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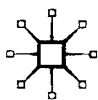
Technology Gatekeepers for War and Peace

The British Ship Revolution and
Japanese Industrialization

Miwao Matsumoto
University of Tokyo

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Preface

This is a book about the scientific and technological revolution in shipbuilding, which had a great impact on both the military and the industrial/commercial world. Its purpose is to analyse the role played by ‘technology gatekeepers’ in the light of a new ‘composite model’ of industrialization, which reveals more profound and subtler sociological implications than ‘success or failure’ type accounts of industrialization usually suggest. The book particularly focuses on the relationship between the scientific and technological revolution and the structure and function of ‘technology gatekeepers’, scrutinizing the process of the transfer of marine science and technology from Britain to Japan at the turn of the twentieth century.

The social framework of present-day science and technology is to a considerable extent a product of at least two epoch-making phases in the social history of science and technology since the mid-nineteenth century. One is the professionalization of science and technology starting about the second half of the nineteenth century. The other is its wartime mobilization starting from around the time of the First World War. Until now the social process leading from the one to the other has received little serious treatment so that the basic question of how the social framework of present-day science and technology has been brought about has yet to be systematically posed and definitely answered. Instead, centre stage has been held by diffuse episodic histories based on a schematic view of the nineteenth and the twentieth centuries as the periods of professionalization and the wartime mobilization of science and technology respectively. This seems to have made it extremely difficult to see beyond the abundant stereotypes and get reliable insights into the role of science and technology during industrialization – in Japan for example – within a proper comparative perspective.

This book challenges this situation and aims at elucidating the dynamics of the social process leading from the professionalization to the wartime mobilization of science and technology, by a detailed analysis of the mechanisms operating in the transfer of marine science and technology from Britain to Japan at the turn of the twentieth century, and of the transfer structure. The author has avoided detailed but monotonous chronologies of events put into a ready-made descriptive framework, and instead pays deliberate attention to the framework of description and analysis, and proposes his own models of explanation. The models proposed are not the products of attractive but careless generalization, but are

validated by a thorough study of primary source materials. The results of this new analysis are important for the sociological reconsideration of industrialization within the perspective of the social history of science and technology.

MIWAO MATSUMOTO

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MIWAO MATSUMOTO

List of Abbreviations

EBHME	Editorial Board for the History of Marine Engineering in Japan
INA	Institution of Naval Architects
JSPS	The Japan Society for the Promotion of Science
NPL	National Physical Laboratory
RCMESJ	The Research Committee of the Marine Engineering Society of Japan
<i>TINA</i>	<i>Transactions of the Institution of Naval Architects</i>
TRS	Temporary Research Section, The Minister of the Imperial Japanese Navy's Secretariat