

“*A fact is more power than many words*” (Chinese proverb). There are about 300 years of history of world modernization and over 50 years of history of modernization study. Here, we focus on its general and brief historic facts of modernization process, study, and thoughts (Fig. 3.1). Generally, modernization is the new phase of human civilization process, and the interaction between them took place naturally (Fig. 3.2).

3.1 Historical Process of Modernization

Definitely, the modernization process is part of the history of human civilization. We will address the process of modernization and civilization together. So far, scientists have estimated that *Homo sapiens* appeared about 2.5 million years ago, civilization emerged about in 3500 BC, and modernization started in about eighteenth century. There are so many interactions between them since about eighteenth century.

3.1.1 Main Stages of Modernization

Generally, the process of civilization and of modernization overlaps with each other, and modernization research overlaps with the civilization study. Here, we mainly address their frontier processes in general.

3.1.1.1 Main Stages of Human Civilization

Human civilization is an organic whole and also an aggregation of the civilizations of different countries and nations whose process is not on a synchronous basis. The frontier trajectory of human civilization can be divided into different stages by the level and characteristics of civilization, but historians and sociologists have different ways of doing so.

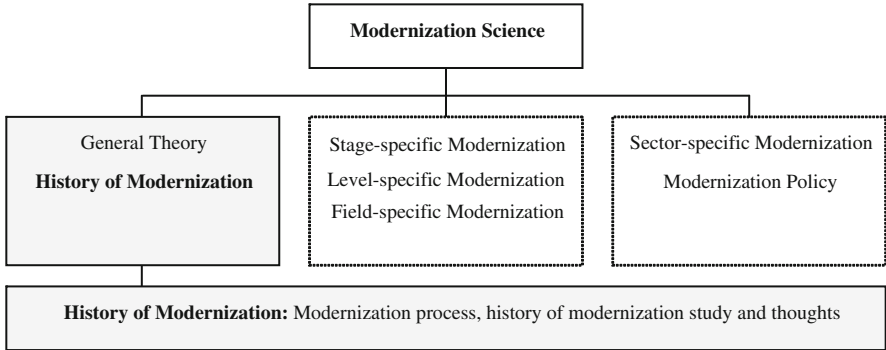


Fig. 3.1 Positioning and structure of the history of modernization

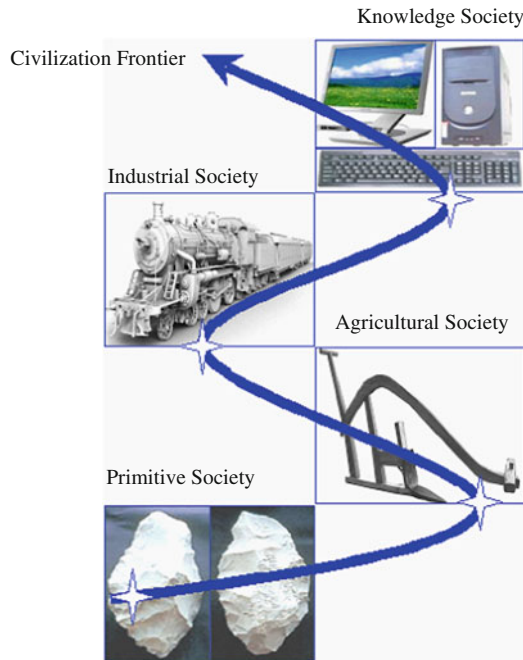


Fig. 3.2 Four forms, three shifts, and two modernizations in the frontier process of human civilization.

Note: Ever since the birth of humankind, the frontier of human civilization has undergone three shifts. The first one is from primitive society and culture to agricultural society and civilization, the second one from agricultural to industrial society and civilization, and the third one from industrial to knowledge-based society and civilization. The second shift is the first modernization; the third one, the second modernization. The four images above represent stone tool, plow, steam engine, and computer, respectively.

Source: He (2010a, b)

(1) Stage Division of Frontier Process of Human Civilization

There are various views on the historical stages of human civilization, among which five are closely related to modernization study. They see the process of human civilization consisting of three to seven historical stages, respectively (Fig. 3.3). The second modernization theory and *China Modernization Report* hold that human civilization has witnessed the process of four stages according to the level and structure of the civilization’s productivity, namely, the Tool Age, the Agricultural Age, the Industrial Age, and the Knowledge Age.

The views on the social stages of human civilization are also diversified, and four of them, which are closely related to modernization research, see the process of human civilization consisting of three to six social stages, respectively (Fig. 3.4). The second modernization theory and *China Modernization Report* hold that human civilization has witnessed the process of four stages according to the level and structure of social productivity, namely, primitive society, agricultural society, industrial society, and knowledge society.

(2) Main Features of Frontier Process of Human Civilization

First of all, different periods took place in the frontier process of human civilization. There are many periods in the frontier process of human civilization, and here are three examples:

- The periods of civilization elements. Human civilization is composed of many elements. Some of them follow the evolution theory and change from a lower to

Chronology	B.C				A.D.						
	2.5million	3500	500	0	500	1500	1750	1914	1970	2000	2100
Three stages	Antiquity				Middle Ages			Modern Times			
	Antiquity							Modern Times		Contemporary Age	
Four stages	Antiquity				Middle Ages			Modern Times		Contemporary Age	
	Prehistory		Antiquity		Middle Ages			Modern Times			
	Antiquity				Middle Ages			Modern Times			Post-modern Times
	Tool Age		Agricultural Age					Industrial Age		Knowledge Age	
	Prehistory		Agricultural Age					Industrial Age		Information Age	
	Prehistory		Agricultural Age					Industrial Age		Network Age	
Five stages	Pre-civilization	Antiquity		Middle Ages		Modern Times			Post-modern Times		
Six stages	Pre-civilization	Antiquity	Classical Antiquity	Middle Ages		Modern Times			Contemporary Age		
Seven stage	Pre-civilization	Antiquity	Classical Antiquity	Middle Ages	Rise of the West		Western Superiority	The world since the 20th century			
	Pre-civilization	Antiquity	Classical Antiquity	Postclassical Antiquity	Rise of the West	Industrialization	The world since the 20th century				

Fig. 3.3 Historical stages of human civilization.

Note: The process of human civilization can be divided into stages according to the level and characteristics of civilization frontier; time span is just a relative criterion. The frontier and average level of civilization vary greatly from stage to stage; countries and regions do not develop on a synchronous basis. It is based on the ideas of Thorndike (1926), Lyotard (1984), Stavrianos (1982), Ralph et al. (1991), Stearns et al. (1992), Wu et al. (1994), He (1999), and Palmer et al. (2002).

Source: RGCMS (2010)

	B.C.				A.D.							
Chronology	2.5million	8000	3500	500	0	500	1500	1750	1914	1970	2000	2100
Three stages	Traditional Society							Modern Society		Postmodern Society		
	Pre-industrial Society							Industrial Society		Postindustrial Society		
Four stages	Primitive Society			Agricultural Society			Industrial Society		Knowledge Society			
	Primitive Society			Agricultural Society			Industrial Society		Information Society			
	Primitive Society			Agricultural Society			Industrial Society		Network Society			
	Primitive Society			Agricultural Society			Industrial Society		Ecological Society			
	Primitive Society			Agricultural Society			Industrial Society		Risk Society			
Five stages	G & H Society	Horticultural Society	Agrarian Society	Agricultural Society			Industrial Society					
	G & H Society	Horticultural Society	Pastoral Society	Agricultural Society			Industrial Society					
	G & H Society	Pastoral Society	Agrarian Society	Traditional Civilization Society			Industrial Society					
	Primitive Society			Slavery Society	Feudalism Society	Capitalism Society	Socialist Society (Communist Society)					
Six stages	G & H Society	Horticultural Society	Pastoral Society	Agricultural Society	Capitalism Society			Postcapitalism Society				
	G & H Society	Horticultural Society	Pastoral Society	Agricultural Society		Industrial Society		Postindustrial Society				

Fig. 3.4 Social stages in the history of human civilization.

