

Chapter 2

After Cultures Meet

Abstract No culture is isolated from other cultures. Nor is any culture changeless, invariant or static. All cultures are in a state of constant flux, driven by both internal and external forces. All of these are the inherent dynamics of the multiculturally based world per se. In this chapter, beginning with the question ‘why Mesopotamia had the oldest civilization in the world’, the spatial interaction of ancient civilizations is assessed; and four non-linear patterns of intercultural dynamics are presented. Our empirical analyses of the four major ancient civilizations (the Mesopotamian, the Egyptian, the Indus, and the Chinese) focus on intercultural influences as well as how they have shaped the spatial dynamics of the world as a whole.

Keywords Ancient civilization • Adjacency • Intercultural dynamics • Mesopotamia • Spatial interaction

2.1 Focus on Mesopotamia

In [Chap. 1](#), we have discussed the natural and geographical factors contributing to the birth of ancient civilizations. Some empirical evidence has also explained to some extent why existing cultures and culture areas are conflicting and complementary. Till now, many issues relating to the origin of and evolution of ancient civilizations are still puzzling both anthropologists and human geographers. They include such questions as: Why Mesopotamia has the oldest civilization in the world? Why is the Chinese civilization younger than the other three ancient civilizations (i.e., ancient Egyptian, the ancient Indus and the Mesopotamian)? Why have some ancient civilizations eventually become extinct while others not? What are the driving forces for the human civilizations to grow, to expand and to decline eventually? Before dealing with these issues, let us first look at the spatial mechanism of cultural formation in Mesopotamia.

The Euphrates and the Tigris run parallel to each other.¹ The land between the Euphrates and the Tigris is known as Mesopotamia, which means “between the rivers” in Greek. The Tigris and the Euphrates provided much of the water that supported the development of ancient Mesopotamian culture. The Euphrates is the longest river of western Asia. More than two-thirds of the entire course of the river is navigable for boats. The Euphrates has its springs in the highlands of Eastern Turkey and its mouth at the Persian Gulf. It is formed in Turkey by two major tributaries—the Murat and the Karasu Rivers—both of them rise from the Armenian mountains. These two streams join together near the city of Elazig, and the Euphrates follows a southeastern route to enter Syria at Karakamis point. After entering Syria, the Euphrates continues its southeastern course and is joined by two more tributaries, the Khabur and the Balikh. Both of these tributaries have their sources in Turkey and they are the last bodies of water that contribute to the river. After entering Iraq, the river reaches the city of Hit. The Euphrates joins in southeastern Iraq to form the Shatt al Arab, which empties into the Persian Gulf.

The Tigris, like the Euphrates, rises from the Armenian mountains. It has two principal sources, Lake Hazer and Lake Van, both in Anatolia in Eastern Turkey. The Tigris’ two streams joins at Til in Turkey. Along its middle and lower courses, the Tigris receives no fewer than five important tributaries of the Zakko or eastern Tigris, the Greater Zab (Zab Ala), the Lesser Zab (Zab Asfal), the Adhem, and the Diyaleh. The city of Baghdad is located on the conjunction of the Tigris and Diyala rivers and navigation is possible from Baghdad downstream. The Tigris follows a southeastern route in Turkey to the city of Cizre, where it forms a section of the boundary between Turkey and Syria before entering Iraq. In Iraq the Tigris meets its tributaries: the Greater Zap, the Lesser Zap, the Adhaim, and the Diyala. It then joins the Euphrates in Qurna and continues its journey as the Shatt al-Arab to the Persian Gulf. Along its course, the Tigris passes through some of the major cities of Iraq, like Mosul, Tikrit, Samarra, and the capital Baghdad.

Mesopotamia has remained as the center of many different civilizations and given natural resources to millions of inhabitants living there. Both the Tigris and the Euphrates have provided much of the water that supported the development of the ancient Mesopotamian culture. The Tigris-Euphrates valley was the birthplace of the ancient civilizations of Assyria, Babylonia and Sumer. In northern Iraq the Euphrates forms the western boundary of the area known as Al Jazirah. To the southeast the alluvial lands between the two rivers was the site of the glorious Babylonian civilizations of ancient times. According to the historical data yielded by archaeological excavations on the banks of the Tigris and the Euphrates, irrigation made it possible for the locals to develop agriculture within the Euphrates-Tigris

¹ Historically, the Euphrates derives its name from the Sumarian Buranun, which became Purattum in Akadian, Ufrat in old Persian, Euphrates in Greek and Latin, Furat in Arabic, and Firat in Turkish. The name for the Tigris comes from the Sumerian Idigna, which became Idiglat in Akkadian, Tigra in old Persian, and Tigris to Herodotus (c. 450 BC) and those after him. Modern Turks refer to it as the Dicle, which is also the Arabic name. Cited from Kolars and Mitchell (1991, pp. 4 and 8).

valley (Kolars and Mitchell 1991). This resulted in the development of great ancient civilizations within the Tigris-Euphrates valley, where water played an important starting role. The Euphrates has been an important river up through history, and the Tigris too contributed greatly to the birth of ancient civilizations.

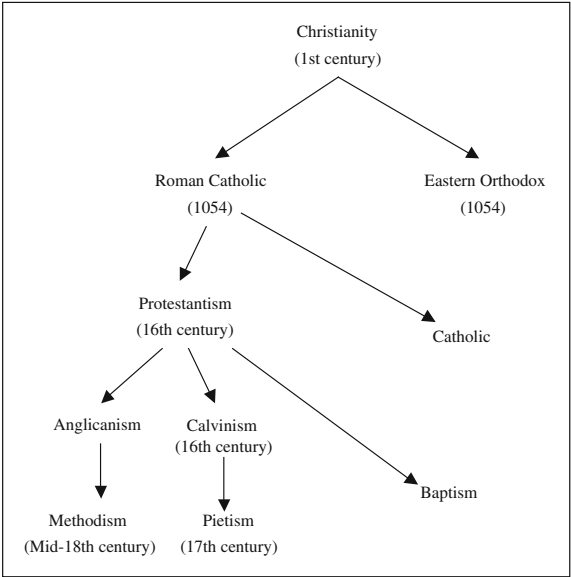
The major contribution of the Tigris and the Euphrates to the civilizations was their suitability to irrigation, and as a result the earliest farmlands were developed within the Tigris-Euphrates valley. To control these floods, the Iraqis divert water from the Tigris to the Euphrates, where the Euphrates has less alleviation than the Tigris. At Samarra a barrage is constructed, in order to improve the control of the floods that can occur between March and May, when snow melts in the mountains. This barrage also was constructed to provide better irrigation. The Euphrates and the Tigris were turbulent and many sections of them were unsuitable for traffic. At times, floodwaters would destroy large areas. Because of the irregularities of the tributaries' flows, the Tigris is widely known for its infamous floods. Furthermore, during the ancient times the land between the Euphrates and the Tigris had remained as the center of human activities that were seriously influenced by the two parallel rivers via even more complicated ways than any other parts of the world. Consequently, the Mesopotamian people were required to form a more centralized rule and to invent more technical wisdoms in order to give a simultaneous control over the floods occurring at *both* rivers than other peoples in the rest of the world.² The final result is that Mesopotamia—an area with the most complicated river systems—gave birth to an oldest civilization in the world.

