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Cross-Cultural Interaction and Periodization in World History

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PERIODIZATION RANKS AMONG THE MORE ELUSIVE TASKS of historical scholarship. As practicing historians well know, the identification of coherent periods of history involves much more than the simple discovery of self-evident turning points in the past: it depends on prior decisions about the issues and processes that are most important for the shaping of human societies, and it requires the establishment of criteria or principles that enable historians to sort through masses of information and recognize patterns of continuity and change. Even within the framework of a single society, changes in perspective can call the coherence of conventionally recognized periods into question, as witness Joan Kelly's famous essay "Did Women Have a Renaissance?" or Dietrich Gerhard's concept of "old Europe."[1]

When historians address the past from global points of view and examine processes that cross the boundary lines of societies and cultural regions, the problems of periodization become even more acute. Historians have long realized that periodization schemes based on the experiences of Western or any other particular civilization do a poor job of explaining the trajectories of other societies. To cite a single notorious example, the categories of ancient, medieval, and modern history, derived from European experience, apply awkwardly at best to the histories of China, India, Africa, the Islamic world, or the Western hemisphere—quite apart from the increasingly recognized fact that they do not even apply very well to European history.[2] As historians take global approaches to the past and analyze human experiences from broad and comparative perspectives, however, questions of periodization present themselves with increasing insistence. To what extent is it possible to identify periods that are both meaningful and coherent across the boundary lines of societies and cultural regions? What criteria or principles might

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[1] Joan Kelly-Gadol, "Did Women Have a Renaissance?" orig. pub. in Renate Bridenthal and Claudia Koonz, eds., *Becoming Visible: Women in European History* (Boston, 1977), 137–64; rpt. in Joan Kelly, *Women, History and Theory: The Essays of Joan Kelly* (Chicago, 1984), 19–50. Dietrich Gerhard, *Old Europe: A Study of Continuity, 1000–1800* (New York, 1981).

[2] On the last point, see Gerhard, *Old Europe*; and C. Warren Hollister, "The Phases of European History and the Nonexistence of the Middle Ages," *Pacific Historical Review*, 61 (1992): 1–22.

the Eastern hemisphere even before modern times. From the sixteenth century forward, cross-cultural interactions provide a foundation for a genuinely global periodization of world history.

In the second place, global periodizations do not represent the only useful or appropriate frames for historical analysis. It goes without saying that developments internal to individual societies—such as the building of states, social structures, and cultural traditions—have profoundly and directly influenced the historical experiences of the lands and peoples involved. (Of course, these "internal" developments have generally taken place within a much larger context that helps to account for local experiences.) Moreover, different peoples have participated in large-scale processes to different degrees, so global periodizations often chart historical development in approximate rather than finely calibrated fashion. Thus global periodizations must allow for alternatives that are sensitive to the nuances of local experiences. Peter Brown's concept of "late antiquity," for example, has great power for the effort to understand historical development in the Mediterranean basin and Southwest Asia, even if it does not resonate on a hemispheric or global scale.[5] Periodizations of individual lands and particular regions will often be more subtle and specific than global periodizations, since they have the potential to reflect more accurately local patterns of continuity and change. Thus, while striving to understand historical development on the large scale, global historians must acknowledge that their periodizations do not always apply equally well to all the lands and regions that they ostensibly embrace.

Nevertheless, global periodizations have their place in contemporary historical scholarship. To the extent that historians consider it valuable to examine the past from global and comparative points of view, they need to identify periods of history that coherently situate historical development in large geographical and cultural contexts. Moreover, global periodizations also have the potential to establish pertinent larger contexts for the understanding of local and regional experiences. For purposes of constructing these global periodizations, the analysis of cross-cultural interactions and their results holds rich promise.

