.*

grain

government control over, 231, 232, 233, 348, 349, 351, 352,
 imports of, 231, 233, 234, 299, 343, 344, 348, 351, 352, 354, 355, 376, 434
 production of, 204, 230, 231, 232, 240, 348, 349

imports

centralised purchases and programming of, 227-235, 239, 258, 259, 261, 299,
 300, 349, 350, 444

civilian requirements generally, 203, 204, 212, 225, 226, 227, 228, 229, 230,
 231, 233, 234, 235, 236, 239, 248, 250, 259, 261, 285, 299, 343, 348-352, 355,
 375, 376, 414, 444

coal, 204, 225, 226, 230, 239, 247, 299, 341, 376

distribution of imports by M.E.S.C., 349

fertilisers, 205, 230, 234, 247, 299, 344, 345, 349, 355, 376, 434n, 435

grain

—*See above under grain*

import licensing in, 234, 235

loadings, of civil supplies to, 354

inflation in, 231, 232, 233

Japanese threat to, 256

locust campaign, 346

Middle East Supply Centre, 227-235, 261, 343, 345, 348, 349, 350, 351, 444

Minister of State in

(Mr. O. Lyttelton), 233

(Mr. R. G. Casey), 229, 343

movement of troops and their supplies to, 18, 19, 109, 143, 189, 191, 193, 203, 204,
 206, 207, 210, 211, 212, 216, 218, 219, 220, 221n, 223, 224-225, 235, 236, 245,
 250, 256, 257, 269, 270, 272, 275, 279-281, 297, 298, 301, 303, 309, 310, 375,
 387, 390, 398

—*See Services: shipping requirements of*

ports in, 203, 204, 210-216, 225, 235, 237, 257, 258, 260, 389

supplies from North America, 203, 204, 206, 210, 228, 234, 235, 264, 299, 354, 355

—*See also Anglo-American shipping collaboration: U.S. help to U.K.: help for specific
 purposes: Middle East; Cairo; Convoys: W.S. convoys; Egypt; Indian Ocean area;
 Overseas territories*

Middlesbrough, 81

—*See Iron ore*

Mines, 43, 121, 122, 126, 136n, 143

degaussing against, 122, 143

in Suez Canal, 211

Minister for the Co-ordination of Defence (Lord Chatfield), 29

Minister of Food (Lord Woolton), 130, 132, 197, 198

Minister of Labour, 170

(Mr. Bevin), 33, 130, 131, 137

Minister of Production (Mr. Lyttelton), 318, 363, 386, 393

Minister of Shipping, 55

(Sir John Gilmour), 44, 54

(Mr. R. H. Cross), 146, 168, 220

Minister of Transport, 133

(Lt.-Col. Moore-Brabazon), 130, 137, 149

Minister of War Transport (Lord Leathers), 55, 200, 289, 319, 330, 331, 334, 336, 338,

339, 343, 355, 371, 372, 373, 386, 396, 401, 402, 407, 417, 425, 435

Minister without Portfolio (Lord Hankey), 84n

Ministry of Economic Warfare, 50, 60, 63

—*See Blockade*

Ministry of Food, 46, 48, 49, 51, 55, 56, 66, 81n, 83, 105, 106, 128, 197, 413

Permanent Secretary of, 348n

—*See Food, United Kingdom*

Ministry of Home Security, 140, 151

Ministry of Labour, 130, 163

Ministry of Shipping, 28, 33, 38, 44, 48, 49, 51, 52, 54, 55, 56, 57, 59, 60, 61, 62, 64, 65,

67, 68, 72, 77, 83, 86, 93, 94, 96n, 99, 100, 101, 104n, 107, 108, 111, 121, 148, 159, 162,

166, 167, 168, 190, 196, 197, 220, 222

amalgamation with Ministry of Transport, 28, 33, 136, 200, 220

Director General, 44

organisation in New York, 136

Parliamentary Secretary (Sir A. Salter), 44, 92

- Sea Transport Division, 38, 337
 Statistical Adviser, 44
 —See *British Merchant Shipping Mission; Ministry of War Transport*
- Ministry of Supply, 48, 49, 51, 55, 56, 65, 66, 67, 68, 81n, 105, 106, 126, 128, 196, 197, 198, 199, 402, 413
 —See *Raw materials, United Kingdom*
- Ministry of Transport, 28, 29, 30, 32, 33, 82, 84, 107, 127, 128, 131, 136, 137, 149, 200
 amalgamation with Ministry of Shipping, 28, 33, 136, 200, 220
 —See *Ministry of War Transport; Ports, United Kingdom; Transport, inland, United Kingdom*
- Ministry of War Transport, 33, 34, 53n, 103, 109, 151, 159n, 162, 166, 167n, 171, 172, 173n, 176, 178n, 182, 183n, 185, 200, 213, 216, 220, 221n, 223, 224, 227, 228, 231, 238, 239, 255, 256, 258, 271, 275, 286, 288, 290n, 295, 298, 301, 303, 306, 320, 324, 327, 331, 348, 350, 356, 360, 361, 369, 384, 390, 391, 402, 405n, 406n, 421, 424, 436, 438n, 439, 440, 444, 449, 450, 451
 achievement of, 442, 443, 451
 control, nature of, 102, 252, 255, 256, 262, 263, 271, 285, 286, 288, 330, 387, 415, 440
 system summarised, 443-451
 —See also *Shipping industry, United Kingdom: war-time control over*
 co-operation with Services, 271, 272, 273, 287, 303, 306, 330, 336, 337, 338, 339, 361, 387, 388, 389, 390, 391, 402-407, 439, 440, 443, 445
 Director General, 91n, 103n, 213, 222, 272, 294n, 304, 339, 352n, 439
 Deputy Director General, 239
 organisation in New York, 127, 253, 442
 —See also *British Merchant Shipping Mission*
 representatives in ports abroad, 209, 211, 212, 214, 215, 235n, 239, 258, 259, 260, 299, 300, 442
 Sea Transport Organisation, 38, 211, 212, 213, 214, 215, 337, 339, 388, 389, 390, 391, 392, 403, 405n, 406n
 staffing and organisation of, 441, 442
 Statistical Adviser, 181
- Ministry of Works, 32, 149
- Monnet, M. Jean, 73
 —See *Anglo-French collaboration*
- Monsarrat, N., *The Cruel Sea*, 176n
- Moore-Brabazon, Lt.-Col. (now Lord Brabazon)
 —See *Minister of Transport*
- Mulberry Harbours
 —See *Ports abroad: invasion of Europe and*
- Munich crisis, 29, 30, 31, 35, 36
- Munitions production, United Kingdom, 49, 50, 66, 67, 105, 126, 148, 188, 198, 303, 316, 318, 328, 336, 363, 413
- Murmansk, 253
 —See *Russia: ports in*
- Narvik ore trade, 52, 56
- National Dock Labour Corporation, 131n
- National Maritime Board, 162, 168, 170
- National Service Acts, 163
- Nauru, 239
 —See *Phosphates*
- Netherlands East Indies, 248, 257, 262
- Newfoundland, crews from, 168, 187
- Newport, 147
 —See *Bristol Channel; Ports, United Kingdom*
- New York, 95, 279, 280, 281
 —See also *Ministry of War Transport: organisation in New York*
- New Zealand, 202, 224
 effects of shipping shortage on, 236, 238, 239, 298
 fertiliser requirements, 205, 239, 240, 261, 298, 300, 301, 344, 431, 434, 435n, 436n
 troops to and from, 218, 245, 275, 278
 —See *Dominions; Import programmes, overseas territories; Indian Ocean area; Overseas territories*
- Nieuw Amsterdam, 273, 280
 —See *Shipping, United Kingdom controlled: troopships*
- Nitrates, 205n, 230, 234, 235, 299, 344, 354, 355, 434