2.2 Spatial Adjacency and Culture

The development of any culture consists of inventing new things and forgetting old ones (Bauman 1999, p. 73). During prehistoric period human civilization did not exist or, at least, only appeared as that in a preliminary stage. Thus, some cultural elements—language and religion—were at only a primitive level; and the intercultural differences were very small. An interesting fact suggests that certain languages might be related in that they have evolved from a common ancestral language (Sapir 1949). As a result intercultural difference increased. Witness to this are, for example, the newly born forms of Christianity in the Western World (see Fig. 2.1). On the other and, there has been a sign of interculturalization during the civilizational era. In the past thousands of years, technological progress, division of social labor, intercultural trade, immigration as well as wars, have speeded up cultural diffusion throughout the world. Witness to this is the widespread of many ethnic (such as Anglo-Saxon, and Han-Chinese), linguistic (such as Chinese, English, French, Portuguese, Russian, and Spanish) and religious (such as Buddhism, Christianity,

² One may find evidence to support the close relationship between river flood and the birth of ancient civilizations from Tables 1.1 and 1.2 of Chap. 1.

Fig. 2.1 Christianity and its major sects



Confucianism, and Islam) groups that had only one or two geographical origins at the early times.³

With close proximity to Mesopotamia, there had been two other ancient civilizations in today’s Egypt and India. The Egyptians have had a very different relationship with the Nile. For thousands of years, they referred to its annual flooding as the “Gift of the Nile.” Each summer, like clockwork, the river would take possession of a strip of land on either side of its bank. When the water receded, a very thin, evenly spread layer of black mud was left behind. Farmers would immediately plant their crops—never needing fertilizers because the flood soil itself was so rich. This narrow strip along the Nile, together with the delta at the river’s northern mouth, is the only farmland Egypt has. Egypt’s farmland is less than 30 thousand square kilometers (only 3% of the country’s total land area), which is obviously far less than India’s and China’s. Furthermore, surrounded by the Mediterranean sea in the north, the Libyan desert (As Sahra al Libiyah) in the west, the Arabian desert in the east, and the Nubian desert in the south, Egypt has no extra hinterland in the African continent. The limited sizes of land and of, naturally, the population might be a reason for the ancient Egyptian civilization to decline and, after being conquered by outside forces, to become extinct eventually.⁴

India’s extraordinary history is intimately tied to its geography. A meeting ground between the East and the West, India has always been an invader’s paradise, while at the same time its natural isolation and the magnetic pull of its religions

³ See Appendix A for the current status of the ethnic, linguistic and religious characteristics of the world.

⁴ For a detailed analysis of the spatial optimality of cultures, see Guo (2009, pp. 41–76).

allowed it to adapt to and absorb many of the peoples who penetrated its mountain passes. Around 5,000 years ago, an important civilization developed on the Indus floodplain. From about 2,600 to 1,700 BC a vast number of settlements were built on the banks of the Indus and the surrounding areas. Indus civilization remnants have been discovered from as far south as Mumbai in India, and as far north as the Himalayas and northern Afghanistan. The westernmost sites are on the coast of the Arabian sea in Baluchistan, Pakistan, right next to the Iranian border. Archaeological work confirms that there has been another large river (i.e., the Saraswati-Ghaggar-Hakra river) in the east of and parallel to the Indus in the third and fourth millennium BC. In the Indus and Ghaggar-Hakra river valleys, in what is today Pakistan and western India, it developed around 2,500 BC into the Harappa or Indus valley civilization on the Indian subcontinent.⁵ The people of the Indus valley civilization achieved great mastery in measuring length, mass, and time. Engineers already followed the decimal division of measurement. In the coastal city of Harappa, remarkable docks were built after studying the effects of tides, waves, and currents (Coppa et al. 2006). Although it is still a myth that the ancient Indus civilization declined suddenly around 1700 BC, the major causes may include the Aryan invasion and the drying up of the ancient Saraswati-Ghaggar-Hakra river.

The valley of the Yellow river is the cradle of Chinese civilization. During the past thousands of years, the Yellow river has played a crucial role in China's civilizational development. The management of the Yellow river has cost large amount of physical and human capitals and, consequently, generated various technologies and wisdoms, all of which have become important elements of the Chinese culture. Attempts at controlling the Yellow river began, according to existing historical records, as early as the twenty-second century BC. A great engineer named Yu was appointed to take preventive measures after a disastrous flood, who came up with the idea of dredging the river to encouraging the water to flow in its proper channel. Yu later was made the emperor of China's first dynasty, the Xia, for his contribution to the control of terrible flooding of the Yellow river. The Yellow river had bore the test of almost all kinds of upheavals and difficulties, and finally created the continuous Chinese civilization (see the latter part of [Sect. 1.1](#) of [Chap. 1](#) for more detailed evidence). And again, to some extent, Yellow river also is the symbol of the spirit of the Chinese people: grittiness, industriousness and assiduity.