Note: G&H Society refers to Gathering and Hunting Society. The division of social stages is based on the frontier characteristics of human civilization; time span is just a relative criterion. Countries and regions do not develop on a synchronous basis. It is based on the ideas of Marx (1954), Black (1966), Bell (1973), Beck (1992 [1986]), Ralph et al. (1991), Crook et al. (1992), Leakey (1994), Inglehart (1997), He (1999), Castells (1996), UNESCO (2005), and Servaes and Carpentier (2006). *Source:* RGCMS (2010)

a higher level and from being simple to being complex, like the development of knowledge and education. Some elements change in cycles. They start from a point and finally return to the starting point; the two points may be slightly different. For example, the division of powers develops from primitive democracy to feudal autocracy and then to democratic election. Individual rights develop from primitive equality to hierarchy and then to modern equality.

- The periods of national civilization. In the Agricultural Age, the civilizations of many countries and nations develop in the cycles of rise, development, maturity, and fall, such as the feudal dynasties in ancient China.
- The periods of human civilization. From the birth of mankind to the end of the twenty-first century, the process of human civilization goes through four ages, namely, the Tool (the age of primitive culture), Agricultural, Industrial, and Knowledge Age. In every age, four stages constitute a cycle including the start, development, mature, and transition stage (Table 3.1). Thus, there are four cycles in the entire development process of human civilization.

If there are “small periods” in each country and nation and a “midperiod” in each age, there should be a “big period” of the four ages in the process of human civilization as a whole. In such a “big period,” the Tool Age is the incubation stage; the Agricultural Age, the start stage; the Industrial Age, the development stage; and the Knowledge Age, the mature stage (Table 3.1). When a period ends,

Table 3.1 “Big periods” in the frontier process of human civilization

Item	Incubation stage	Start stage	Development stage	Mature stage
Four ages	Tool Age	Agricultural Age	Industrial Age	Knowledge Age
Four forms	Primitive culture	Agricultural civilization	Industrial civilization	Knowledge civilization
Direction	Hunting and gathering	Farming and animal husbandry	Industries and services	Knowledge and information
Goals	Establishing a human society	Meeting survival needs	Meeting material needs	Meeting spiritual needs
Major innovation	Stone tool	Plow	Steam engine	Computer
Frontiers	Socialization, food gathering, personalization	Agriculturalization, food production, rise of civilization	Industrialization, deagriculturalization, first modernization	Knowledgeablization, deindustrialization, second modernization

Note: Meeting survival needs means meeting such basic needs as clothing, food, housing, and transportation, mainly the needs for food

Source: He (2003)

human civilization enters a new transition stage (incubation stage of a new civilization) and then a new “big period” starts.

Second, there are periodic shifts in the frontier process of human civilization. Periodic shifts can be seen in many aspects of civilization process, and here are three examples:

- The periodic shifts of civilization direction. In the history of human civilization, three shifts have taken place in the direction of civilization process (Fig. 3.2). The main orientation and goals of civilization development are gathering, hunting, and socialization in the Tool Age; crop farming, animal husbandry, and meeting survival needs in the Agricultural Age; industries, services, and meeting material needs in the Industrial Age; and knowledge, information, and meeting spiritual needs in the Knowledge Age. As the direction of human civilization changes cyclically, the frontier and state of civilization also go through periodic shifts (Table 3.1) and so do the connotation and characteristics of civilization (Table 1.23).
- The periodic shifts of civilization axis. In the history of human civilization, there are three shifts of civilization axis (Table 3.1). The first one is from primitive culture to agricultural civilization, leaving the former marginalized (decreased importance and percentage); the second one is from agricultural to industrial civilization, leaving the former marginalized; the third one is from industrial to knowledge civilization, leaving the former marginalized. During such a process, economic and social axes have also changed (Table 3.2).
- The periodic shifts of civilization center. Based on available information, in the Tool Age, Africa is the cradle of human beings; in the Agricultural Age, Asia (Middle East) is a major cradle of agricultural civilization; in the Industrial Age, Europe is the birthplace of industrial civilization; in the Knowledge Age, North America is a major cradle of knowledge civilization. Thus, the geographic center of human civilization has been changing on a cyclical basis (Table 3.2).

Table 3.2 Periodic shifts of axis and center in the frontier process of human civilization

Item	Primitive culture	Agricultural civilization	Industrial civilization	Knowledge civilization (2005)
Civilization axis	Hunting and gathering	Farming and animal husbandry	Industries and services	Knowledge and information
Economic axis	Food	Land	Capital	Innovation
Social axis	Kinship	Power	City	Internet
Civilization center	Africa	Multiple centers	Europe	America (North America)
Cradle of civilization	Africa	Asia (middle east)	Europe (Western Europe)	America (North America)
Center of science	–	Multiple centers	Europe (Italy, France, UK, Germany)	America (North America) (USA)

Note: American scholar Daniel Bell believes that in the process of social development, there is an organizational structure that stands at the center and is surrounded by other structures, some social logic is primary while others are secondary, and there is always an axis principle that rules in every society (Bell 1973). The age of primitive culture is before the birth of civilization, so the civilization axis here actually refers to its cultural axis. The center of agricultural civilization changes with time, so there are multiple centers. For example, there were four great ancient civilizations including ancient Babylon, ancient Egypt, ancient India, and ancient China, as well as four classical civilizations including ancient Greece, ancient Rome, India, and China. The characteristics of knowledge civilization are limited to the civilization by 2005

Source: Bell (1973) and He (1999, 2003)

Table 3.3 Accelerations in the periods and stages of frontier process of human civilization

Item	Tool Age	Agricultural Age	Industrial Age	Knowledge Age
Time spans	2.5 million years	5,260 years	Approx. 210 years	Approx. 130 years
Start stage	2.3 million years	3,000 years	110 years	20 years
Development stage	160,000 years	1,100 years	40 years	30 years
Mature stage	30,000 years	900 years	30 years	30 years
Transition stage	3,500 years	260 years	20 years	50 years

Note: The time spans of different periods and stages are rough figures. Those of the Knowledge Age are estimated figures

Source: He (2003)

Third, there are accelerations in the frontier process of human civilization. Acceleration is embodied in many aspects of civilization process, and here are three examples (He 2003):

- The acceleration in the periods of civilization process. The time span of a period becomes shorter and shorter in the four stages of human civilization. The Tool Age spans nearly 2.5 million years; the Agricultural Age, over 5,000 years; the Industrial Age, more than 200 years; and the Knowledge Age is expected to span some 100 years (Table 3.3).
- The acceleration in the stages of civilization process. In the three periods of the Tool Age, the Agricultural Age, and the Industrial Age, the time span of a stage gets shorter and shorter from the start stage to the development, mature, and then transition stages; it is the same in the first 12 stages of civilization development (Table 3.3).

Table 3.4 Acceleration in the growth of productivity

Item	Agricultural Age		Industrial Age		Knowledge Age	
	1000	1700	1700	1950	1973	1998
World's average per capita GDP	435	615	615	2,114	4,104	5,709
Average annual growth rate	0.05%		0.50%		1.33%	
Growth rate 1	0.26 International dollar per year		6.00 International dollars per year		64.20 International dollars per year	
Growth rate 2	26 International dollars per 100 years		60 International dollars per 10 years		64 International dollars per year	

Note: The unit of per capita GDP is the international dollar at PPP-based prices in 1990. It is based on the data coming from Maddison (2001)

Source: RGCMS (2010) and He (2010a)

- The acceleration in the elements of civilization such as productivity and knowledge. If productivity grows every 10,000 years in the Tool Age, every 100 years in the Agricultural Age, and every 10 years in the Industrial Age, the pace should be in yearly terms in the Knowledge Age. Per capita GDP grows faster in the Knowledge Age than in the Industrial Age where the growth rate is higher than in the Agricultural Age based on the increased value per year (Table 3.4).