- North West Africa, Allied invasion of, 210, 269
 French ships captured in, 102n
 naval ships, requirements for, 255, 307, 313, 368n
 number of troops required and transported, 307, 312
 port problems connected with
 ports abroad, 307, 313
 United Kingdom ports, 138, 307, 333, 389
 shipping requirements for, 303, 306, 307, 308, 312, 313, 314, 321, 336, 340, 352, 353, 361n, 364, 383, 387, 404
 effects on India and Indian Ocean area, 340, 346, 352, 353
 effects on United Kingdom imports, 307, 308, 313, 314, 361n, 402
 percentage met by United Kingdom ships, 364
 planning of, 306, 307, 312, 313
 problems of shipping management in, 389, 390
 sailings to, number of, 323
- Norway
 Government of, 95, 99
 operations in, 93n, 217, 306
 —See also *Shipping, Norwegian; Shipping, Scandinavian*
- Ocean Island, 239
 —See *Phosphates*
- Oil companies, 159, 160
- Oilseeds imports
 port diversion and, 12, facing p. 22, 81
 processing of, 32
 storage of, 32
- Orion, 239
- 'Overlord'
 —See *Europe, Allied invasion of*
- Overseas territories in British area of responsibility
 economic controls in, 190, 204, 205, 227, 228, 229, 230, 231, 232, 238, 252-253, 258, 259, 261, 298, 299, 302, 342, 436, 444
 shipping requirements of, 3, 4, 7, 18, 61, 62, 143, 188, 189-190, 192, 200-240, 261, 262, 284, 285, 287, 291, 294, 297-302, 305, 307, 335, 341-353, 375-377, 381, 387, 394, 396, 434-437, 458, 460
 problems of planning summarised, 443, 444
 —See *Anglo-American shipping collaboration: help for specific programmes: (a) Indian Ocean sailings, and (b) Overseas territories; Coal, overseas; Fertilisers: overseas territories' requirements; Grain, overseas territories' requirements; Indian Ocean area*
- Pacific
 shipping services in, 203, 204
 —See also *Shipping, United States: Services' (U.S.) demands for: Pacific theatre*
- Palestine, 225, 227, 257
 —See *Middle East*
- Paymaster-General
 —See *Cherwell, Lord*
- Pearl Harbour, 225, 256
 effects of, 261, 284
- Persia, 203, 219, 220, 227, 245, 320
 supplies to Russia through, 253
 —See *Middle East*
- Persian Gulf
 famine in, 343, 344
 movement of vehicles to, 297, 298
 ports in, 253
 —See *Middle East*
- Petroleum products, 3, 12n, facing p. 22, 72
- P.E.P., 205n, 228n
- Phosphates, 205, 239, 240, 259, 261, 298, 300, 301, 342, 344, 431, 434, 435n, 436n
 —See *Australia: fertiliser requirements; New Zealand: fertiliser requirements; South Africa: fertiliser requirements*
- Poland
 pre-war coal exports, 74, 225
- Port Said, 210, 215, 225, 257, 342
 —See *Egypt; Middle East; Ports abroad*

Port operations and general port problems described, 6, 10, 12-15, 19

Ports abroad

- capacity of and delays in, 6, 14, 124, 138, 139, 200, 219, 220, 237, 253, 254, 257, 258-261, 271, 313, 389, 390n, 395n, 415, 416, 426, 429, 444, 445
- combined operations and, 389
- delays through crew difficulties, 166
- development of, 387
- effects of delays in, 209, 260, 261
- equipment in, 207, 208, 210, 211, 215, 253, 260, 397, 445
- import requirements of, 299
- invasion of Europe and, 398, 401, 404
 - Mulberry harbour, 397, 399, 404
- invasion of North West Africa and, 307, 313
- labour in, 207, 211, 212
- organisation in, 211, 212, 213, 214, 215, 258, 259, 260, 445
- relief for liberated territories and, 436n
- repairs in, 143, 144, 145, 208, 257, 259, 261
- table showing port position in a theatre of war, 457
- See also *Archangel*; *Gulf of*; *Alexandria*; *Antwerp*; *Bombay*; *Calcutta*; *Cape Town*; *Cherbourg*; *Convoys: W.S. convoys*; *Durban*; *East London*; *France: ports in*; *Freetown*; *India: ports in*; *Middle East: ports in*; *Murmansk*; *Port Said*; *Russia: ports in*; *South Africa: ports in*; *Sudan*; *Suez Canal*; *Vladivostok*