Without considering geographical factor, it could be very difficult to understand the patterns of both global and regional development. For instance, bilateral trade flows across the US-Canadian border, between France, Italy, UK, Germany and the Netherlands, and along the western coast of the Pacific Ocean (including, *inter alia*, South Korea, Taiwan, Hong Kong and the mainland of China) have risen a great deal more quickly than those between remote and isolated economies. Besides distance, another proxy of geographical factor exerting influences on international trade is adjacency. For example, bilateral trade between France and

⁵ This phase is contemporary to the Early to Middle Bronze Age, to Mesopotamian Ur III, prepalatial Minoan Crete, and the First Intermediate Egyptian Period.

the United Kingdom will be due to their proximity, but trade between France and Germany will be further boosted by their common border. For example, in Frankel et al. (1997, p. 66) estimated result, the coefficients on ‘adjacency’ range between 0.5 and 0.7. Because trade is specified in natural logarithmic form in their model, the way to interpret the coefficients on adjacency is to take the exponent: that is to say, two countries that share a common border will, *ceteris paribus*, increase their trade by about 65–101 % compared with two otherwise countries.⁶

Now let us examine the role that geographical adjacency has played in the interactions and dynamics of the early civilizations in the eastern hemisphere. Due to their geographical proximity to Mesopotamia, the Nile and the Indus valleys have been able to receive direct cultural influences from Mesopotamia, and vice versa. This might be the primary reason for the Nile and the Indus valleys (and also, of course, the Mesopotamia) to have an earlier civilization than the Yellow river valley. The major excavations which were first carried out by the joint Pakistani American Harappa Archaeological Research Project (HARP) in 1986, have shown that the ancient Indus civilization might have gradually spread from west to east. This might have been the result of intercultural trade with Mesopotamia—the first major ancient civilization in the world. Ancient Mesopotamian texts speak of trading with at least two seafaring civilizations—Magan and Meluhha—in the neighborhood of South Asia in the third millennium BC. This trade was conducted with real financial sophistication in amounts that could involve tones of copper. The Mesopotamians speak of Meluhha as a land of exotic commodities. A wide variety of objects produced in the Indus valley have been found at sites in Mesopotamia.⁷

During ancient times, given the unavailability of transportation via air or at sea, Chinese civilization was geographically isolated from the other, earlier civilizations in Asia. The Himalayas between China and India and the Pamirs in central Asia had been the major geographical obstacles for China to receive cultural influences from the Indus and the Mesopotamian civilizations during the pre-modern times. For example, in the Tang dynasty (AD 618–907) a Chinese Buddhist pilgrim, named Xuanzang (AD 602–664), conducted a 16-year visit to India in AD 629, bringing back 657 copies of Sanskrit manuscripts to China. The 12-volume monograph entitled *Datang Xiyu Ji* (the great Tang record of a journey to the West), written by Xuanzang’s disciples, tells how the trip from China to India was full with innumerable hardships. By contrast, the Mesopotamian, the Egyptian and the Indus civilizations could easily exert influences on and, at the same time, receive influences from each other. The final result may be that the ancient Chinese civilization is much younger than the other three ancient civilizations (see Table 2.1 for a comparison of these ancient civilizations).

⁶ See Chap. 3 for a detailed quantitative analysis of geographical influences on international trade.

⁷ Cited from an article available at www.harappa.com/har/indus-saraswati.html. Accessed 7 April 2009.

Table 2.1 A brief comparison of the world's four ancient civilizations

	Ancient Egyptian	Mesopotamian	Ancient indus ^a	Chinese
Appearance of written language	3100 BC (hieroglyphic writing)	3300 BC (pictographic writing)	1500 BC (Vedic—an early form of Sanskrit)	1384 BC (<i>Jiaguwen</i> —characters found on oracle bones)
Creation of religion or law with written texts	2350 BC (inscription in the burial chamber)	1755 BC ^b (Hammurabi code)	1500 BC (Brahmanism)	1044 BC (<i>Zhouli</i> —rites of the Zhou dynasty)
Invention of calendar or time measurement	3000 BC	3000 BC	2500 BC	1766 BC
Date of birth of state(s)	3100 BC (1st dynasty)	3500 BC (six city-states)	750 BC (16 kingdoms or <i>mahajanapadas</i>)	1988 BC (Xia dynasty)

^a Since most ancient civilizations developed within the Harappa or Indus valleys had become extinct before 1700 BC, some figures shown in this column may not be accurate

^b Hammurabi created the first code of laws (using the Babylonian language) in the world

2.3 Patterns of Intercultural Dynamics

A glance at the process of the world's civilizational evolutions during the past thousands of years simply reveals that no civilizations (or countries) have been economic and technological leaders forever. There are various historical cases in which a culture was invaded and eventually replaced by another culture. But it is more common to think of historical episodes in which a gradual cumulative process of divergence does seem to have been at work; one need only think of India's industrial and commercial leadership in the last centuries before the Christ, or China's widening technological leadership in the first and the first half of the second millenniums after the Christ. For example, paper was introduced in China in the second century AD, came to Japan in the seventh century, and was diffused westward to Central Asia in the eighth century, North Africa in the tenth, Spain in the twelfth and northern Europe in the thirteenth. Printing was invented in China in the eighth century AD and movable type in the eleventh century, but this technology only reached Europe in the fifteenth century. Another Chinese invention, gunpowder, made in the ninth century, disseminated to the Arabs after a few 100 years and eventually reached Europe in the fourteenth century (Braudel 1981, p. 14).

Since the seventeenth or eighteenth century, the Western civilization has been far more developed than the rest of the world. As mentioned in Weber (1904, pp. 1–2), only in the West did modern science exist at a stage of development which we reorganize today as valid. Empirical knowledge, reflection on problems of the cosmos and life, philosophical and theological wisdom of the most profound sort, are not confined to it, though in the case of the last the full development of a systematic theology must be credited to Christianity under the influence of Hellenism, since there were only fragments in Islam and in a few of Indian sects. Although the knowledge and observation of great refinement have existed in all ancient civilizations, they lack scientific foundations. For example, the Indian geometry had no rational proofs; that was another product of the Greek intellect, also the creator of mechanics and physics. The ancient Indian and Chinese natural sciences, though well developed in observation, lacked the method of experiment, which was, apart from beginning in antiquity, essentially a product of the Renaissance, as was modern laboratory. Hence medicine in China and India, though highly developed in empirical technique, lacked a biological and particularly a biochemical foundation.