3.1.1.2 Main Stages of General Modernization

Modernization is both a world trend and a collection of modernization in different countries and fields. The modernization processes in different countries and fields are not on a synchronous basis. Here, we focus on the frontier process of general modernization. The stages of modernization's frontier trajectory are closely related to the start of modernization and criteria to define the stages. There has been no consensus on the start of modernization, but a common view is that modernization started in the 1760s (Example 3.1).

Example 3.1 Start of Modernization

Currently, there are mainly three views on the start of modernization. The first one holds that modernization started from the revolution of science in the sixteenth and seventeenth centuries; the second one suggests that it is the Enlightenment in the seventeenth and eighteenth centuries; the third one indicates that it is the British Industrial Revolution and the French Revolution in the eighteenth century. Of the three views, the third one is the most popular. In China Modernization Report, *the British Industrial Revolution in the eighteenth century is taken as the start of modernization. Modernization research may start with the beginning of the eighteenth century, but the idea of modernization can be traced back earlier.*

If modernization started from the British Industrial Revolution in the eighteenth century, then in which year did it start? There is no consensus on this issue either. There are several options like 1750, 1760, 1763, and 1770. In 1763, Scottish inventor James Watt improved the steam engine, which was later patented in 1769. The invention and application of the steam engine is a typical representative of the Industrial Revolution.

(continued)

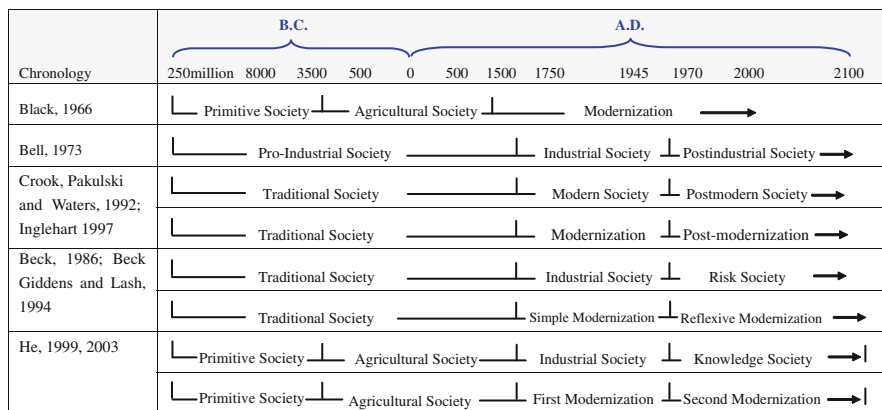


Fig. 3.5 Stages in the frontier process of modernization and civilization.

Note: The stage divisions are defined based on the level and characteristics of frontier trajectory of modernization and civilization; time span is just a relative criterion. Modernization processes in different countries are not on a synchronous basis.

Source: He (2010a, b)

Generally, the 1760s (1760 or 1763) can be taken as the start of modernization. If so, modernization starts along with the advent of the Industrial Age, industrial societies, and modern societies.

No consensus has been reached on how to define the stages in modernization’s frontier trajectory (Fig. 3.5). Now there are five views on defining the stages according to the characteristics (qualitative criterion) of the modernization frontier (Table 3.5). The fifth view agree that the modernization process consists of two major stages (though their names and contents may be different), and the dividing time is around 1970 (knowledge and information revolution).

Based on the characteristics (qualitative criterion) and level (quantitative criterion) of modernization’s frontier, modernization between the eighteenth and the twenty-first centuries consists of two major stages, namely, the first modernization and the second modernization; each stage is composed of four phases including the start, development, mature, and transition phases. The quantitative criteria for defining the phases of each modernization stage are addressed in Chap. 1 (Table 1.17, Table 1.18).

3.1.1.3 Relationship Between Modern Civilization and General Modernization

There is no single definition of modern civilization. In general sense, modern civilization refers to modern industrial civilization; in broad sense, it also includes knowledge civilization and ecological civilization. Modern civilization can be traced back to the Renaissance, the religion Reformation, and the scientific revolution in Europe. They represent origin of modern civilization and the preparatory stage of

Table 3.5 Defining the stages of the modernization process

Stages	Contents	Annotation
Three waves	First wave (1780–1860), second wave (late nineteenth century–early twentieth century), and third wave (second half of the twentieth century) (Luo 1993)	Stages of classical modernization
Four stages	Challenges posed by modernity, stabilization of modern leadership, economic and social transformation, and social integration (Black 1966)	
Five stages	Five stages of economic growth: traditional society, the stage to create preconditions for the take-off, the take-off stage, the maturation stage, and the stage of massive consumer spending (Rostow 1960); a sixth stage was later added: the quality of life stage	
Four periods	Preparatory period, transformation period, advanced modernization period, and international integration period (Black 1976)	
Two major stages	Classical and post modernization (modern and postmodern society) (Crook et al. 1992; Inglehart 1997) Simple and reflexive modernization (industrial society and risk society) (Beck 1986; Beck et al. 1994) First and second modernization (industrial and knowledge society) (He 1998a, b, 1999, 2003)	Two kinds of modernizations

Source: RGCMS (2010)

modernization. The development of modern civilization has witnessed a series of major historical events which are closely related to the stages of modernization (Fig. 3.6). Generally, the frontier trajectory of modernization consists of the preparatory stage, the first modernization, and the second modernization; the first modernization comprises of three waves, and the second modernization includes three waves.

3.1.2 Main Waves of Modernization

There are different ideas on the waves of modernization process at present.

According to the connotation and characteristics of the frontier, the two stages of the modernization process can be divided into several waves. *China Modernization Report 2005* introduced the six waves of economic modernization, while *China Modernization Report 2006* brought up the six waves of social modernization (Table 3.6). But the fifth and the sixth waves are just forecasts.

3.1.3 Options on Modernization Paths

Modernization is the world frontier of modern civilization as well as the act and process of reaching that frontier since the eighteenth century. The act and process of reaching the frontier is closely related to the path of modernization and the characteristics of civilization frontier. From the perspective of the universality of

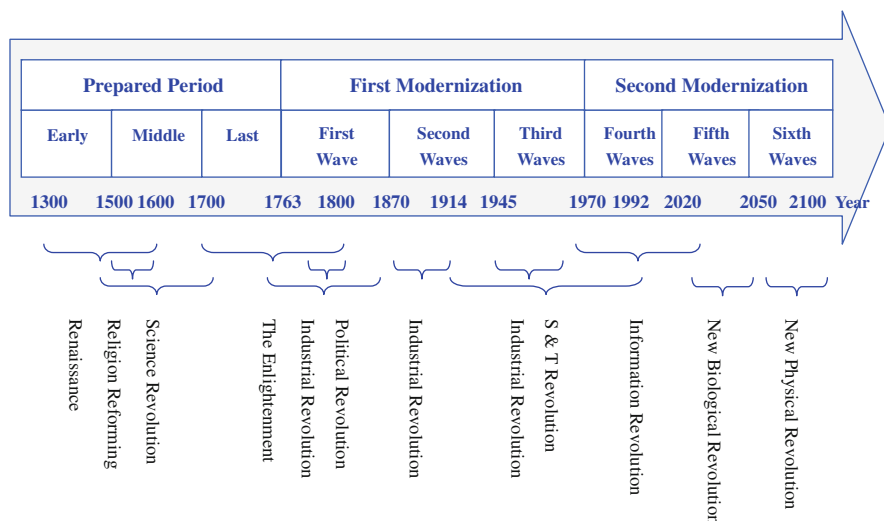


Fig. 3.6 Major events in modern civilization and the stages of modernization's frontier trajectory. *Note:* The typical feature of the first industrial revolution is mechanization; that of the second one is electrification; and that of the third one is automation. The fifth and sixth waves are just forecasts. Modernization processes in different countries are not on a synchronous basis. *Source:* RGCMS (2010) and He (2010a, b)

Table 3.6 Six waves of economic and social modernization

Wave	Chronology	Economic modernization	Social modernization	Annotation
First	ca. 1763–1870	First industrial revolution	Urbanization, mechanization	<i>First modernization</i> Industrialization, urbanization, democratization, rationalization
Second	ca. 1870–1945	Second industrial revolution	Electrification, compulsory education	
Third	ca. 1946–1970	Third industrial revolution	Social welfare, automation	
Fourth	ca. 1970–2020	Information revolution	Network, knowledge-based	<i>First modernization</i> Knowledge-intensive, networking
Fifth	ca. 2020–2050	New biological revolution	Biological economic society	Globalization, greenization
Sixth	ca. 2050–2100	New physical revolution	Cultural economic society	

Note: The waves are defined based on the connotation and characteristics of modernization's frontier trajectory. The fifth and sixth waves are just forecasts. Modernization processes in different countries are not on a synchronous basis, and the stages may also be different. For advanced countries, the six waves may occur one after another. But for those left behind, two or more waves may happen at the same time, which means that the changes of several waves may take place during the same period of time

Source: RGCMS (2005, 2006)

modernization, there is usually a single frontier, but there can be multiple frontiers from the perspective of the diversity of modernization. There are many optional modernization paths. In choosing the path, the general law of modernization should be followed and the objective conditions should be met.