WHEN DEALING WITH THE PAST FIVE CENTURIES, efforts at global periodization clearly must take cross-cultural interactions into account. Since the year 1492, the regions of the world have come into permanent and sustained contact with each other, and cross-cultural interactions have profoundly influenced the experiences of all peoples on earth. Legions of scholars have examined the effects of cross-cultural interactions in modern times while exploring themes such as long-distance trade, exchanges of plants, animals, and diseases, transfers of technology, imperial and

[5] Of Peter Brown's many thoughtful and penetrating works, see especially *The World of Late Antiquity, A.D. 150–750* (London, 1971); and *The Making of Late Antiquity* (Cambridge, Mass., 1978). In the form of mass migrations, of course, cross-cultural interactions were a prominent feature of late antiquity. In his own work, however, Brown has concentrated on the cultural and religious history of the Mediterranean basin, and to a lesser extent of Southwest Asia, without placing the experiences of those regions in a larger Eurasian or hemispheric context and without directly addressing the theme of cross-cultural interaction.

colonial ventures, missionary campaigns, the transatlantic slave trade, and the development of global capitalism.[6]

For earlier periods, however, it might seem that founding a global periodization on cross-cultural interactions stretches a point beyond usefulness. Granting that the world's peoples did not live in isolated, hermetically sealed societies until 1492, it remains a legitimate question whether cross-cultural interactions were intensive and extensive enough to provide frameworks for periodization in pre-modern times. It is a reasonable concern, for example, that a periodization founded on cross-cultural interaction might accord undue privileges to that tiny fraction of humanity that undertook long-distance travel or that otherwise became directly engaged in cross-cultural interactions in pre-modern times.

Yet, even in pre-modern times, processes of cross-cultural interaction had implications that went far beyond the experiences of the individuals who took part in them. Three kinds of processes in particular had significant repercussions across the boundary lines of societies and cultural regions: mass migrations, campaigns of imperial expansion, and long-distance trade. Mass migrations had the potential to bring about political, social, economic, and cultural transformations in the lands they touched. The migrations of Indo-European, Bantu, Germanic, Turkish, Slavic, and Mongol peoples all worked profound effects across the boundary lines of societies and cultural regions. These migrations touched almost every corner of the Eastern hemisphere before modern times. Meanwhile, the migrations of ancient Siberian and Austronesian peoples led to the establishment of human societies in the Western hemisphere and the Pacific islands.

Alongside migrations, empire building also influenced historical development across the boundary lines of societies and cultural regions. The establishment of large-scale empires did not necessarily imply the extension of close, centralized supervision to all lands and peoples falling within imperial boundaries. "Heaven is high, and the emperor is far away," according to a Chinese proverb, which acknowledged a degree of *de facto* independence enjoyed by local and regional authorities of pre-modern empires. Even in the absence of effective central supervision, however, pre-modern empire building deeply influenced human societies. Quite apart from the imposition of foreign rule and taxes on conquered peoples, imperial expansion also favored the establishment of commercial and diplomatic relations between distant peoples, as well as the spread of cultural traditions.

Granting the importance of mass migrations and imperial conquests, questions might still remain about the significance of long-distance trade in pre-modern times. Traditional wisdom holds that long-distance trade in pre-modern times dealt largely if not exclusively with luxury goods of high value relative to their bulk. Traffic in such goods might make for a fascinating topic of inquiry, since it sheds

[6] See, among others, Philip D. Curtin, *Cross-Cultural Trade in World History* (New York, 1984); Daniel R. Headrick, *The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850–1940* (New York, 1988); Immanuel Wallerstein, *The Modern World-System*, 3 vols. (New York, 1974–); Eric R. Wolf, *Europe and the People without History* (Berkeley, Calif., 1982); William H. McNeill, *Plagues and Peoples* (Garden City, N.Y., 1976); and two works by Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, Conn., 1972); and *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (New York, 1986).

light on the ingenuity of merchants and the development of markets. Nevertheless, so the traditional wisdom suggests, trade in luxury goods had limited significance for pre-modern social and economic history for several reasons: it involved a tiny proportion of the populations of producing and consuming societies, it mainly affected political and economic elites, and it did not generate a division of labor or otherwise restructure the economies and societies of trading parties.[7]