Economists have characterized the mechanism of international competition in securing technological leadership by a leapfrogging process.⁸ To this end, the international patterns of incremental technological change are explained (see, for example, Brezis et al. 1993). Theoretical and empirical analyses have concluded that, given their extensive experience with older technologies, leading nations may have no incentive to adopt new ideas; lagging nations, however, have less experience with the old technologies, may grasp the opportunity to break into the

⁸ Leapfrog is a game in which one player kneels or bends over while the next in line leaps over him or her.

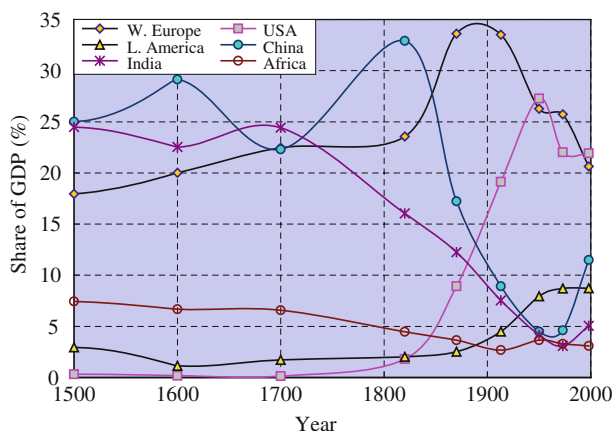


Fig. 2.2 A dynamic view of the world economy, AD 1500—2000 *Source* Created by the author based on Maddison (2001)

market (see, for example, Jovanovic and Nyakro 1994; and Barro and Sala-i-Martin 1995, Chap. 8). If the new techniques eventually prove to be more productive than the old techniques, there is a reversal of leadership. While individual countries have established long periods of economic and technological leadership, such periods of dominance are not forever. The early modern preeminence of the Dutch was ended by the rise of England; and England's preeminence by the rise of Germany and America. If the current world growth pattern (see Fig. 2.2) persists for two or more decades, we may be seeing the U.S. overtaken by China or India in the twenty-first century.

Technology has been the most fundamental element in promoting intercultural influences. In pre-modern times the spread of ideas and technology could take centuries. Intercontinent journeys, which now only need a few hours via air, would have taken several months before the twentieth century. Technological advances in communication have made it possible to know in an instant what is happening in a household or factory or on a stock market half a world away. The growing importance of services and information in the world economy means that an increasing proportion of economic value is weightless—that is, it can be transmitted over fiber-optic cable rather than transported in a container ship. At the same time improvements in transportation networks and technology are reducing the costs of shipping goods by water, ground and air and improvements in information technology have made it easier to raise productivity, as well as to increase intercultural specialization of labor (see Table 2.2). More important are the improvements in information technology (IT) that have made it easier to manage the new interconnections worldwide via Internet, the fast-growing tool of communication. The Internet has provided a new means of commerce, with clear speed and cost advantages.

Table 2.2 Declining costs of transportation and communication

Year	Average ocean freight and port charges per ton (US\$)	Telephone call (3 min, New York/London) (US\$)	Computers (index, 1990 = 100)
1920	95	—	—
1930	60	245	—
1940	63	189	—
1950	34	53	—
1960	27	46	12,500
1970	27	32	1,947
1980	24	5	362
1990	29	3	100
2000 ^a	—	<1	50 ^b

Notes “—” denotes “not available”. ^a Calculated by the author. ^b Based on the data estimated by Kanamori and Motohashi (2007) for Japan and Korea

Source IMF (1997), except those that are noted otherwise

When a new technology becomes available, however, it may not initially seem much better than the old one—and to a nation that has established a commanding lead in the old technology, it may well seem worse. Thus eighteenth century Holland, with its established lead in shipping, banking and trading, was not attracted by the prospects of cotton spinning; it was the somewhat poorer English who moved into the new area and exploited its eventually far greater potential (Brezis et al. 1993, p. 1212). Such a failure to take advantage of new technologies may seem in retrospect like short-sightedness. In fact, however, it may have been a fully rational decision from the point of view of individual entrepreneurs. A country with an established lead will be a high wage nation; new technologies or industries that are initially less productive than the old one are therefore not profitable. It is only a lagging nation, where the old technology is less well developed and hence wages are lower, that the new, relatively untried techniques seem attractive. Such economic and technological ‘leapfrogging’ could be essentially random: lagging countries may simply get luck, leading countries get unlucky. And, indeed, the divergent patterns could be explained, at least partially, by what has been noted in Landes (1966, p. 563): “Prosperity and success are their own worst enemies”.⁹

Cultural diffusion is generally taken to mean the spread of a culture from one area or ethnic group to another area or ethnic group. Diffusion has always had a catalytic function in cultural development, as the comparatively rapid growth of human culture as a whole has risen from the ability of all societies to borrow

⁹ Brezis et al. (1993, p. 1219) give a number of conditions under which there will be a leapfrogging process: (i) The difference in wage costs between the leading nation and potential challengers must be large. (ii) The new technology must, when viewed by experienced producers, appear initially unproductive compared with the old one. (iii) Experience in the old technology must not be too useful in the new technology. (iv) The new technology must ultimately offer the possibility of substantial productivity improvement over the old.

elements from other cultures and to incorporate them into their own. Moreover, the necessity of integrating newly acquired elements into one's cultural heritage both creates new problems (such as the so called 'clash of civilizations' as mentioned in Huntington's (1993) article) and engenders new ideas. It was the opportunity for relatively rapid interchange of inventions and ideas between different cultures that either made possible the birth of newer civilizations or promoted the old civilizations to advance further.

Indeed, the clash of civilizations is not a welcoming event in contemporary society. And it did lead to both emotional and physical damages to human beings, especially at the first stage of the clash. However, the history of civilizations has told that the clash of civilizations is inevitable in many cases and it might yield positive effects on the progressive evolution of civilizations in the long-run, if not the short-run. One example witness to the inter-civilizational dynamics may be found in the Eastern Hemisphere where the Mesopotamian, the ancient Egyptian and the ancient Indus civilizations were exerting influences on and benefiting from each other. It is argued that it probably was the significance of the intercultural influences that made the birth of these three civilizations much earlier than that of the ancient Chinese civilization (as discussed in [Sect. 2.2 of Chap. 2](#)).