3.1.3.1 The Path Options for Advanced Countries (Frontier Paths)

First, suppose there is a single frontier of civilization. If there is one old frontier of civilization and one new frontier, there can be a single path or multiple paths for advanced countries to move from the old frontier to the new one (Fig. 3.7).

Second, suppose there are multiple frontiers of civilization. If there are both multiple old frontiers of civilization and multiple new frontiers, there will be multiple paths for advanced countries to move from an old frontier to a new one (Fig. 3.8). If there are either multiple old frontiers or multiple new frontiers, there will also be multiple paths.

3.1.3.2 The Path Options for Developing Countries (Catch-up Paths)

First, suppose there is a single frontier of civilization. If there is one old frontier of civilization and one new frontier, there can be a single path or multiple paths for developing countries to move from the nonfrontier to the old frontier and then to the new one; there may be a path or no path for developing countries to move directly from a nonfrontier to a new frontier (Fig. 3.9). If such a path does exist, it might be different from that for advanced countries.

Second, suppose there are multiple frontiers of civilization. If there are multiple frontiers of civilization, there will be multiple paths for developing countries to move from nonfrontier to old frontier and multiple paths from the old frontier to a new one; there may be a path from nonfrontier to a new frontier.



Fig. 3.7 Modernization paths of advanced countries (one frontier).
 Note: The *solid line* indicates a single path; the *dotted lines* represent optional paths.
 Source: He (2010a)

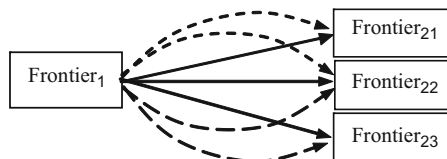


Fig. 3.8 Modernization paths of advanced countries (multiple frontiers).
 Note: The *solid lines* indicate a single path; the *dotted lines* represent optional paths.
 Source: He (2010a)

Fig. 3.9 Modernization paths of developing countries (one frontier).

Note: The solid line indicates a single path; the dotted lines represent optional or possible paths.

Source: He (2010a)

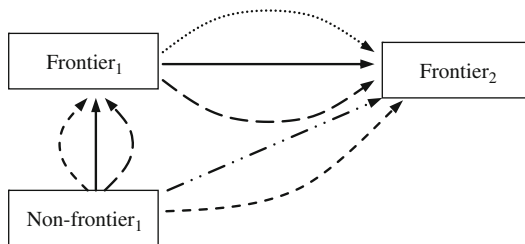


Table 3.7 Options of modernization path in developing countries

Unskippable	Annotation	Skippable	Annotation
1. Urbanization	A major stage that cannot be skipped, but “semiurbanization” is possible	Steam engine	Not necessary. Internal combustion engine is an alternative
2. Industrialization	A major stage that cannot be skipped, but “semi-industrialization” is possible	Telegraph	Not necessary. Internet is an alternative
3. Knowledgeablization	The stage of education popularization cannot be skipped	Phonograph	Not necessary. CD play is an alternative
4. Informatization	A major stage that cannot be skipped, but some technology stages can be skipped	Pager	Not necessary. Cell phone is an alternative

Note: The major stages in historical development cannot be skipped, but the paths are optional; some technology stages can be skipped

Source: RGCMS (2010) and He (2010a)

Third, if modernization process is the ordered arrangement of a series of states, does it mean that developing countries have to experience all the states? The answer is no from the perspective of technological progress. Some technological states are necessary, but some are not; developing countries may skip some technological states (Table 3.7).

3.2 History of Modernization Study

Modernization has become a world phenomenon since about eighteenth century. It was common in the eighteenth and nineteenth centuries but did not attract special attention from scholars and was not a research subject of academic studies. In the early twentieth century, the term “modernization” first appeared in the academic literature. Since the 1950s, the research on modernization has witnessed several climaxes with continuous theoretical innovations (Fig. 3.10). There were two main tracks in the early development of modernization science: modernization research and modernization theories that promoted each other.

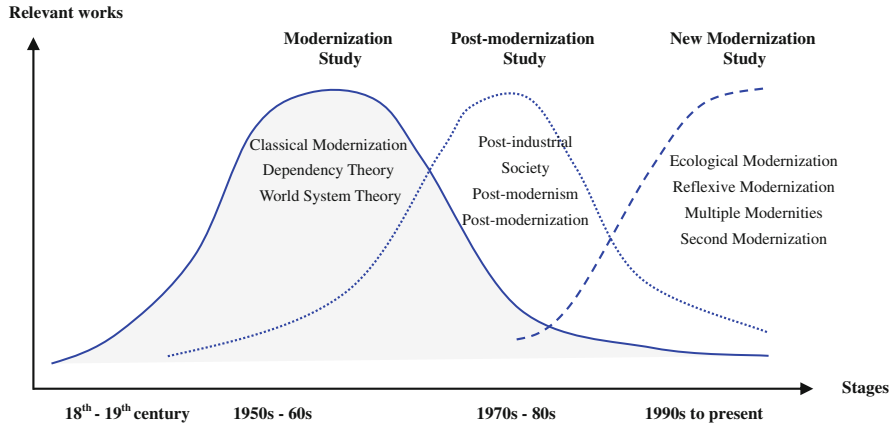


Fig. 3.10 Three waves of modernization research in the twentieth century.
 Source: He (2003)

Table 3.8 Origin of modernization research

Stage	Approx. period	Subjects
Breeding	Third century BC to 1950	Research of early development: research of the world history and human development and research in the four fields such as economy
Exploring	1950–1960	Multidisciplinary research: research of developing countries and in various fields
Maturing	1960–1970	Multidimensional research: theoretical research, empirical research, and research in various fields

Source: RGCMS (2010)

3.2.1 Origin of Modernization Study

It is almost impossible to identify the exact origin of modernization research at present. If we do not take into consideration the early research done by Chinese scholars, modernization research in the West has a history of at least over 50 years. However, there is no consensus on the division of modernization research stages yet.

Generally, modernization research began in the twentieth century. Chinese scholars began the research in the 1930s, while their American counterparts, in the 1950s. If we categorize modernization research as a research on human development, the history of which can be traced back to years before Christ, then the history of modernization research can be roughly divided into the following three stages (Table 3.8).

3.2.1.1 Breeding Stage: Early Development Research

Modernization is a profound change of human civilization since the eighteenth century, which is inevitably integrated with the human civilization history and the world history. The early research on the world history, human civilization history, and human development can be regarded as the “prehistoric” predecessor of

modernization research. Though it is not modernization research itself, it provides historical background and academic basis for the birth of the latter. In addition, some early academic literature and thoughts are still of practical value and of lasting influence upon modernization research (Example 3.2).

Example 3.2 Early Research of Human Development

The research on human development can be traced back to years before Christ. After thousands of years of effort spent in exploring the pattern for human development and civilization progress, a large quantity of academic literature has been accumulated. Some early literature is more or less related to the modernization research whose academic impact is still alive today.