Recent research has called much of this received wisdom into question and has suggested that long-distance trade had more important effects than scholars have commonly realized. This research represents several lines of thought. One comes from the perspective of economic anthropology and draws attention to the cultural and political significance of pre-modern trade in luxury commodities. Even though trade in preciosities directly involved only small numbers of people, it involved some very important people. Apart from their economic value, exotic commodities often served as symbols of power, status, and authority. The ability to display them, consume them, or bestow them on others was crucial for the establishment and maintenance of political and social structures. Thus, even when its economic value was small, trade in luxury goods often had large political and social implications. Kingfisher feathers, tortoise shells, and rhinoceros horns might strike modern analysts as commodities of little economic significance. In pre-modern China, however, the rarity of such items conferred on them high value, which ruling elites appropriated as symbols of power, status, and authority. To the extent that trade in exotic items figured in the establishment or maintenance of political authority, it was a very important affair, regardless of its economic significance.[8]

A second line of argument emerges from studies of cross-regional commerce. It suggests that even when long-distance trade had its origins in the exchange of preciosities, it had the potential to expand rapidly and develop into bulk trade affecting large numbers of people rather than just political and economic elites. An example of this sort of development comes from trade in Buddhist paraphernalia between India and China. Buddhism reached China by the second century B.C.E.,

[7] There are works that take long-distance trade seriously even in pre-modern times: see especially Curtin, *Cross-Cultural Trade in World History*; and C. G. F. Simkin, *The Traditional Trade of Asia* (London, 1968). For several works that in various ways express the view that early long-distance trade was an enterprise of limited significance—and that do so from radically different perspectives—see Wallerstein, *Modern World-System*, 1: 19–21, 39–42; W. W. Rostow, *How It All Began: Origins of the Modern Economy* (New York, 1975), 14–15; Rondo Cameron, *A Concise Economic History of the World: From Paleolithic Times to the Present* (New York, 1989), 32–33, 78, 121–22; and Patricia Crone, *Pre-Industrial Societies* (Oxford, 1989), 22–24, 33–34. In the interests of fairness and precision, I would like to point out that these authors do not absolutely deny the significance of early long-distance trade: Cameron, for example, holds that it helped to integrate the economy of the Mediterranean basin under the Roman empire. In all cases, however, these authors and others convey the clear impression that long-distance trade was not an activity of large economic significance until modern times.

[8] See Jane Schneider, "Was There a Pre-capitalist World System?" *Peasant Studies*, 6 (1977): 20–29; and Robert McC. Adams, "Anthropological Perspectives on Ancient Trade," *Current Anthropology*, 15 (1974): 239–58. For broader analyses along similar lines, see also Mary W. Helms, *Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographical Distance* (Princeton, N.J., 1988); and Nicholas Thomas, *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific* (Cambridge, Mass., 1991). On the political significance of long-distance trade in early Southeast Asia, see Kenneth R. Hall, *Maritime Trade and State Development in Early Southeast Asia* (Honolulu, 1985). On the taste for exotic commodities and the uses made of them in pre-modern China, see especially two volumes of Edward H. Schafer, *The Golden Peaches of Samarkand: A Study of T'ang Exotics* (Berkeley, Calif., 1963); and *The Vermilion Bird: T'ang Images of the South* (Berkeley, 1967).

but it did not become a popular faith there until the late fifth and sixth centuries C.E. The growth of a Chinese Buddhist community generated high demand for exotic commodities such as coral, pearls, gems, crystals, semi-precious stones, glass, incense, and ivory, as well as symbolic items (such as statues or representations of the Wheel of the Law) used in Buddhist rituals or as decorations for stupas and monasteries. By the sixth century C.E., this demand had stimulated a high volume of trade in commodities that during earlier centuries had figured as luxury goods traded only in small quantities.[9] Quite apart from the cultural and political significance of the spread of Buddhism to China, this trade had important economic effects in both India and China.

A third line of research suggests that pre-modern trade occasionally became voluminous enough to push large regions toward economic integration and thus to shape economic and social structures across the boundary lines of societies and cultural regions. The Indian Ocean basin represents the most important case in which trade encouraged the economic integration of an especially large region in pre-modern times. By the seventh century C.E., large numbers of Persian merchants, soon followed by Arabs, ventured throughout the Indian Ocean basin from East Africa to India and beyond to Southeast Asia and China. By the tenth century, trade generated enormous revenues in port cities throughout the basin. More important, this trade was by no means limited to luxury goods but also involved heavy and bulky commodities. Cargoes of dates, sugar, building supplies, coral, timber, and steel crossed the ocean in large quantities. (Often, they did double duty, serving both as ballast during voyages and as marketable commodities in port cities.) As trade linked the lands of the Indian Ocean basin, comparative advantages encouraged the organization of large and sophisticated regional industries: silk textiles in China and India, cotton textiles in India, ceramics in China, steel and iron production in China, India, and Southwest Asia, and the breeding of horses, cattle, and camels by nomadic and pastoral peoples in Central Asia, Southwest Asia, and Arabia. Thus, far from being an economically insignificant affair involving exchanges of luxuries between elites, long-distance trade in the Indian Ocean helped structure economies and societies in the various regions of the Indian Ocean basin.[10]