In order to clarify the dynamic patterns of intercultural influences, let us consider a simplified case in which the so-called 'clash' occurs between a 'leading' culture and a 'lagging' culture. Although the leading culture has a higher average level in technological progress than the lagging one, the lagging culture also has some technological advantages over the leading one. Thus, we suppose that each culture will develop (grow) via a linear pattern (as shown by the dot lines in [Fig. 2.3](#)). If the two cultures meet in a specific space, then there will be different, non-linear development patterns for both the leading and the lagging cultures. In the following, we define four types of patterns for these two cultures' developments over time:

Pattern 1. If the lagging culture invades the leading culture but fails eventually, the development of the leading culture follows the pattern shown in [Fig. 2.3a](#).

Pattern 2. If the leading culture invades the lagging culture but fails eventually, the development of the lagging culture follows the pattern shown in [Fig. 2.3b](#).

Pattern 3. If the lagging culture invades the leading culture and wins eventually, the development of the leading culture follows the pattern shown in [Fig. 2.3c](#).

Pattern 4. If the leading culture invades the lagging culture and wins eventually, the development of the lagging culture follows the pattern shown in [Fig. 2.3d](#).

2.4 Intercultural Influences

No culture is not influenced by, and does not influence, other cultures. Nor is any culture changeless, invariant or static. All cultures are in a state of constant flux, driven by both internal and external forces. In [Chap. 1](#), we have examined the various internal factors contributing to the birth of and the evolution of ancient

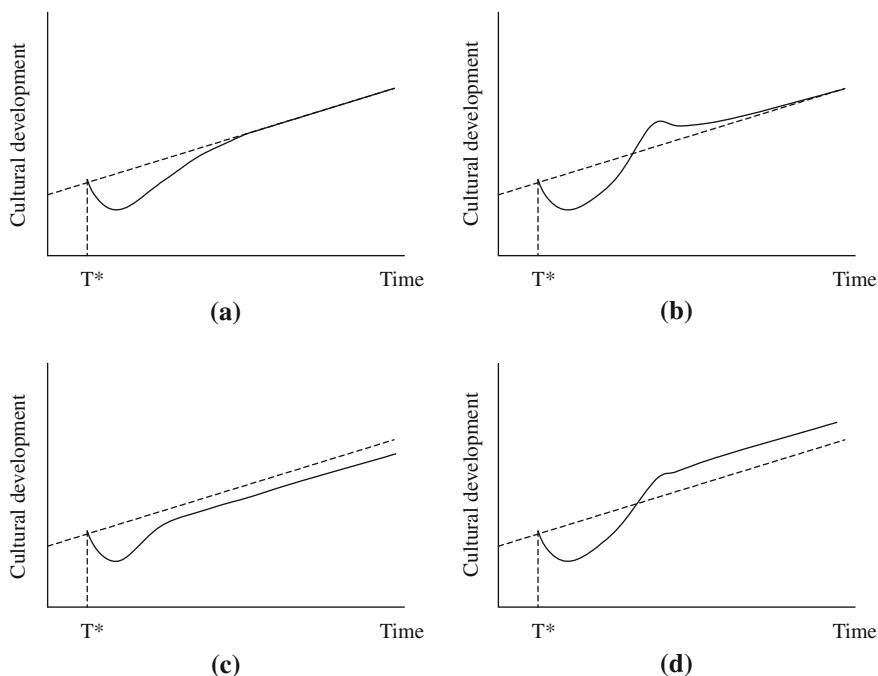


Fig. 2.3 Patterns of cultural development under different external conditions. *Notes* (1) T^* denotes the date at which a foreign culture invades; (2) dot lines denote the normal pattern of cultural development

civilizations. In fact, when trying to answer such question as why there were no great ancient civilizations in America, we should also pay attention to other factors. In some circumstances, external factors (such as intercultural contacts and exchanges) are also very importantly influencing culture change. For example, internal factor played an important role in the cultural development of North America before the fifteenth century, while external factor played an important role after the New World was found in 1492. Of course, we still need more detailed evidence in order to reach the conclusion that America's geographical isolation could have resulted in the declining of its early civilizations. However, a comparison of the North American Prairie nomads and the Eurasian Steppe nomads—which are thought to be blood relatives—simply suggests that external influence should matter to the evolution of civilizations (see Box 2.1).

Most anthropologists would agree in that the earliest human societies must have been small and simple in social organization, and poor in technological equipment. As a result cultures must have been highly diversified. Since these characteristics contrast greatly with modern industrial societies, we must think that the world has experienced some forms of integration of adjacent cultures throughout the world. There are six forms of cultural integration. The first type of cultural integration is called 'configurational or thematic integration'. It refers to an identity of meaning

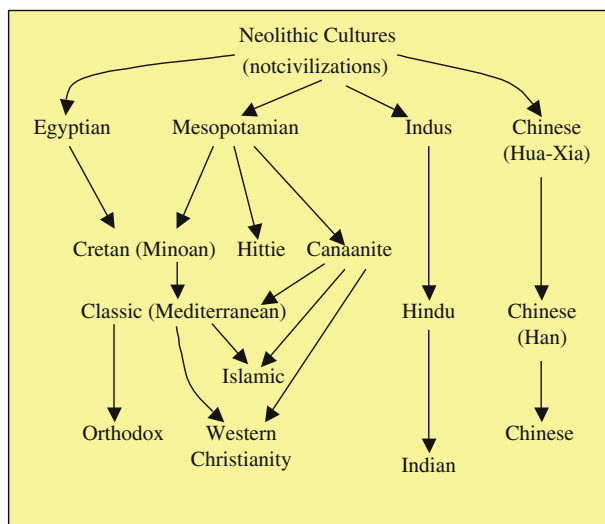


Fig. 2.4 The dynamic relations among major civilizations of the world

within a diversity of cultural items: their conformity to a common pattern, their embodiment of a common theme. Connective integration is the second type of cultural integration that concerns the extent to which the diverse parts of culture are directly connected with one another. A third dimension of integration (or logical integration) concerns the extent to which cultural items tend to contradict one another. This perspective defines integration not as identity or as interlocking diversity but in terms of logical consistency—a criterion that primarily affects existential beliefs and systems of norms. The fourth form is known as the adaptive or functional integration. A fifth type of integration (stylistic integration) is that which emerges from the mutual adaptation of parts of experience felt so intensively that their contrasts and organization produce an emotionally gratifying whole. Its locus is those characteristic modes of behavior and manners of expression we term styles. Finally, the sixth form of cultural integration is called regulative integration.¹⁰

A brief glance at the evolutions of human civilizations reveals that the interaction of civilizations has existed frequently in many places of the world. The world's civilizations have evolved through different phases, since they first emerged 5,000 years ago. Some regions witnessed two or three generations of affiliated cultures, with the demise of one culture and interregnum followed by the rise of another successor generation. A simplified chart of the dynamic relations among the major ancient civilizations and their successors is shown in Fig. 2.4.