First, research literature on the human civilization history and the world history is represented by *The Republic* (Plato, third century BC), *New Science* (Vico 1725), *Essay on the Mores and the Spirit of Nations* (Voltaire 1756), *Sketch for a Historical Picture of the Progress of the Human Mind* (Condorcet 1795), *The Decline of the West* (Spengler 1918), *A Study of History* (Toynbee 1934–1961), and *World Civilizations: Their History and Their Culture* (Burns et al. 1955).

Second, research literature in the four fields of human civilization is represented by *Politics* (Aristotle, third century BC), *Two Treatises of Government* (Locke 1690), *Social Contract, or Principles of Political Right* (Rousseau 1762), *An Inquiry into the Nature and Causes of the Wealth of Nations* (Smith 1776), *Course of Positive Philosophy* (Comte 1830–1841), *Social Statics* (Spencer 1850), *Capital* (Marx 1867), *Primitive Culture* (Taylor 1871), *Ancient Society* (Morgan 1877), *Gemeinschaft and Gesellschaft* (Tönnies 1887), *Division of Labor* (Durkheim 1893), *The Protestant Ethic and the Spirit of Capitalism* (Weber 1904), *The Theory of Economic Development* (Schumpeter 1912), and *The Structure of Social Action* (Parsons 1937).

In the research on world history, civilization history, and human development, there is abundant literature of the early research in this aspect, including some literature and thoughts closely tied to modernization research (Example 1.5). Ideas about the ideal society (Plato, third century BC), the recurring cycle and spiral evolution of historical development (Vico 1725), the common pattern of the development of nations (Voltaire 1756), the advancement of science and technology (Condorcet 1795), and the recurring cycle of civilization development (Spengler 1918) have great impact upon the modernization research.

Second, in the research in the four fields of economy, society, politics, and culture. Some early literature and thoughts in these fields are to some extent related to the modernization research (Example 3.2). Ideas about equality and freedom (Rousseau 1762), labor productivity (Smith 1776), positivism (Comte 1830–1842), social evolution (Spencer 1850), class conflicts (Marx 1867), division of labor (Durkheim 1893), rationality (Weber 1904), and structural functionalism (Parsons 1937) have profound and long-lasting influence upon modernization research.

3.2.1.2 Exploring Stage: Multidisciplinary Research

The 1950s marked the exploring stage of modernization research. Supported by the American government and some private foundations, a group of young political scientists, economists, sociologists, psychologists, anthropologists, and demographers conducted study of modernization (So 1990), the results of which were published on journals such as *Economic Development and Cultural Change*.

First, the study on developing countries. In the representative works, *The Passing of Traditional Society: Modernizing the Middle East* (Lerner 1958), Lerner analyzes the modernization process of seven countries in the Middle East and believes that modernization refers to the transformation from traditional society to modern society.

Second, the research in fields such as economy. The representative works include *Social System* (Parsons 1951), *The Stages of Economic Growth: A Non-Communist Manifesto* (Rostow 1960), and *The Politics of the Developing Areas* (Almond and Coleman 1960). Parsons proposes five sets of model variants of social system, while Rostow divides the economic growth into five stages.

3.2.1.3 Maturing Stage: Multidimensional Research

The 1960s marked the maturity stage of modernization research in which a number of works on modernization research with long-lasting influence were published.

First, theoretical research. The representative works include *The Dynamics of Modernization: A Study in Comparative History* (Black 1966), *Modernization, Protest, and Change* (Eisenstadt 1966), *Modernization: the Dynamics of Growth* (Weiner 1966), “*Tradition and Modernity Reconsidered*” (Bendix 1967), and so on.

Second, the research in fields such as economy. The representative works include *The Achieving Society* (McClelland 1961), *Political Modernization in Japan and Turkey* (Ward and Rustow 1964), *The Politics of Modernization* (Apter 1965), *Modernization and the Structure of Societies* (Levy 1966), and *Political Order in Changing Societies* (Huntington 1968), as well as some works published in the 1970s, such as *Becoming Modern: Individual Change in Six Developing Countries* (Inkeles and Smith 1974).

3.2.2 Three Waves of Modernization Study

In the second half of the twentieth century, there were three worldwide climaxes of modernization research (Fig. 1.15), namely, the modernization research in the 1950–1960s period, the postmodernization research in the 1970–1980s period, and the new modernization research since the 1980s. Of course, these three waves are not completely separated from each other but highly integrated and need to refer to each other while being discussed.

3.2.2.1 The First Wave: Classical Modernization Research

The period from the 1950s to the 1960s was the golden age for modernization research when it became a hot topic of humanities and social science and was

conducted in a multidisciplinary and multidimensional way. However, the period from the 1970s to 1980s marked the lowest point of the first wave of modernization research, where the classical modernization study was widely criticized, while new theories such as the dependency theory and the world systems theory were gaining ground (Martinelli 2005). The period from the 1980s to 1990s was the adjustment period of the first wave, when the modernization theory was valued once more thanks to the success of modernization in East Asia and the modernization-oriented transformation in East Europe and Latin America, but its methods were adjusted and viewpoints corrected. Some scholars regard the modernization research in the 1950s to 1960s as classical modernization research and, since the end of the 1970s, as new modernization research (So 1990), the latter being distinguishable with the adjustment of research methods and the change of some viewpoints.

3.2.2.2 The Second Wave: Postmodernization Research

The period from the 1970s to 1980s marked the climax of postmodernization research which included three parts: the postindustrial society, postmodernism, and postmodernization research. Though postmodernism can be traced back to the nineteenth century, the research did not reach the climax until the 1970–1980s and lasted through the 1990s.

In the 1970s, there were mainly three branches of modernization research: one continued with the study of modernization theories (including the modernization history, public policies, and the relationship between economy and democracy of developed countries), which enriched the modernization theories; one studied the modernization in developing countries, making corrections of the classical modernization theory; and another studied the future development of advanced countries (futurology), bringing about various new theories, including the postindustrial society, postmodernism, postmodernization, new modernization, continuous modernization, information society, knowledge society, and so on. The postmodernization research was part of the study of the third branch.

3.2.2.3 The Third Wave: New Modernization Research

The period from the 1980s to 1990s marked the climax for new modernization research, which mainly included the research on ecological modernization, the reflexive modernization research, the multiple modernities research, and the second modernization research.

Besides inheriting the social science paradigm of the classical modernization research, new modernization research introduced the methodology of natural science and borrowed useful concepts from it. Researches on ecological modernization, reflexive modernization, and second modernization pay more attention to the social impact of natural science and high technology and the duality of science and technology, namely, their positive effects and side effects.

3.2.3 Criticism on Modernization Study

Especially in the 1970s and 1980s, modernization research was widely criticized by people from many aspects of the society, including both mainstream and radical sociologists (So 1990).

First of all, it was criticized for its own flaws. For example, the concept of modernization did not have a clear span; the connotation of the concept was too general and preferential (favorable to some countries and the rich); the concepts of modernity and tradition were obscure, subjective, and did not echo with each other; and the modernization theories were too general and lagging behind. Second, there was not merely one direction of development but many of them, and there was not merely one path of development either. Third, modernization was not linear, partially reversible, and with occasional discontinuity. Fourth, the significance of traditional value could not be totally denied. Fifth, we could not be too optimistic or ignore the external factors. In some developing countries, the policies and measures adopted based on the classical modernization theory did not achieve the expected results.

Of course, the research on modernization and the practice of it are two different issues which need to be dealt with in different ways.

The criticism of modernization research reveals its problems, creating more room for theoretical development and in-depth research.

Problems arising in the practice of modernization might be an attendant phenomenon or side effect (by-product) of modernization or mistakes in the practice. If we can foresee the problems beforehand, then we might probably prevent them from happening. Problems of countries which have practiced modernization earlier provide historical experience and lessons for those which come after. These problems, called modern diseases by some, include environmental pollution, ecological degradation, indifference of social relationships, international conflicts, gap between the rich and the poor, economic crisis, and so on. The problems of practice have something to do with people's ideas and thoughts. The side effect is not inevitable, but it is indeed difficult to prevent it completely.