Ports, United Kingdom

- capacity of and delays in
 - First World War, 6, 10, 11, 13, 138
 - pre-war planning and, 6, 10-16, 24-34, 36, 39, 45
 - before fall of France, 80-84, 87
 - after fall of France, 91, 104, 105, 106, 107, 108, 111, 119, 124, 126-142, 166, 188, 219, 220, 426
 - in 1942, 1943 and 1944, 307, 333, 389, 396, 398, 399, 400, 401, 407, 416, 433
- bombing of, 15, 24, 25, 26, 28, 30, 31, 43, 44, 80, 84, 104, 107, 119, 126, 128, 138, 139, 140, 141, 142, 148, 163
- cost of port delays in terms of United Kingdom imports, 10, 128, 166
- delays through crew difficulties, 165, 166, 167, 169
- departmental organisation and, 15, 81, 83, 128, 129, 132, 136, 333
- dispersal of stocks from, 31, 32
- distribution of imports between, 11, 12, facing p. 22, 81, 107
- emergency port, 82, 134
- equipment for, 12, 14, 30, 83, 128, 138
- headquarters organisation for, 28
 - Diversion Room, 33, 141, 214
- invasion of Europe and, 396, 398, 399, 400, 401, 407
- invasion of North West Africa and, 138, 307, 333, 389
- labour in, 12, 16, 34, 83, 128, 130, 131, 133, 134, 136, 137, 138, 139
- measurement of port capacity, 26-30, 107-108, 119, 138, 399-401, 443
- military operations and, 138, 333, 334, 389
- movement of United States troops and supplies to United Kingdom and, 333, 400, 401
- Port Emergency Committees, 28, 30, 31, 33, 128, 129, 132, 134
- Port and Transit organisation, 28, 29, 32, 81n, 129, 149, 333
- port managers, 131, 149
- Regional Port Directors, 130-133, 136, 137
- restrictions on use of east coast ports, 14, 15, 25, 44, 80, 81, 126, 135, 136, 333
- statistics, 135
- storage space in, 13, 14, 28, 31, 81, 83, 134, 136
- transport from, 7, 11, 13, 14, 15, 27, 29, 33, 34, 81, 107, 108, 127, 128, 133, 134, 135, 136, 138, 139, 140, 148, 149, 150
- turn-round time in (figures), 129, 138, 141, 142, 146
- west coast
 - diversion of shipping to,
 - pre-war preparations, 14, 15, 25, 26-31, 81
 - before fall of France, 80, 81, 82, 83, 84, 87
 - after fall of France, 107, 108, 111, 119, 121, 126-142, 147
- See *Bristol Channel*; *Cardiff*; *Clyde*; *Glasgow*; *Greenock*; *Hull*; *Humber*; *Liverpool*; *Mersey*; *Middlesbrough*; *Newport*; *Swansea*; *Tyne and Tees*

Postan, M. M., *British War Production*, 67n, 127n

Powell, L. H., *The Shipping Federation*, 162n

- Pre-war planning, 1-16, 24-40, 45-46, 52, 56, 58, 72-75
- Prime Minister (Mr. Churchill), 94, 130, 139, 146, 148, 150, 191, 193, 194n, 197, 198, 200, 218, 220, 224, 254, 263, 270, 273, 274, 297, 304, 308, 316, 318, 319, 320, 324, 326, 327, 328, 329, 332, 338, 359, 363, 367, 369, 371, 374, 375, 386, 392, 409, 414, 417, 431
relations with President Roosevelt, 286, 291, 334
- Production Executive, 149
- Quebec Conference ('Quadrant'), August 1943, 145n, 380n, 391n, 392, 394, 399n
- Quebec Conference ('Octagon'), September 1944, 410
- Queen Elizabeth*, 135n, 273, 274, 280, 281, 282
—See *Cunard White Star; Shipping, United Kingdom controlled: troopships*
- Queen Mary*, 135n, 273, 274, 281, 282
—See *Cunard White Star; Shipping, United Kingdom controlled: troopships*
- Railways abroad
Middle East, 257
South Africa, 226
- Railways, United Kingdom
coal traffic and, 76, 108, 127, 136
ports and, 13, 14, 15, 27, 29, 33, 81, 107, 127, 134, 135, 136, 138, 140, 148
rates, 133
statistics of, 107
wagons, shortage of, 127, 128, 149
—See *Road transport; Shipping, United Kingdom controlled: coasters; Transport, inland, United Kingdom*
- Rationing
—See *Economic controls in United Kingdom; Food, United Kingdom: control of; Overseas territories: economic controls in*
- Raw materials, United Kingdom
control of, 49, 51, 55, 67, 81
effects of Pearl Harbour on, 261
home production of, 39, 199
imports, 1, 3
consumption rates, 46, 47, 55, 67, 105, 106, 190, 197, 199, 304, 305, 308, 316, 321, 363, 364, 413
distribution between different ports (peace-time), 11, 12, facing p. 22
diversion of shipping and, 29, 126, 127
level of
peace-time, 47
before fall of France, 56, 57, 70
after fall of France, 197
—See *Imports: level of*
programmes for
pre-war planning, 36-40
before fall of France, 47-52, 54-57, 65-68, 71
fall of France to Pearl Harbour, 105-108, 195, 196-199
after Pearl Harbour, 304, 305, 308, 315, 316, 362-365, 401-402
—See *Import programmes, United Kingdom*
- stocks
level of
pre-war planning, 45, 46, 47
outbreak of war, 46
up to fall of France, 66, 68
fall of France to Pearl Harbour, 105, 106, 196
after Pearl Harbour, 316, 325, 401, 402, 413
dispersal of, 32
storage of, 31
—See *Stocks, United Kingdom*
world shortage of, 433
—See *Cargoes: availability of; Iron ore; Ministry of Supply; Steel; Timber*
- Red Sea, phosphates from, 240, 301
- Registrar-General of Shipping and Seamen, 163n, 171, 178n, 181, 184n
- Registration for Employment Order, 170, 186