¹⁰ Cited from Levine (1972, pp. 375–8).

The major historical events occurred in the four geographical areas of the Euphrates-Tigris valley (or called Mesopotamia), the Nile valley, the Indus valley and the Yellow river valley are shown below in chronological order, respectively. They can tell how the world's four ancient civilizations (the Mesopotamian, the ancient Egyptian, the ancient Indus, and the Chinese) had exerted profound influences upon each other and upon, and were influenced by, the rest of the world.

2.4.1 The Euphrates-Tigris Valley¹¹

- 1500 BC: a caravan trader, Abraham, leads nomads from Sumer to Canaan and then on to Egypt (Hebrews)
- 1400 BC: the Mitanni king Saustatar conquers Assyria and reconquers Syria; the Mitanni king and the Egyptian pharaoh sign a peace treaty
- 1000 BC: the Phoenicians control trade in the Mediterranean Sea from their bases in Byblos and Sidon
- 671 BC: the Assyrians capture the Egyptian capital of Memphis
- 664 BC: the Assyrians conquer Thebes
- 653 BC: the Scythians invade the Median empire (northeast Persia); Assyria destroys the Elamite kingdom
- 612 BC: the Babylonians split the Assyrian empire (Mesopotamia to Babylon and Elam to Media) while Egypt recovers control of Palestine and Syria
- 605 BC: the Babylonians conquer Carchemish and defeat the Egyptian army
- 525 BC: Cambyses of Persia conquers Egypt
- 521 BC: Persia empire expands beyond the Indus River
- 514 BC: the Persians invade Scythia
- 490 BC: Persia attacks mainland Greece
- 480 BC: the Greeks expel the Persians from Europe
- 334 BC: Alexander defeats the Persian army at the Dardanelles
- 333 BC: Alexander invades the Persian empire from Syria to Palestine
- 331 BC: Alexander the Great conquers Persia and destroys Persepolis
- 282 BC: Seleucus conquers Asia Minor
- 261 BC: Antiochus II (Seleucid) fights the Egyptians
- 250 BC: the Parthians invade the satrapy of Parthia (northern Iran) and found the Parthian empire
- 225 BC: the Celts in the west and the Sarmatians in the east destroy the Scythian kingdom
- 198 BC: the Seleucids conquer Palestine and Phoenicia from the Ptolemaics
- 192 BC: the Seleucids under Antiochus III are defeated by the Romans in Thracia
- 190 BC: Bactrian king Euthydemus defeats Seleucid king Antiochus III at Magnesia

¹¹ Based on Toynbee (1961), Zhao (2001) and other sources.

- 188 BC: Pergamum conquers the Seleucid lands of Lydia, Phrygia, Lycaonia, Pisidia
- 185 BC: Parthians expand into Seleucid eastern Iran
- 170 BC: Batrian king Demetrios I expands Bactria to northwestern India
- 165 BC: the Maccabees revolt in Palestine and gain independence from the Seleucids
- 155 BC: Bactrian king Menander invades northwestern India
- 141 BC: the Parthians conquer Media and Elam from the Seleucids
- 127 BC: the Parthians are defeated by the Scythians
- 126 BC: the Parthians conquer Babylonia from the Seleucids
- 124 BC: the Parthians are defeated again by the Scythians
- 106 BC: Mithridates II signs a treaty with China to open the “silk road”
- 92 BC: Mithridates II signs a peace treaty with Rome
- 69 BC: Rome invades Tigranes’ Armenian kingdom
- 80 BC: the Scythians (Saka) conquer northwestern India from Bactria
- 71 BC: Mithridates VI of Pontus is conquered by Rome
- 64 BC: Syria is conquered by Rome; the Seleucid dynasty ends
- 63 BC: Pompeus captures Jerusalem and annexes Palestine to Rome
- 53 BC: the Parthians led by Orodes II defeat the Romans at Carrhae (Syria)
- 20 BC: Rome and the Parthians fix their boundary along the Euphrates river (Iraq)
- 50 AD: Christianity emerges from Palestine
- 116: Roman emperor defeats the Parthian king and conquers Mesopotamia
- 244: king Shapur I attacks Rome
- 298: the Sassanids sign a peace treaty with Rome
- 363: the Sassanids defeat the Roman emperor Julian and recapture Nisibis and Armenia
- 379: Shapur II conquers Arabia and reaches the border with China
- 451: Zoroastrian Persia (Sassanids) defeats Christian Armenia
- 484: Zoroastrian Persia and Christian Armenia sign a treaty that allows the Armenians to keep their religion
- 636: the Arabs capture Ctesiphon, the Sassanid empire ends

2.4.2 *The Yellow River Valley*¹²

- 176 BC: the Huns attack the Han dynasty
- 121 BC: China defeats the Huns
- 110 BC: the Silk Road is inaugurated (a treaty between Chinese emperor Wudi and Parthian king Mithridates II)

¹² Based on Dai and Gong (2000) and other sources. Note that intercultural influences within the Yellow River valley can date from as early as the twenty-third century BC, but they soon resulted in the integration of a single culture.