There is an antimodernization trend while modernization is sweeping the whole world (Alitto 1991), which will not be discussed here.

3.3 History of Modernization Thoughts

Despite over 50 years of modernization research, there is no universally agreed theory on modernization yet. Some hold that the theory of modernization misses not only systematic theoretical structure but also agreed basic definition. To a large extent, the theory of modernization is a collection of academic thoughts on modernization research, of research results, and ideas of scholars in different fields.

3.3.1 Origin of Modernization Theory

Throughout the history of human civilization, the development of thought does not always synchronize social practices; some thoughts go ahead of the society, while some summarize social practices. In the field of modernization research, there are some thoughts preceding social practices. Modernization began around the eighteenth century, and the research on it in the twentieth century, but some core concepts of modernization can be traced back much earlier.

3.3.1.1 Origin of Modernization Thoughts

Generally, different thoughts of modernization have different origins. The Enlightenment in the eighteenth century witnessed the burst of Western modernization thoughts, many of which can be traced back to the literature in this period. Of course, there are also several other sources which can be dated back to much earlier days, such as the Renaissance from the fourteenth to the sixteenth centuries, the Protestant Reform in the sixteenth century, the scientific revolution and bourgeois revolution from the sixteenth century to the seventeenth century, the Industrial Revolution in England in the eighteenth century, and the French Revolution.

The Renaissance was a period when the mind was emancipated; the feudal autocracy and religious tyranny gradually collapsed; secularism, individualism, and humanitarianism spread across the Europe; and a society which did not belong to the church with metropolises as its center appeared in Europe. At the same time, capitalism also rose in Europe thanks to commercial revolution. The subsequent scientific revolution introduced to Europe scientific knowledge, scientific thoughts, scientific spirit, and scientific methods, providing intellectual support for the modernization movement.

In the Enlightenment period, thinkers collected, sorted out, and spread philosophical and scientific knowledge and analyzed the history from a rational perspective. Many of their ideas became part of the classical modernization theory, such as forgiveness, justice, rationality, freedom, equality, democracy, and rule by law. The term “modernization” was coined in this period (1748–1770). The modernization in Europe would be impossible without the Enlightenment.

In the Industrial Revolution period, Smith proposed economic liberalism, Saint Simon described the picture of industrial society, Comte brought forward sociology, Spencer developed the theory of social evolution, Marx introduced the theory of scientific socialism, Durkheim published *Division of Labor in Society*, and Weber illustrated the concepts of legitimacy and bureaucracy. The political revolution promoted the spread and practice of nationalism, liberalism, democracy, rule by law, and socialism.

In the early twentieth century, some scholars began to study modernization. For example, in 1933, there was a special issue of *Shenbao Monthly* on modernization problems in China, including 26 articles discussing the difficulties and paths of modernization in China. In 1937, American scholar Parsons published *The Structure of Social Action*, and structural functionalism later became an important theoretical framework of classical modernization research.

The modernization research in the first half of the twentieth century was scarce, and there was no theory formed yet.

3.3.1.2 Establishment of Modernization Theory

Generally, the establishment of modernization theory refers to that of classical modernization theory, which was the first, but not only, member of the big family of modernization theories. Here, we will briefly introduce the establishment and evolution of classical modernization theory.

(1) Origin of Classical Modernization Theory

According to British scholar Harrison (1988), the classical modernization theory was established in the 1950–1960s, and its theoretical sources included evolutionism, the diffusion theory, structural functionalism, the systems theory, and the theory of interaction (Fig. 3.11). Political science, anthropology, psychology, economics, and geography also made their contributions. The classical modernization theory did not stand alone but was a cluster of different thoughts; its origin can be traced back to the classical evolution theory in the nineteenth century (Harrison 1988).

Based on Harrison's point (Harrison 1988), there are over 30 Western scholars who have contributed to the formation of classical modernization theory, including classical evolutionists, new evolutionists, and scholars on the diffusion theory, the social system theory, structural functionalism, and so on.

(2) Academic Challenges Against the Classical Modernization Theory

In the late 1960s, the classical modernization theory began to be criticized widely not only by the outsiders but also by the scholars engaged in the modernization research. New theories began to catch eyes, including the dependency theory, the world system theory, and postmodernism, which were all critical about or against the classical modernization theory.

(3) Academic Evolution of the Classical Modernization Theory

Since the 1970s, the classical modernization research has undergone dramatic changes, with part of the theory corrected. Based on abundant case studies and empirical studies, scholars found and corrected some one-sided views of classical modernization theory (Black 1976; Harrison 1988; So 1990; Inglehart 1997; Inglehart and Welzel 2005; Martinelli 2005). For instance, secularism is a complex social process, but religion will always exist and play a role in it; modernization is not linear, and there are multiple paths; tradition and modernity do not totally contradict with each other, and the traditional value will exist for a long time and play a role; the relationship between democracy and economy is not linear and is complicated; and the new modernization, Confucian culture, and export-oriented industrialization in East Asia have a positive role, as well as the new modernization in East Europe and the transformation from planning-commanded modernization to market-oriented modernization.

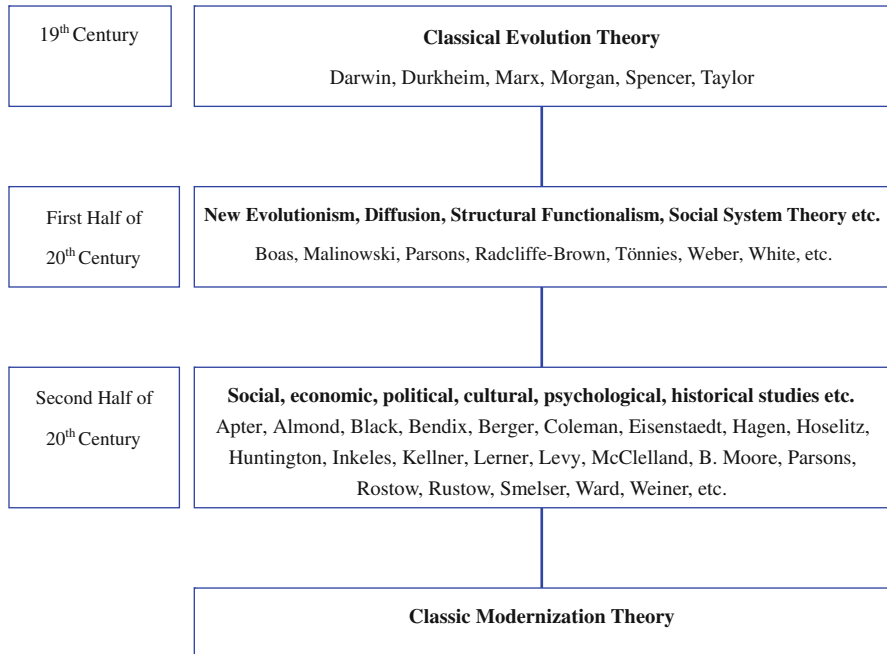


Fig. 3.11 Establishment of classical modernization theory.

Note: It is based on the thoughts of Harrison (1988)

3.3.2 Evolution of Modernization Theory

The evolution of the modernization theory roughly refers to two things: the evolution of the classical modernization theory and the establishment and evolution of other modernization theories. The former having been discussed above, we are going to discuss the latter here. On the whole, the classical modernization theory is the basis of modernization theory, and other theories were derived from it later (Fig. 3.12).

3.3.2.1 (1) Formation and Evolution of Postmodernization Theory

In the 1970s, the future development of advanced countries caught people's attention, and a lot of new thoughts such as postmodernism and postindustrial society emerged. There were various schools of postmodernism, and in the 1990s, the postmodernization theory was formed.

3.3.2.2 (2) Formation and Evolution of New Modernization Theory

From the 1980s to the early 1990s, some scholars continued the research on modernization and brought forward some new ideas such as new modernization, continuous modernization, ecological modernization, reflexive modernization, multiple modernities, and globalization, which will be discussed later in this book.