- Rice
 effects of Pearl Harbour on supplies, 261, 342, 347
 —See *India: grain; Indian Ocean area: grain requirements in*
- Road transport, 13, 15, 33, 107, 135, 136, 138, 148
 control over, 128, 134
 —See *Railways; Shipping, United Kingdom controlled: coasters; Transport inland, United Kingdom*
- Roosevelt, President, 191, 193, 194, 195, 217n, 224, 225, 287, 294n, 318, 319, 328, 329, 363, 364, 371, 372, 374, 375, 386, 392, 409, 413, 415, 417, 426, 429, 433, 449
 relations with Prime Minister, 286, 291, 448
 —See *Anglo-American shipping collaboration; Shipping, United States; United States of America*
- Rosen, S. M., *Combined Boards of the Second World War*, 393n, 433n, 448n
- Roskill, S. W., *The War at Sea*, 24n, 43n, 155n, 196n
- Royal Air Force, 1, 80, 84, 172n, 223, 263
- Royal Navy, 1, 38, 57, 92, 94, 96, 98, 108, 159n, 167, 168, 172, 174, 175, 176, 186, 210, 212, 217, 223, 259, 263, 372, 389, 397
 coal demands of, 341
 Royal Naval Reserve, 159, 163
 —See *Admiralty; Convoys: escorts*
- Russia
 German invasion of, 195, 224
 help to, 251, 253, 254, 255, 265, 288, 321, 322, 331, 336, 379, 381
 convoys to, 210, 254, 255, 321
 planning problems involved in, 253
 invasion of Baltic States by, 94
 ports in, 253, 254
- Safaga, 257
- Salter, Sir Arthur (now Lord), 44, 46, 191, 193, 194, 252, 263, 284n, 285, 286, 288, 289, 291, 294, 317, 365
Allied Shipping Control, 26n, 35n
 —See *British Merchant Shipping Mission; Ministry of Shipping: Parliamentary Secretary to*
- San Demetrio*, 173n
- San Florentino*, 173n
- Sea-power, 1, 108, 272, 451
- Secretary of State for Air (Sir Kingsley Wood), 25
 (Sir Archibald Sinclair), 386
- Secretary of State for Colonies (Mr. Oliver Stanley), 345n
- Secretary of State for Foreign Affairs (Mr. Eden), 344, 363, 364
- Secretary of State for India (Mr. L. S. Amery), 352
- Secretary of State for War (Sir James Grigg), 319, 386
- Services, fighting, British, 7
 arrangement for meeting requirements from Indian Ocean territories, 205
 coal requirements in Middle East, 341, 342
 co-operation with Ministry of War Transport, 271, 272, 273, 303, 306, 330, 337, 338, 339, 361, 387, 388, 389, 390, 391, 402-407, 439, 440, 443
 diversion of shipping and, 82
 organisation in ports abroad, 211, 212, 213, 214
 overseas territories' economies and, 205, 226, 227, 228, 238, 347
 shipping requirements of, 1, 3, 4, 8, 9, 18, 19
 up to fall of France, 38, 51, 65, 72n, 122
 fall of France to Pearl Harbour, 109, 110, 111, 122, 124, 125, 143, 188, 189, 190, 202, 216, 217, 219, 220, 221, 235, 236, 250
 after Pearl Harbour, 252, 256, 257, 260, 262, 272, 284, 289, 295, 297-311, 312-314, 317, 319, 320, 321, 322, 328, 329, 330, 331, 332, 334, 335, 336, 337, 345, 359, 360, 362, 364, 366, 367, 369, 370, 371, 372, 375, 379, 380, 381, 386-392, 396-399, 402-407, 410, 411, 420, 432, 437, 438, 439, 460
 1943 inquiry into, 386-392
 administrative difficulties in meeting, 387-392, 397, 402-407
 scales of equipment and reserves, 189, 304, 314, 315, 319, 320, 324, 370
 table showing a military operational programme, facing p. 462
 table showing an operational maintenance loading programme, 461
 troopships
 —See *Shipping, United Kingdom controlled: troopships*
 wastage of shipping in meeting, 221, 285, 303, 390

- Services, fighting, British, *contd.*
 wheeled vehicles and tanks, 235, 297, 298, 302, 309, 310, 326, 387, 398, 402, 408
 improvements in packing and stowing, 302, 326, 387, 397, 424
 rate of movement of, 297, 298
 —See *Burma road, operation to reopen; Europe, Allied invasion of; India: (a) troops for, (b) troops from; Indian Ocean area: demands of: military; Italy, Allied invasion of; Mediterranean: operations in; Middle East: movement of troops and their supplies to; North-West Africa, Allied invasion of; Sicily, Allied invasion of; Strategy*
- Seychelles, 343
- Shipbuilding, United Kingdom
 pre-war output, 2, 22
 war-time output, 43, 57, 58, 122, 123, 125, 217, 220, 252, 284, 374, 426
 concentration on naval building, 364
 —See *United States of America: shipbuilding in*
- Shipping Committee, 304, 305, 327, 379, 421
- Shipowners, 5, 8, 15, 34, 36, 48, 52, 53, 100, 131, 136, 143, 144, 158, 159, 160, 162, 167n, 170, 171, 174, 211, 212, 213, 214, 299, 361n, 388, 403, 405, 406, 415, 441, 442, 447, 451
 foreign, 92, 93, 95, 96, 97, 100, 103, 192, 237
- Shipping Federation, 162n, 167, 170, 175, 185
 —See also *Shipowners*
- Shipping industry, United Kingdom
 labour relations in, 16, 162, 176
 pre-war conditions, 1, 2, 34, 51, 158, 159, 160, 161
 laid-up tonnage, 2, 21
 protection of, 2
 pre-war relative decline of, 2, 3, 17
 pre-war size, 2, 3, 5, 23
 war-time control over, 7, 8, 9, 35, 38, 39, 52, 53, 54, 55, 56, 75, 78
 in First World War, 8, 9, 35, 38, 39
 licensing of ships, 52, 53, 54, 55, 75
 pre-war plans, 36n, 38, 39, 52
 requisitioning of ships, 7, 8, 9, 39, 52, 53, 54, 55, 56
 rates of hire, 8, 9, 60
 war-time profits, 52, 53
- Shipping, Australian, 21, 23, 204, 249
- Shipping, Belgian, 5, 17, 21, 23, 91, 94, 99, 112, 113, 114, 115, 116, 117, 118
 —See also *Belgium, Government of; Shipping, foreign*
- Shipping, Canadian, 21, 23
- Shipping, Danish, 5, 17, 21, 23, 43, 63, 91, 93, 94, 95, 96, 99, 102, 103, 112, 113, 114, 115, 116, 117, 118, 186, 187, 192, 194, 249
 agents' committee in New York, 95, 96, 97
 —See also *Denmark, Government of; Shipping, foreign*
- Shipping, Dominions, 3, 4, 17, 21, 23, 54n, 69, 99n, 249, 300, 375n, 379n
- Shipping, Dutch, 5, 17, 21, 23, 63, 91, 94, 99, 100, 101, 102n, 112, 113, 114, 115, 116, 117, 118, 237, 249, 257, 262, 273, 384
 —See also *Holland, Government of; Netherlands East Indies; 'Nieuw Amsterdam'; Shipping, foreign*
- Shipping, enemy and hostile
 captures of, 43, 96, 98, 99, 102, 113, 114, 115, 116, 117, 118, 223
 in United States, 192, 194
 driven from seas by blockade, 237, 262
 —See *Shipping, Danish; Shipping, French; Shipping, German; Shipping, Japanese*
- Shipping, Estonian, 94, 113, 114, 115, 116, 117, 118
- Shipping, foreign, 17, 21, 23
 competition from, pre-war, 2
 enemy attempts to obtain, 91, 92, 93, 94, 97, 98, 103, 112
 help to France before fall of France, 64, 72, 73, 74, 75, 76, 77, 79, 85, 91
 losses, 113
 masters of, 92, 93, 94, 95, 96
 protection (peace-time), 2
 size of fleets (pre-war), 17, 21, 23
 laid-up tonnage, 21
 tonnage employed on British services
 pre-war estimates of help, 5, 37, 39, 72, 73
 before German attacks in West, 44, 57, 58, 59-64, 69, 73, 76, 77, 102, 113, 120, 122
 means of pressing ships into British service, 60-61