- 48 AD: defeated by the Han dynasty, the Huns dissolves
- 68 AD: Buddhism is introduced from India to China
- 372: Buddhism is introduced from China to the kingdom of Koguryo (Korea)
- 643: Buddhist pilgrim Xuanzang brings sanskrit manuscripts from India to China
- 650: the Tang dynasty extends the boundaries of China west into Afghanistan, north into Siberia, east into Korea and south into Vietnam, golden age of art and literature (ideal of the universal man, combining the qualities of scholar, poet, painter, statesman)
- 659: the Tang defeats the western Ashina kaghanate
- 781: Tibetans occupy Dunhuang
- 821: Peace treaty between Tibet and China
- 846: the Kirghiz drive the Uighurs west to the Tarim basin
- 907: northern invaders terminate the Tang dynasty
- 1115: the Jurchen/Nuzhen invade from the north and establish the Jin dynasty with capital in Beijing
- 1125: the Jurchen/Jin force the Song court to move their capital to Hangzhou in the south
- 1234: Mongols led by Ogodai Khagan conquer northern China and expel the Jurchen
- 1264: the Mongols invade China and Kublai Khan founds the Yuan dynasty and moves the capital from Karakorum to Khanbaligh (Beijing)
- 1266: Marco Polo travels from Venice to China
- 1279: Mongols complete the conquest of entire China and terminate the Song dynasty
- 1368: China regains independence from the Mongols
- 1368: the renovation of the Great Wall of China
- 1389: the Uighurs convert to Islam
- 1405: Zhenghe (a former Muslim slave) sails west with a fleet of 300 ships, invading Sumatra and Ceylon (Sri Lanka) and eventually reaching the coast of Africa
- 1550: the renovation of the Great Wall of China is completed
- 1557: Portugal establishes a trading post in Macau (first European settlement in the Far East)
- 1583: Jesuit missionary Matteo Ricci arrives in China
- 1616: Nurhachi unifies the Jurchen (Manchus) and creates the state of Jin (latter named Qing) in northeastern China
- 1644: the Manchus, led by Dorgon, invade northern China and establish the Qing dynasty
- 1689: China signs a border treaty with Russia to settle the border between Russian Siberia and Chinese Manchuria
- 1728: France establishes a trading post in Guangzhou
- 1729: the emperor issues a decree banning the sale of opium
- 1757: China invades eastern Turkestan and renames it Xinjiang
- 1760: all foreign trade is confined to Guangzhou
- 1840: the Opium war with Britain
- 1842: China cedes the island of Hong Kong to Britain

- 1851: the Taiping rebels, with 30 million people killed
- 1856: China is attacked by British and French forces
- 1860: British and French forces occupy Beijing; Russia secures north Manchuria
- 1884: France expands in Indochina after winning a war against China
- 1895: Japan defeats China and China is forced to cede Taiwan and recognize Japanese sovereignty over Korea
- 1900: the anti-western Boxer (Yihetuan) rebellion, followed by the invasion of foreign troops including Russia, Britain, France, Japan, USA, etc.
- 1912: China adopts the Gregorian calendar
- 1917: China joins World War I on the side of Britain, France, Japan and the USA, the first time ever that Chinese soldiers walk into another continent
- 1921: Under the supervision of Soviet agent Borodin, Marxist intellectuals found the communist party of China
- 1931: the Japanese army invades Manchuria
- 1933: the Japanese army invades Hebei
- 1936: Japan invades the northern province of Suiyuan
- 1937: Japan captures Nanjing (about 300,000 Chinese are killed)
- 1945: Japan is forced to retreat from China (20 million Chinese dead)
- 1997: Britain returns Hong Kong to China
- 1999: Portugal returns Macau to China

2.4.3 *The Nile Valley*¹³

- 1991 BC: Amenemhet I seizes power (12th dynasty), builds the “Wall of the Prince” in the Sinai to protect Egypt from invasions
- 1640 BC: An Asian population, the Hyksos, Semitic people from Palestine, seizes power in northern Egypt (the Delta), with capital in Avaris, and introduces the horse-driven chariot (15th and 16th dynasties); the Egyptians still rule on south Egypt, maintaining their capital at Thebes, and Inyotef V founds the 17th dynasty
- 1532 BC: Ahmose I of Thebes defeats the Hyksos at Avaris and expels them from Egypt
- 1504 BC: Amenhotep I dies and is succeeded by his brother-in-law Tuthmosis I, who campaigns all the way to Mesopotamia, makes Thebes the most imposing city of the kingdom and erects the Obelisk at the Karnak temple
- 1458 BC: Tuthmosis III defeats the Mitannis and conquers Syria, the peak of Egyptian power
- 1300 BC: Egyptians build a canal connecting the Nile and the Red Sea

¹³ Based on www.scaruffi.com/politics/egyptians.html, Toynbee (1961) and Zhao (2001).

- 1275 BC: the Egyptian king Rameses II fights against the Hittite king Muwatalli at the city of Kadesh in Syria
- 926 BC: pharaoh Shoshenk invades Palestine
- 720 BC: the Nubian king Piankh/Piye of Kush (Sudan) conquers the various kingdoms of Egypt and founds the Nubian dynasty
- 671 BC: the Assyrians defeat Tajarqa and capture the Egyptian capital of Memphis
- 605 BC: Nebuchadnezzar II leads the Babylonians to conquer Carchemish and defeat the Egyptian army
- 525 BC: Cambyses of Persia conquers Egypt at the battle of Pelusium
- 404 BC: Amyrtaios of Sais expels the Persians (28th, 29th and 30th dynasties)
- 343 BC: the Persians conquer Egypt again (31st dynasty)
- 332 BC: Alexander the Great conquers Egypt
- 331 BC: Alexander founds Alexandria in Egypt
- 196 BC: the Rosetta Stone is carved in both Greek and Egyptian
- 51 BC: Cleopatra VII Ptolemy becomes queen of Egypt (last of the Greek monarchs)
- 30 BC: Cleopatra commits suicide and Egypt becomes a province of the Roman empire
- 395: Egypt is assigned to the eastern Roman empire (Byzantium)
- 641: Egypt is conquered by the Arabs and forced to convert to Islam