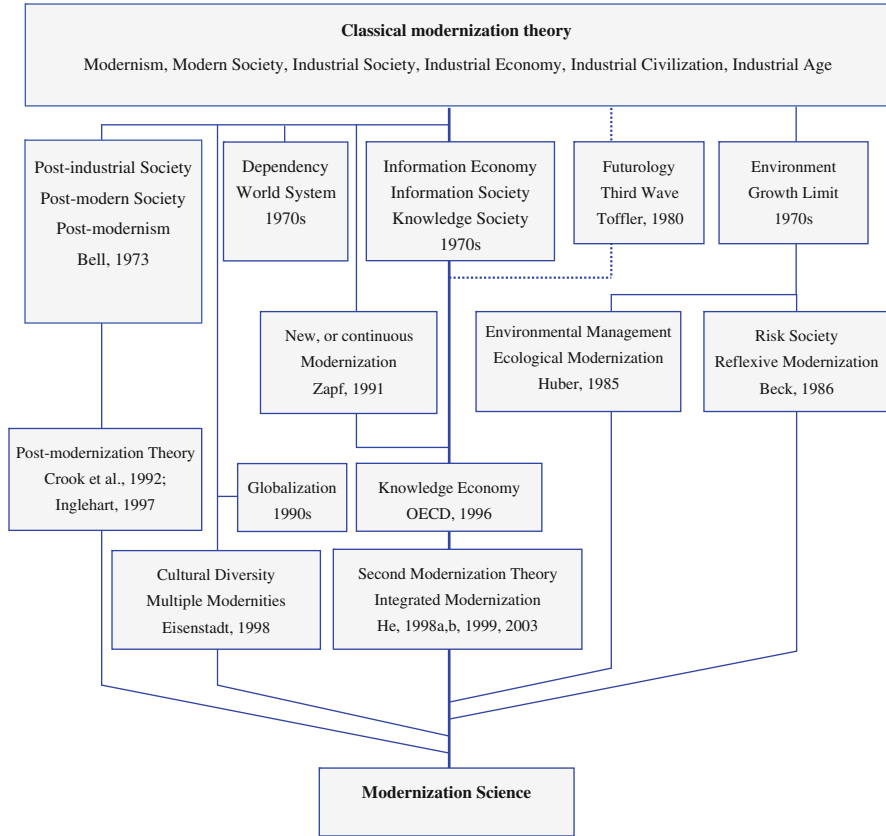


Fig. 3.12 Evolution of modernization theory (*Theory Tree*).
 Source: RGCMS (2006) and He (2010a, 2011)

3.3.2.3 (3) Formation and Evolution of the Second Modernization Theory

At the end of the 1990s, with the rising of knowledge economy and knowledge society, the second modernization theory came into being. In the early twenty-first century, it gradually developed into a general theory of modernization, including the first and second modernization, as well as integrated modernization.

3.3.3 Emergence of Modernization Science

As the definition shows, science is a systematic, confirmed kind of knowledge. For a long time, the modernization research and the modernization theory were not systematic or regulated and thus could not be called a science. Now, the systematic modernization research, knowledge, and theory are qualified to constitute a science known as the modernization science.

3.3.3.1 Modernization Research in the Twentieth Century Was Not an Independent Science Yet

In the twentieth century, the modernization research was scattered in different disciplines of social science and humanities in a marginal and unfavorable position most of the time; the modernization theory was not systematic in structure, and its knowledge is loosely developed. The situation falls far behind the conditions needed for a science. Therefore, the “modernization science” was only a science-to-be in the twentieth century, not a new science.

Some scholars hold that the modernization theory is a development theory (So 1990), and the modernization research is a development study, which emerged as a new science in the second half of the twentieth century as a branch of social science and addressed the development problems of developing countries in a multidisciplinary way, with focus on the economic, social, and political development in the third world.

Development theories mainly include the classical modernization theory, the dependency theory, the world systems theory, the state theory, the development economics, etc. In the development study, the social development study generally adopts the classical modernization theory, the economic development study generally adopts the development economics, the dependency theory, and the world systems theory, and the political development study uses the classical modernization theory and the development politics.

3.3.3.2 Modernization Science Gradually Becomes a New Science in the Twenty-First Century

Science is an open system, with new disciplines and knowledge emerging successively. With the expansion of modernization research and the accumulation of modernization knowledge, the modernization science will come to the surface and become a new member of the big family of sciences.

(1) Abundant Accumulation

Starting from the 1950s, the modernization research has a history of over 50 years, with three climax researches, respectively, on classical modernization, the postmodernization, and the new modernization. The modernization theory has developed into a big family, including the classical modernization theory, the postmodernization theory, the ecological modernization theory, the reflexive modernization theory, the multiple modernities theory, the second modernization theory, and so on. There is rich knowledge on modernization too. For instance, in the National Library of China, there are over 1,000 kinds of Chinese books and about 400 English books themed on modernization (according to the search result on Dec. 12, 2009).

(2) Adapting to the General Trend of Interdisciplines and Integration of Sciences

The new division and integration of sciences have become a world trend, and the interdisciplinary science has been widely valued. The modernization science is a highly interdisciplinary science, involving multiple disciplines of natural sciences

and social sciences, and also a highly integrated science for explaining modernization phenomena requires the cooperation of multiple disciplines.

(3) Meeting the Needs of Globalization and International Competition

Economic globalization and greening have become a world trend too, and the international cooperation and competition have been unprecedentedly intense. The international community has been increasingly concerned about how the advanced countries can stay advanced and how developing countries can become advanced in the process of international interaction. The research subjects of the modernization science include: why are advanced countries advanced while others are not? How can advanced countries stay advanced? And how can developing countries become advanced? The appearance of modernization science meets the needs of international competition in the twenty-first century.

3.3.3.3 Contributions from Chinese Scholars

Chinese scholars' research on modernization began early and has reached three climaxes (Table 3.9). As early as in the 1930s, Chinese scholars began academic discussions on China's modernization which was interrupted and stopped later. Since the reform and opening up of the Chinese mainland in 1978, there has been a climax of research on the classical modernization, with a batch of high-quality works published. Since the 1990s, Chinese scholars in the field of natural science have partaken in the modernization research, and China's modernization study has entered the stage of multidisciplinary research, where Professor Chuanqi He proposed the second modernization theory, the integrated modernization theory, the international modernization theory, the modernization science (He 2010a, 2011), and so on.

Table 3.9 Three climaxes of Chinese scholars' research on modernization

Item	Early discussions on modernization	Classical modernization research	Multidisciplinary research on modernization
Approx. period	1930s	End of 1970s to mid-1990s	Since the 1990s
Research subjects	Discussions on the problems of China's modernization	Classical modernization research Research on China's modernization	New modernization research Discussions on modernity and postmodernity
Works	Symposium on China's Modernization (1933) <i>Modernization</i> (semimonthly) (1937)	<i>A New Approach on Modernization</i> (1993) <i>Study of the World Modernization Process</i>	<i>Series of Second Modernization</i> (1999–2010) <i>Modernization Science</i> (2010) <i>China Modernization Report</i> (2001–2011)
Literature translation	–	Translation of classical modernization works	Translation of works on modernity, postmodernity, and new modernization



Fig. 3.13 Symposium on modernization and the modernization magazine published in the 1930s in China.

Note: Left, the symposium on the problem of China's modernization published by *Shenbao Monthly* in 1933 in Shanghai; right, the semimonthly magazine *Modernization* published in 1937 in Taiyuan, Shanxi Province

(1) Discussions on China's Modernization in the First Half of the Twentieth Century

Chinese scholars began to discuss problems concerning China's modernization as early as in the 1930s (Fig. 1.18). In 1933, there was a special issue of *Shenbao Monthly* dedicated to the problems of China's modernization, including 10 short comments and 16 long essays. It was probably the first symposium on modernization published in China. In 1948, *Chinese Culture and the Modernization Process* was published by Shanghai Observation Press (Wu 1948). Around the 1930s, a group of modern periodicals were published in China, such as *Modern Weekly* (1931), *Modern Society* (1932), *Modern Politics* (1932), *Modern Economy* (1933), and *Modernization* (1937); the latter was a semimonthly based in Taiyuan and probably the first periodical named as modernization in China.