- after German attacks in West, 69, 91-103, 104, 111, 113, 114, 115, 116, 117, 118, 120, 122, 124, 125, 154, 157, 190, 192, 218, 223, 237, 262, 265n
 control of, 102
 means of pressing ships into British service, 96, 97
 first and second years of war compared, 102
 coasters, 101, 134
 rates of hire, 59, 60, 63, 64, 100, 101, 102, 103
 tankers, 101
 tonnage employed in 'safe' trades, 93, 95, 97, 99, 100, 101, 103, 120, 192, 204, 206, 211, 237, 298, 240, 251, 262
 —See *United States of America: foreign shipping and*
- Shipping, French
 pre-war, 2, 21, 23
 up to fall of France, 5, 17, 72-80, 85, 113
 after fall of France, 91, 97, 98, 99, 102, 103, 114, 115, 116, 117, 118, 186, 187, 192, 194, 249, 273, 388n
 —See also *Anglo-French collaboration; France; 'Ile de France'; Shipping, enemy and hostile*
- Shipping, German, 17, 21, 23, 113, 114, 115, 116, 117, 118, 192, 249, 262
 pre-war competition from, 2
 —See *Shipping, enemy and hostile*
- Shipping, Greek, 5, 17, 21, 23, 61, 63, 101, 113, 114, 115, 116, 117, 118
 —See *Greece*
- Shipping, Japanese, 17, 21, 23, 98, 249, 262
 pre-war competition from, 2
- Shipping, Yugoslav, 5, 23, 61, 96, 101, 113, 114, 115, 116, 117, 118
- Shipping, Latvian, 94, 113, 114, 115, 116, 117, 118
- Shipping, Norwegian, 5, 17, 21, 23, 63, 91, 93, 94, 99, 100, 101, 102n, 112, 113, 114, 115, 116, 117, 118, 192, 194, 237, 249, 251, 262, 264, 384
 —See *Norway; Shipping, Scandinavian*
- Shipping, Panamanian, 113, 114, 115, 116, 117, 118
 U.S. ships flying Panamanian flag, 193
- Shipping, Polish, 113, 114, 115, 116, 117, 118
- Shipping, Russian, 37n
- Shipping, Scandinavian, 2, 5, 17, 21, 23, 37n, 93n
 —See also *Shipping, Norwegian; Shipping, Swedish*
- Shipping, Swedish, 5, 17, 23, 58, 63, 96n, 99, 113, 114, 115, 116, 117, 118, 249
- Shipping, United Kingdom controlled
 pre-war plans, 3-10, 34-40
 up to and including the fall of France, 43, 44, 45, 47-71, 72-80, 91-125
 fall of France to Pearl Harbour, 188-200, 202-206, 216-248, 250-256
 after Pearl Harbour, 256 to the end of the book
 bombing of, 24, 25, 35, 58, 80, 84, 110, 126, 155, 211, 254
 budgets for—See generally *Anglo-American Shipping collaboration: shipping budgets*
 carrying capacity generally
 factors that determine, 4, 7, 18-20
 pre-war assumptions about, 7, 36
 up to fall of France, 44, 47, 50, 51, 52, 57, 65, 109n
 fall of France to Pearl Harbour, 104, 106, 109, 110, 111, 121-124, 135, 139, 154, 190, 195, 196, 202, 209, 219, 222, 243, 437
 after Pearl Harbour, 263, 299, 302, 303, 307, 313, 315, 338, 359, 365, 367, 368, 424, 425, 426, 445
 troopships, 109, 270, 271, 272, 274, 275, 276, 282
 —See *Convoys; Evasive routeing; Imports, United Kingdom: sources of supply; Mediterranean: closing of; Port operations described; Ports abroad: capacity of and delays in; Ports, United Kingdom: capacity of and delays in; Services, fighting, British: shipping requirements of: (a) administrative difficulties in meeting, (b) wastage of ships' time involved in meeting, (c) wheeled vehicles and tanks: improvements in packing and stowing; Shipping, United Kingdom controlled: (a) demands upon: co-ordination of, (b) management of, (c) repairs to*
- coasters, 6, 15, 33, 54n, 74, 75, 76, 79, 82, 107, 108, 123, 138, 379, 381, 388, 389
 coal transport and, 107, 108, 127, 136
 invasion of Europe and, 398, 400, 404, 405
 overside discharge into, 134, 135
 port diversion and, 82
 rates, 133
 control, nature of, 102, 252, 255, 256, 262, 263, 271, 285, 286, 288, 330, 387, 415, 440, 443-451