2.4.4 The Indus Valley¹⁴

- 2500 BC: farmers with advanced techniques move from far west into the Indus Valley
- 2000 BC: the Kurgan culture spreads to Eastern Europe and northern Iran
- 1700 BC: Indo-Iranians migrate eastward to settle in Iran
- 1600 BC: Indo-Aryans invade India from the northwest and expel the Dravidians
- 900 BC: Indo-Aryans invade the Ganges valley
- 521 BC: the Persian empire expands beyond the Indus River (Punjab and Sind)
- 327 BC: Alexander invades the Indus valley
- 304 BC: the Magadha king buys the Indus valley for 500 elephants from Seleucus
- 259 BC: the Mauryan king Ashoka converts to Buddhism and sends out Buddhist missionaries to nearby states
- 251 BC: Buddhism is introduced to Ceylon (Sri Lanka)
- 250 BC: Bactria (Afghanistan) declares its independence from the Seleucids
- 50 AD: Thomas, an apostle of Jesus, visits India
- 127: Kanishka enlarges his kingdom from Bactria into Uzbekistan, Kashmir and Punjab and promotes Buddhism
- 233: Ardashir I Sassanid conquers the Kushan empire
- 510: the Huns led by Mihiragula conquer Punjab, Gujarat and Malwa from the Gupta
- 528: the Gupta empire collapses under continuous barbaric invasions

¹⁴ Based on www.scaruffi.com/politics/indians.html, Toynbee (1961) and Zhao (2001).

- 629: the Chinese monk Xuanzang travels to India; Tibet expands to Nepal under Songtsen Gampo
- 630: Songzen Gampo introduces Buddhism to Bhutan
- 711: the Arabs conquer Sindh and Multan (Pakistan)
- 998: Mahmud of Ghazni conquers Punjab
- 1192: Turkic-speaking chieftains from Afghanistan led by Muhammad of Ghor defeat Prithvi Raj and establish a Muslim sultanate at Delhi
- 1266: Baban seizes power of the Delhi sultanate and welcomes Islamic refugees fleeing the Mongol hordes the Delhi sultanate
- 1304: Mongols under Ali Beg invade India but are repelled by the Delhi sultanate
- 1321: Jordanus, a Dominican monk, is the first Christian missionary in India
- 1325: Muhammad ibn Tughluq becomes sultan of Delhi
- 1328: the Mongols invade India but are repelled by the Delhi sultanate
- 1498: the Portuguese explorer Vasco da Gama reaches India
- 1509: Portugal conquers Diu and Goa in India; the Vijayanagar kingdom reaches its zenith under Krishna Raja
- 1526: Babur captures Delhi from Ibrahim, the sultan of Delhi, and founds the Mogul empire in India
- 1534: Portugal acquires Bombay
- 1555: the Mogul king Humayun re-conquers India
- 1600: The British East India Company is established.
- 1639: Britain acquires Madras from the raja of Chandragiri
- 1665: Britain acquires Bombay from Portugal
- 1672: France settles Pondicherry
- 1686: Mogul emperor Aurangzeb conquers Bijapur, ending the Adil Shahi dynasty
- 1688: the Moguls complete the conquest of India
- 1690: Britain acquires Calcutta
- 1738: Persian general Nader Shah invades India and captures Delhi
- 1751: Britain becomes the leading colonial power in India
- 1757: the East India company defeats France and gains access to Bengal
- 1764: Britain expands to Bengal and Bihar
- 1776: the Marathas conquer Mysore
- 1794: the Marathas conquer Delhi

2.5 Summary

‘Culture change’ is defined as ‘the conceptual formulation that refers to the many ways in which societies change their patterns of culture’ (Vogt 1972, p. 554). The records of prehistory and history reveal that the patterns of culture of every human society have changed constantly. The rate and type of the cultural change may be slow and gradual, as it was during the Paleolithic, or fast and drastic, as it has been in contemporary societies. Generally, the factors influencing cultural development are

diversified—both internally and externally. Internal factors, such as geographical location, natural environment, socioeconomic conditions and technological inventions, may lead to changes in people's lifestyle. External factors, such as immigration, foreign trade and the conquest by another culture, may also bring about culture change. The roles of the internal and external factors in culture change may be different, depending on different space and time conditions.

In this chapter, we have briefly reviewed the evolutions of the world's major civilizations. Our analysis mainly focuses on how these civilizations were interacted with each other. We have also presented details about their dynamic relations with the rest of the world. A host of factors, including, *inter alia*, immigration, increased diplomatic and cultural contacts, the diffusion of science and technology, the mass media and international travel and trade, are dramatically transforming contemporary international political and economic relations. As a result the interactions between different cultures are becoming more and more important in our changing world.

Since the end of the Cold War, the study of intercultural relations has become a popular topic in the field of global politics and economics. But support has been found for views emphasizing both intercultural conflict and cooperation. With all the positive ways of gaining from intercultural cooperation, it seems logical to inquire why economic cooperation has failed. Regions are a basis for cooperation among states only to the extent that geography coincides with culture. Divorced from culture, propinquity does not yield commonality and may foster just the reverse. The overall effectiveness of multicultural organizations generally varies inversely with the cultural diversity among their members. As a result single cultural organizations are more stable and successful than multicultural organizations. This is true for both political and economic organizations.

Box 2.1 Why prairie and steppe nomads became different

The North American Prairie nomads and the Eurasian Steppe nomads are thought to have been blood relatives. At least 12,000 years ago, The Prairie nomads crossed the Bering land bridge and settled at the North America. The end of the nomadic era came around the same time for both groups when Europeans and Euro-Americans invaded their territories and brought with them the five-fold threat of disease, firearms, immigration, agriculture and formidable administration.

The Eurasian Steppe nomads bordered the Near Eastern, Mesopotamian, Indus and Chinese civilizations, which produced inventions such as the wheel and the smelting furnace. As a result the Steppe nomads enjoyed the benefits of those inventions, and had early access to the horse as a beast of burden and a means of transportation. The Prairie nomads lived far from the advanced civilizations of Mesoamerica and received little influence from them. Prairie nomads had only the dog and there is no evidence of the wheel

on the ancient Plains. Steppe nomads therefore traveled greater distances with heavier loads than Prairie nomads.

Although the human population in both regions was relatively small and thinly dispersed, which was limited by the availability of food and water, especially during the frequent periods of drought, the Steppe nomads were much stronger than the Prairie nomads. About 190,000 individuals populated the Plains. On the Steppes, the average population was probably ten times larger, and the nomadic tribes sometimes came together to form major empires.

Source Based on CMCC (2006)

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