(2) Classical Modernization Research in the Second Half of the Twentieth Century

From the 1950s to the 1970s, the modernization study in the Chinese mainland was at the low point, with rare literature on this issue. However, since 1978, the number of literature on modernization research has increased. In the period from 1979 to 1998, the China Association of Science and Technology founded and ran the *Modernization* magazine. And in 1981, the Science Press founded *Study on Agricultural Modernization*. In 1989, Tianjin Social Science Association founded *Theory and Modernization*. Chinese scholars have completed a lot of high-quality researches and published a lot of high-level works, such as *From Tradition to*

Modern (Jin 1979), *The Road toward a Modern Country* (Qian and Chen 1987), *Social Modernization* (Sun 1988), and *A New Approach on Modernization* (Luo 1993).

(3) Multidisciplinary Research on Modernization Since the End of the 1990s

Since the late 1990s, there have emerged various schools of Chinese scholars dedicated to the modernization study, with the theory of classical modernization and its application continuing to be promoted, the research on modernity and postmodernity attracting more and more attention, and several new modernization theories being introduced. In 1998, Chinese scholar Chuanqi He proposed the second modernization theory (He 1998a, b); since 1999, eight books of the *Second Modernization series* have been published, which include the *Modernization Science: the Principles of National Advance* (He 2010a); since 2001, there have been 11 *China Modernization Reports* published, which cover the topics such as modernization and evaluation, knowledge economy and modernization, the modernization theory and the prospects, regional modernization, economic modernization, social modernization, ecological modernization, cultural modernization, international modernization, world modernization, and modernization science. The second modernization theory adopts the research method combining natural sciences and social sciences, with the stress on the empirical research and quantitative analysis.

Summary

Modernization is an objective phenomenon since about eighteenth century in the world, and the modernization science is a newly emerging interdisciplinary science which deals with the modernization phenomenon.

Historical Process of Modernization

Modernization is not only a sort of change of civilization but also the competition among different civilizations. Human civilization is not only an organic whole but also an aggregation of civilizations of different countries and nations. Both modernization and civilization development are asynchronous.

First, frontier and stages of human civilization. According to the level and characteristics of civilization, the frontier trajectory of human civilization can be divided into different stages. Historians and sociologists split over the stage division of human civilization.

There are mainly three theories on civilization development: cyclical theory, evolution theory, and periodic theory.

The second modernization theory holds that from the emergence of humankind to the end of the twenty-first century, when the productivity level and structure is used as the main basis of stage division, the frontier trajectory of human civilization may be divided into 16 stages and 4 ages and that civilization process has such features as periodicity, nonlinearity (periodic shifts), and acceleration, termed “periodic shift theory” of civilization development, for short.

Second, frontier and stages of general modernization. There has been no consensus on the division of stages of modernization process in general sense.

The frontier trajectory of modernization process from the eighteenth century to the twenty-first century could be divided, according to the features and level of modernization frontier, into two major stages: first and second modernization, both of which can be further divided into four phases—start, developing, mature, and transition. *China Modernization Report* proposed the six waves of modernization frontier according to its connotation and features.

Third, the relationship between modernization and civilization frontiers. Modernization and the world frontier of human civilization are coupled in terms of stage, progress, path, and time–space structure, as shown in the periodic table, coordinates system, and roadmap concerning the frontier trajectories of human civilization and modernization.

Brief History of Modernization Science

“*Rome was not built in a day*” is a world proverb and suitable to modernization science. There are two main threads throughout the development of modernization science: the modernization study and modernization theory, which complement each other.

The modernization study in the West began in the 1950s, and the research on human development can be traced back to years before Christ.

There are three waves of modernization research: the classical modernization research in the 1950–1960s, the postmodernization research in the 1970–1980s, and the new modernization research since the 1980s. The modernization study was criticized in the 1970–1980s and valued again in the 1990s.

The classical modernization theory was formed in the 1950–1960s, whose ideas can be traced back to the Enlightenment or even the Renaissance and whose origin can be traced back to the classical evolutionism in the nineteenth century. It is related to evolutionism, the theory of diffusion, the structural functionalism, and the theory of social system.

Since the 1960s, there have emerged about ten theories on modernization and relevant theories, which are the classical modernization theory, the dependency theory, the world systems theory, the postmodernization theory, the ecological modernization theory, the reflexive modernization theory, the continuous modernization theory, the globalization theory, the multiple modernities theory, and the second modernization theory.

In the twentieth century, the research on and the theory of modernization belonged to different disciplines and did not constitute a science yet.

In the twenty-first century, modernization science will come to be a new one which is interdisciplinary and highly integrated.

There are three waves of Chinese scholars' modernization research: the research on China's modernization problems in the 1930s, the classical modernization research in the 1970–1990s, and the multidisciplinary research on modernization since the end of the 1990s. The classical modernization research has produced a batch of high-level works, and the multidisciplinary research on modernization has led to many innovations, such as the second modernization theory and the modernization science.

Further Reading

- Beck U, Giddens A, Lash S (1994) *Reflexive modernization: politics, tradition and aesthetics in the modern social order*. Stanford University Press, Stanford, CA
- Bell D (1973) *The coming of postindustrial society*. Penguin, New York
- Black CE (ed) (1976) *Comparative modernization: a reader*. Free, New York (Trans. Yang Y, Chen Z, Shanghai: Shanghai Translation Publishing House, 1996)
- Crook S, Pakulski J, Waters M (1992) *Post-modernization: change in advanced society*. Sage, London
- Gilman N (2007) *Mandarins of the future: modernization theory in Cold War America*. The Johns Hopkins University Press, Baltimore
- Grasso J, Cornin J, Kort M (2009) *Modernization and revolution in China: from the opium wars to the olympics*, 4 Revisedth edn. M.E. Sharpe, New York
- Harrison D (1988) *The sociology of modernization and development*. Unwin Hyman, London
- He C (1999) *The second modernization: inspiration for human civilization process*. Higher Education, Beijing
- He C (2003) *Oriental renaissance: three roads to the modernization*. Commercial, Beijing
- He C (ed) (2010) *China modernization report outlook: 2001–2010*. Peking University Press, Beijing
- Inglehart R (1997) *Modernization and postmodernization: cultural, economic and political change in 43 societies*. Princeton University Press, Princeton
- Inglehart R, Welzel C (2005) *Modernization, cultural change, and democracy: the human development sequence*. Cambridge University Press, New York
- Luo R (1993) *New approach on modernization: the world and China's modernization process*. Peking University Press, Beijing
- Martinelli A (2005) *Global modernization: rethinking the project of modernity*. Sage, London
- Ralph PL (1991) *World civilizations: their history and their culture*. W. W. Norton, New York, Trans. Zhao F, Beijing: The Commercial Press, 1998/1999

- RGCMS (Research Group for China Modernization Strategies et al) (2010) China modernization report 2010: World modernization outline 1700–2100. Peking University Press, Beijing
- Ritzer G, Goodman DJ (2004) Modern sociology theory. McGraw-Hill, New York
- Rostow WW (1960) The stages of economic growth: a non-communist manifesto. Cambridge University Press, Cambridge, Trans. Guo X, Wang S, Beijing: China Social Sciences Press, 2001
- Shah H (2011) The production of modernization: Daniel Lerner, mass media, and the passing of traditional society. Temple University Press, Philadelphia
- So AY (1990) Social change and development. Sage, Newbury Park
- Stavrianos LS (1982) The world since 1500: a global history. Prentice-Hall, Englewood Cliffs, NJ (Trans. Wu X, Liang C, Shanghai: Shanghai Academy of Social Sciences Press, 1992)
- Vago S (1999) Social change, 4th edn. Prentice Hall, Upper Saddle River, NJ