Shipping, United Kingdom controlled, *contd.*

—See *Shipping industry, United Kingdom: war-time control over demands upon*

allocation of shipping between main categories of demand, 3, 4, 62, 65, 73-80, 101, 102, 188, 189, 190, 200, 216, 217, 220, 221, 234, 235, 236, 237, 240, 250, 252, 253, 255, 262, 263, 287, 290, 302, 303, 305, 314, 319, 320, 321, 329, 330, 335, 337, 338, 340, 345, 359, 360, 362, 364, 379, 380, 381, 391, 394, 403, 424, 431, 443, 444, 447, 450

co-ordination of, 4, 19, 124, 200, 221, 235, 250, 287, 290, 299, 300, 307, 313, 314, 360, 387, 388, 446

troopships, 270, 271, 272

—See also *Shipping, United Kingdom controlled: management of*

For categories of demands see *Anglo-American shipping collaboration: U.K. help to U.S.A.; France: shipping requirements of; Import programmes, United Kingdom; Liberated territories: shipping requirements of; Overseas territories: shipping requirements of; Russia: help to; Services, fighting, British: shipping requirements of*

employment of, tables showing, 125, 295, 379, 381, 420, 455, 456, 457

employment returns, 124

enemy attacks on, 4, 7, 10, 24, 25, 35, 43, 44, 45, 58, 59n, 80, 84, 104, 108, 110, 121, 122, 126, 127, 136n, 139, 143, 154, 155, 162, 171, 173, 176, 190, 208, 211, 217, 219, 239, 250, 254, 263, 313, 367, 368, 369

First World War, 44

pre-war assumptions, 24

protection against, 110, 122, 136n, 143, 155, 158

—See *Bombing; E-boats; Mines; Shipping, United Kingdom controlled: size of fleet: losses; Submarines; Surface raiders, German*

fast ships, need for, 189, 191, 216, 217, 220, 224

employed in cross trades, 57, 61, 62, 64, 120, 124, 125, 192, 196, 204, 235, 236, 237, 248, 250n, 259n, 299, 300, 302, 317, 320, 331, 335, 341, 346, 352, 362, 375, 379, 380, 381, 394, 396, 414, 420, 432, 445, 446

tables analysing, 458, 459

—See also *Overseas territories: shipping requirements of; Shipping, foreign: employed in safe trades; Shipping, United States: employed in cross trades*

internment of by Vichy France, 98

management of, 4, 19, 53, 54, 57, 70, 127, 136, 196, 200, 213, 222, 235, 236, 250, 270, 271, 272, 273, 275, 276, 299, 300, 303, 307, 338, 370, 387, 388, 389, 390, 402-407, 415, 416, 424-425, 426, 443, 444, 446, 450, 451

stowage of cargo, 4, 20, 127, 128, 136, 156, 189, 210, 211, 213, 235, 236, 381n, 382, 387, 389, 397, 404

mismanagement of, 423, 424

percentage of shipping used for invasion of Europe represented by, 405

percentage of shipping used for invasion of North-West Africa represented by, 364

refrigerated shipping, 188n, 220

requisitioning of by Admiralty, 39, 217

—See also *Armed merchant cruisers*

repairs to, 19, 57, 122, 143-145, 153, 188, 195, 208, 250n, 257, 259, 379, 381, 389, 394n, 416, 420

control over repairs in United Kingdom, 144

repairs in ports abroad, 143, 144, 145, 208, 257, 259, 261

repairs and alterations to ships for Russian convoys, 255

responsibility for Eastern Hemisphere imports, 262, 287, 288

size of dry-cargo fleet

pre-war assumptions, 4, 5, 35-38

at periods throughout the war, 69, 154

at outbreak of war, 43

at fall of France, 43, 91, 104

spring 1941, 217

1942, 263, 284, 293

1943, 293, 332, 364, 367, 374, 376n, 381, 394, 398

1944, 381, 398

1945, 420, 450, 551

gains generally, 43, 51, 57, 58, 64, 104, 111, 120, 122, 123, 154, 191, 293, 381

—See also *Anglo-American Shipping collaboration: U.S. help to United Kingdom: transfer of ships to United Kingdom on bareboat charter; Shipbuilding, United Kingdom; Shipping, foreign; Shipping, United Kingdom: transfers from foreign flags to*

