
Preface

From the perspective of the world frontier of human development, some scholars hold that human beings originated in Africa, initiated agricultural civilization in Asia and industrial civilization in Europe, and fostered knowledge civilization in America approximately. In its about 5,500 years of history, the center and frontier of human civilization has been moving, with different performance in different countries and nations. There is universality as well as diversity in the changes of national and human civilization.

Modernization, a worldwide phenomenon since about eighteenth century, refers to the frontier changes and international competition of human civilization generally. It is the frontier process of the formation, development, transformation, and international interaction of modern civilization; the composite process of the innovation, selection, diffusion, and withdrawal of civilization elements in an alternating way; and also the process of international competition for catching up with, reaching, and maintaining the world's advanced level as well as international differentiation. Countries that reached and maintained the world's advanced level are advanced ones, while the rest are developing ones. A country may change from a developing one to an advanced one, or vice versa. There is a certain probability that the international status of a country changes in some term.

In the eighteenth century, the Industrial Revolution took place, and modernization began when British political economist Adam Smith finished his magnum opus *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776). According to the book, the annual supply of a nation depends on two circumstances: the productivity of labor and the proportion between the number of those who are employed in useful labor and that of those who are not so employed.

The nineteenth century saw the expansion of the Industrial Revolution and the diffusion of modernization. In this century, British political economist David Ricardo (1817) put forward that "possessing utility, commodities derive their exchangeable value from two sources: from their scarcity and from the quantity of labor required to obtain them." German philosopher Carl Marx (1867) argued that "a country should and can learn from other countries" and "what industrially developed countries show to industrially undeveloped countries is just the future of the latter."

The twentieth century witnessed the outbreak of the information and knowledge revolution as well as the transition of modernization. In this century, Austrian

economist Joseph Schumpeter (1912) proposed his “innovation theory” where innovation of businesses is used to explain economic development; American scholars came up with the classical modernization theory, which explains the shift from a traditional agricultural to a modern industrial society in 1950s to 1960s. Around the 1960s, advanced countries finished their classical modernization. Since the 1970s, information and ecological revolutions have swept across the globe, modernization studies have been enriched again gradually, and advanced countries have started the historical transition from industrial to knowledge society, from industrial to knowledge economy, from material to ecological culture, etc.

Over the past 300 years, human civilization has undergone revolutionary changes. An outstanding change in the international system is international differentiation and national stratification. According to the research by economist Angus Maddison (2001), the ratio of average GDP (PPP) per capita of Western European countries to that of African countries was about 2.6 in 1700, about 2.9 in 1820, about 5.9 in 1913, and up to 13.1 in 1998. Ever since the beginning of the nineteenth century, international differentiation has accelerated. Countries are divided into advanced and developing ones, and developing countries are divided into moderately developed, preliminarily developed, and underdeveloped ones.

In the twenty-first century, modernization, international competition, and differentiation will go on.

The second modernization theory holds that the national advancement is an objective phenomenon and the result of national modernization, international competition, and differentiation. Generally, the national level in the world is in direct proportion to its percentage of innovation value, effective and efficient labor, effective investment and advanced assets, advanced technology, as well as capital and skills per capita.

The modernization science is an interdisciplinary one which deals with modernization phenomena. It has two basic tasks: (1) describing and explaining the frontier changes and international competition of modern civilizations and (2) explaining and providing principles and methods on national advance. As the first monograph on modernization science in English language, this book includes three parts with eight chapters: the basic concepts and research methods; the general theories and brief histories of the modernization; the stage-specific, level-specific, field-specific, and sector-specific modernization; as well as modernization policies.

There were a lot of excellent scholars in the last 50 years who had made the remarkable contributions to the modernization studies, such as Talcott Parsons, Daniel Lerner, Walt W. Rostow, Cyril E. Black, Samuel Huntington, and Alex Inkeless, etc., to the *classical modernization theory*; Andre G. Frank, etc., to the *dependence theory*; Immanuel Wallerstein, etc., to the *world system theory*; Daniel Bell, Jean-Francois Lyotard, Ronald Inglehart, and Stephen Crook, etc., to the *postmodernization theory*; Joseph Huber, Martin Janicke, and Arthur P. J. Mol, etc., to the *ecological modernization theory*; Ulrich Beck, Anthony Giddens, and Scott Lash, etc., to the *reflexive modernization theory*; Edward A. Tiryakian and Wolfgang Zapf to the *new or continual modernization theory*; David Herd, etc., to the *globalization theory*; Shmuel N. Eisenstadt, etc., to the *multiple modernities*

theory; and Chuanqi He, etc., to the *second modernization theory* and *integrated modernization theory*.

In the People's Republic of China, eight monographs on the *second modernization* since 1999 and more than 12 books on the *China Modernization Report* since 2001 have been published. I am grateful to the experts who have provided valuable comments to above work, including Ioan Bolovan (Romania), Geoffrey Hodgson (UK), Joseph Huber (Germany), Andras Inotai (Hungary), Nikolay Lapin (Russia), Alberto Martinelli (Italy), Arthur Mol (Netherlands), Witold Morawski (Poland), Edward A. Tiryakian (USA), Hellmut Wollmann (Germany), etc.

So many people have contributed to the successful completion of this book in China. I extend my heartfelt thanks to the Peking University Press for its support on the *China Modernization Reports* since 2001, which provides the most positive studies in the different fields on the modernization science; special thanks to the Science Press for its support on the Chinese edition of *Modernization Science* (He 2010a), which is the member of *Second Modernization* series and provides the important thoughts and strong foundation to this book, and to my colleagues at the China Center for Modernization Research and the Research Group for China Modernization Strategies, Chinese Academy of Sciences, and to all the friends and scholars who have given great attention and support to the publishing of the *Second Modernization* and *China Modernization Report* series.

I wish to express my sincere appreciation to the Springer-Verlag GmbH and her editors including Lisa Fan, Leana Li, Esther Otten, Niels Peter Thomas, and Lu Ye for their kindness and help on the publishing of this book.

I would also like to particularly thank my parents Mr. Hanshan He and Ms. Shaozhen Yan and my wife Ms. Feng Zhang.

The modernization science is much more than a new science. It represents a new hope.

P.R. China

Chuanqi He

Modernization Science

The Principles and Methods of National Advancement

He, C.

2012, XXXII, 648 p., Hardcover

ISBN: 978-3-642-25458-1