- losses generally, 4, 10, 43, 45, 51, 104, 110, 111, 113-118, 120, 122, 123, 125, 154, 156, 190, 191, 202, 217, 219, 237, 250, 252, 263, 284, 293, 307, 313, 314, 318, 367, 368, 375, 381, 384, 394, 404, 416, 426-427
 —See also *Shipping, United Kingdom controlled: enemy attacks on; Shipping, United States: losses*
- tankers, 3, 22, 23, 159, 191, 209
- transfers from foreign flags to United Kingdom flag, 43n, 59, 69, 97, 98, 99, 102, 103, 113-118, 374, 375, 380, 384, 385, 394n, 395, 396, 405n, 410, 419
- troopships, 3, 4, 38, 109, 135n, 188n, 189, 191, 200, 208, 209, 214n, 216-225, 242, 243, 244, 245, 250, 257, 269-276, 312, 316, 372, 379, 381, 397
 availability of, 217, 218, 222, 223, 257, 372
 carrying capacity
 —See *Shipping, United Kingdom controlled: carrying capacity*
 different categories of, 273, 275
 losses, 217, 223, 246
 'monsters', 273, 274, 279-281
 North-West African invasion and, 312
 number of men moved in, 269, 275, 277, 278, 298
 planned use of, 271, 272, 273, 275, 276
 rescue arrangements, 274n
- Shipping, United States, 17, 21, 23, 96n
 carrying capacity, 18
 —See *Ports abroad; Shipping, United States: Services' demands: wastage of shipping*
 controls over shipping and demands for shipping, 234, 235, 286, 287, 289, 291, 303, 308, 330, 335, 376, 416, 417, 425, 449, 450
 crew shortages, 374
 employment of in 1942, table showing, 294
 help to Russia, 251, 253, 254, 289, 294
 in cross trades, 192, 206, 235, 237, 249, 251, 284, 291, 298
 invasion of Europe and, 405
 losses, 415, 426
 management of, 275, 289, 303, 370, 386, 392, 401, 406, 415, 416, 425-427
 North African invasion and, 306, 385
 percentage of United States' total shipping requirements accounted for by civilian programmes, 412, 428
 responsibility for Western Hemisphere imports, 262, 287
 pre-war condition of, 2, 59
 sailing under Panamanian flag, 193
 Services (U.S.) demands for and allocations of, 191, 284, 285, 286, 287, 289, 290, 291, 292, 294, 303, 316, 319, 330, 334, 364, 365, 369, 370, 374, 376, 386, 392, 393, 396, 401, 410, 412, 415, 416-418, 422, 423, 425-427, 428, 431, 433, 438, 447, 449
 Pacific theatre, 290, 292, 316, 334, 336, 401, 410, 411, 412, 414, 415, 447, 449, 450
 projected inquiry into, 1943, 386, 392
 wastage of shipping, 289, 334, 369, 370, 386, 415, 416-418, 425-427, 429-430, 433, 438, 449
 size of fleet
 before the Second World War, 17, 21, 23
 before Pearl Harbour, 191, 193, 275
 after Pearl Harbour, 284, 293, 318, 319, 364, 374, 376n, 421, 449
- Ship warrant scheme, 96
- Sicily, Allied invasion of ('Husky' operation), 328, 331, 332, 336, 369, 383
 shipping requirements of, 331, 332, 336, 369, 383, 388, 390, 391
 management of shipping for, 390
- Sierra Leone
 See *Freetown*
- Sinclair, Sir Archibald (now Lord Thurso)
 See *Secretary of State for Air*
- Smuts, Field-Marshal, 256
- Somervell, General, 336, 337, 339
 See *United States of America: Chiefs of Staff*
- South Africa
 coal exports, 205, 225, 226, 321, 341, 342, 376n
 effects of shipping shortage on, 236, 238, 239, 240, 298, 299
 exports from United Kingdom to, 298
 fertilisers for, 205, 239, 240, 259, 298, 300, 301, 342, 344, 434, 435n, 436n
 Government of, 260

- South Africa, *contd.*
 port delays in, 210, 258, 259, 260, 261, 424, 426
 equipment of ports, 259, 260
 labour in ports, 259
 Ministry of War Transport representative in, 260
 organisation in, 260
 ship repairs in, 257, 259, 261
 supplies to Middle East from, 248, 341, 342
 troops to Middle East from, 219
- South America
 effect of decision to cut Indian Ocean sailings on, 321
 enemy and hostile shipping in, 192
 imports, 288
 meat to United Kingdom from, 220
 supplies to Middle East from, 248
- Southern Rhodesia
 food shortage, 343
- Stalin, 254
- Stamp, Lord, 37
- Stanley, Mr. Oliver
See Secretary of State for Colonies
- Statistical Digest of the War*, 120, 145n, 154n, 263n, 367n, 368n, 376n
- Steel, imports of, facing p. 22, 50, 126, 128, 156, 199
- Stocks, United Kingdom, 7
 dispersal of, 31
 Government control over, 8
 level of and policy towards
 pre-war planning, 39, 45, 46
 at outbreak of war, 46
 up to fall of France, 45, 55, 56, 68
 fall of France to Pearl Harbour, 105, 190, 199, 200, 201, 250, 302, 325
 after Pearl Harbour, 302, 304, 305, 306, 316, 321, 325, 363, 364, 401, 402, 434
 investigations into, 305, 314, 318, 413-414
 military stocks—*See Services, fighting, British: shipping requirements: scales of equipment and reserves*
 —*See Food: stocks; Import programmes, United Kingdom; Raw materials: stocks*
- Storage space, 13, 14, 28, 31, 32, 34, 39, 81, 83, 128, 134, 135, 140, 149
 cold stores, 81, 83
 —*See Inland sorting depots; Ports, United Kingdom*
- Strategy, 1, 44
 fall of France to Pearl Harbour, 92, 108, 109, 218, 219, 220, 223, 224
 1942, 256, 257, 263, 269, 270, 272, 290, 291, 306, 308, 314, 316, 319, 320, 321, 322
 as settled at Casablanca Conference, January 1943, 328, 329, 346, 362
 as settled at Washington Conference, May 1943, 366, 367, 368, 369, 372
 as settled at Quebec Conference, August 1943, 393
 shipping as limitation on, 216, 219, 220, 221, 222, 223, 224, 250, 263, 302, 303, 328, 331, 332, 333, 334, 335, 336, 337, 338, 345, 346, 364, 365, 366, 367, 368, 369, 370, 372, 373, 405, 409, 411, 437, 438, 439
 troopships, 269, 270, 275, 276, 372
 —*See Europe, Allied invasion of; Indian Ocean area: demands of: military; Middle East: movement of troops and their supplies to; North-West Africa, Allied invasion of; Services, fighting, British; Shipping, United States: Services' (U.S.) demands on; Sicily, Allied invasion of*
- Submarines
 German attacks, 43, 44, 58, 59n, 108, 110, 122, 155, 173, 176, 208, 250, 254, 263, 313
 First World War, 10
 pre-war assumptions about, 24
 victory over, 367, 368, 369
- Subsidies to shipping, 2
- Sudan, 226, 227
 Port Sudan, 257
- Suez Canal, 203, 210, 211, 215, 241, 257, 258
 Suez, 109, 210, 211, 213, 215, 219, 225, 235n, 257, 279, 280, 342
- Sugar
 imports, 47, 364
 distribution between different ports, 12, facing p. 22

- processing of, 32
- storage of, 32
- stocks, 46
- See *Food, United Kingdom*
- Surface raiders, German
 - attacks by, 24, 110, 122, 239, 254
 - See *Shipping, United Kingdom controlled: enemy attacks on*
- Swansea, 147
 - See *Bristol Channel; Ports, United Kingdom*
- Sweden, 58, 59
 - See also *Shipping, Scandinavian; Shipping, Swedish*
- Syria, 220, 232, 233, 257
 - See *Middle East*
- Tail of the Bank
 - See *Ports, United Kingdom: emergency port*
- Temperley and McNair, *Merchant Shipping Acts*, 165n
- Tees and Tyne
 - peace-time trade through, 11, 12, facing p. 22
 - See *Middlesbrough: Ports, United Kingdom*
- Thornton, *British Shipping*, 160n, 161n, 164n
- Timber
 - imports, 37, 50, 56, 57, 199
 - distribution between different ports, 12, facing p. 22
 - stocks, 45, 46
 - dispersal of from ports, 32
 - See *Raw Materials, United Kingdom*
- Titmuss, R. M., *Problems of Social Policy*, 158n
- Tolstoy, *War and Peace*, 440n
- Transport and General Workers' Union, 137
- Transport, inland, from ports abroad, 206, 208, 211, 213, 214, 226, 257, 258, 387
- Transport, inland, United Kingdom generally, 7, 11, 13, 14, 15, 27, 29, 33, 34, 76, 81, 107, 108, 127, 128, 133, 134, 135, 136, 138, 139, 140, 148, 149, 150
 - preparations for invasion of Europe and, 396, 399, 400, 406, 407
 - See also *Railways, United Kingdom; Road transport; Shipping, United Kingdom controlled: coasters*
- Treasury, 100, 101, 144
- Turkey, 210, 227, 320, 331, 379, 381n
 - wheat for, 226, 343, 344
 - See *Middle East*
- United Kingdom Commercial Corporation, 349
- United Nations
 - size of shipping fleet, 344, 366, 368, 369, 373
 - losses, 367, 368, 373n
 - See *Anglo-American shipping collaboration; Shipping, foreign*
- United Nations Relief and Rehabilitation Administration, 227n
 - See also *Liberated territories*
- United States of America
 - British Ambassador in, 224
 - British naval help to, 263
 - British purchasing mission in, 298
 - Chiefs of Staff, 287, 330, 331, 364, 365, 380, 386, 393, 402, 410, 411, 412, 413, 416, 417, 418, 425, 429, 438, 447, 448, 449
 - civilian consumption in, 285, 433
 - convoys introduced by, 263
 - Danish shipping agents in, 95
 - destroyers from, 195
 - equipment for foreign ports from, 209
 - fertilisers from (phosphates from Florida), 240, 301
 - foreign shipping and, 95, 96, 97, 100, 101, 192, 193, 194, 206, 237n, 251, 262, 264, 384
 - help (general) to United Kingdom, 80
 - Iceland occupied by, 218
 - imports into, 61, 284, 450
 - Maritime Commission, 193, 194, 195
 - Middle East Supply Centre and, 228, 229, 350

United States of America, *contd.*

- movement of United States forces to United Kingdom ('Bolero' Operation), 269, 272, 273, 274, 275, 276, 277, 279-281, 282, 316n, 322, 328, 329, 333, 334, 336, 369, 372n, 383, 396, 399, 400, 401, 405
- movement of United States forces to Australia and Far East, 274, 276
- munitions from, 127
- naval escorts for British convoys, 195
- Neutrality Acts, 5, 59, 191, 193
- ports in, 445
- Service Departments in, 286, 287, 289, 317, 319, 363, 371, 372n, 393, 410, 412, 416, 417, 418, 449
- shipbuilding in, 190, 191, 192, 193, 217, 224, 252, 275, 289, 290, 301, 308, 331, 364, 366, 367, 368, 369, 374, 433, 437, 438
- ship repairs in, 144, 195
- steel from, 126
- stockpiling in, 191
- supplies to Middle East from, 203, 204, 206, 210, 228, 234, 235, 264, 299, 354, 355
- system of government in, 195, 377, 393, 440, 441
- troops, scales of equipment, 370, 427
- vehicles from, 297, 298, 309, 311
- War Shipping Administration, 287, 289, 291, 294n, 319, 330, 333, 337, 362, 363, 364, 371, 373, 392, 393, 394, 395, 396, 402, 405n, 414, 415, 416, 417, 418, 424, 425, 431, 433, 447, 448, 449, 450
 - relations with United States Service Departments, 289, 337, 371, 374, 396, 416
 - See also *Anglo-American shipping collaboration*

Vehicles

—See *Services, fighting, British: shipping requirements of: wheeled vehicles and tanks*

Vladivostok, 253

War Cabinet, 5n, 51, 54n, 55, 57, 59, 66, 67, 71, 83, 84n, 108n, 189, 198, 202, 220, 289, 345, 355, 425, 435, 441

War Cabinet Office, economists in, 104, 107

War Office, 303n, 312, 314, 319, 360

—See *Army; Secretary of State for War; Services, fighting, British: shipping requirements of*

Washington Conference, December 1941, 287

Washington Conference, May 1943 ('Trident'), 366-377, 378, 380n, 382, 383, 386, 392, 393, 394, 395, 409

War risks insurance, 38, 59, 63

—See *Marine insurance*

Water supplies for ships, 208, 209, 217, 259

West Africa, 227n

ports in—See *Dakar, Freetown*

troop reinforcements for, 218

Whale oil, stocks of, 45, 46

—See *Food, United Kingdom*

Wheat, United Kingdom

imports, 9, 47, 52, 55, 56

distribution among different ports, 12, facing p. 22

milling capacity, 38, 139, 140

stocks, 45, 46, 55

storage of, 32

—See *Food, United Kingdom; Grain: overseas territories' requirements*

Wood, Sir Kingsley

—See *Lord Privy Seal, Secretary of State for Air*

Yalta Conference, January, 1945 ('Argonaut'), 145n, 416-418, 420, 421-422, 423, 431, 436, 447, 449, 450n