When pre-modern societies engaged in long-distance trade on a regular and systematic basis, trade routes not only facilitated the transportation and exchange of commodities, they also served as avenues of technological and biological

[9] It is impossible to calculate the value of this trade, but literary and archaeological sources make it clear that by the sixth century C.E., trade in Buddhist paraphernalia had become quite large. See Wang Gungwu, *The Nanhai Trade: A Study of the Early History of Chinese Trade in the South China Sea* (Kuala Lumpur, 1958); and Liu Xinru, *Ancient India and Ancient China: Trade and Religious Exchanges, A.D. 1–600* (Delhi, 1988).

[10] On the economic integration of the Indian Ocean basin, see especially two recent volumes of K. N. Chaudhuri, *Trade and Civilisation in the Indian Ocean: An Economic History from the Rise of Islam to 1750* (Cambridge, 1985); and *Asia before Europe: Economy and Civilisation of the Indian Ocean from the Rise of Islam to 1750* (Cambridge, 1990). See also George F. Hourani, *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times* (Princeton, N.J., 1951); the first volume, with four additional volumes projected, of André Wink, *"Al-Hind": The Making of the Indo-Islamic World* (Leiden, 1990); and an article in which Wink outlines his larger vision of the Indian Ocean basin, "*'Al-Hind'*: India and Indonesia in the Islamic World-Economy, c. 700–1800 A.D.," *Itinerario*, 12 (1988): 33–72.

diffusions. In some cases, these diffusions profoundly influenced the development of societies engaged in trade, which suggests a fourth reason for the significance of long-distance trade in pre-modern times. Technologies involving transportation, metallurgy, weaponry, animal energy, and natural sources of power all diffused throughout most of Eurasia and Africa, largely along trade routes. Meanwhile, long-distance trade and campaigns of imperial expansion sometimes combined to encourage biological diffusions in pre-modern times. During the half-millennium from about 600 to 1100 C.E., for example, Islamic conquests and trade in the Islamic world sponsored a remarkable diffusion of food and industrial crops throughout much of the Eastern hemisphere, resulting in population growth and increased production from China to Europe and North Africa. Similarly, during the era of the ancient silk roads and again during the age of the Mongol empires, traffic over long-distance trade networks facilitated the spread of lethal pathogens beyond their original homes, leading to disease epidemics in much of Eurasia.[11]

Finally, besides its political, social, economic, and biological significance, long-distance trade also had implications for cultural and religious change in pre-modern times. When merchants traded regularly across the boundary lines of societies and cultural regions, they established diaspora communities and brought cultural and religious authorities from their homelands into those communities for their own purposes. Their cultural and religious traditions sometimes attracted interest among their hosts, particularly when foreign merchants came from a well-organized society possessing the capacity to provide significant political, diplomatic, military, or economic benefits for their hosts. In several notable cases, the voluntary association of individuals with the cultural and religious traditions of foreign merchants helped to launch processes of large-scale conversion, by which societies made a place for foreign cultural or religious values. Merchants played prominent roles, for example, in the processes that led to the establishment of Hinduism and Buddhism in Southeast Asia, of Buddhism, Manichaeism, and Nestorian Christianity in Central Asia, and of Islam in Southeast Asia and sub-Saharan Africa.[12]

Thus recent research has made a persuasive case for the significance of long-distance trade, even in pre-modern times. Pre-modern trade did not wield an influence approaching that of cross-cultural commerce in modern and contemporary times. In combination with processes of mass migration and imperial expansion, however, it is clear that long-distance trade had strong potential to shape historical experiences across the boundary lines of societies and cultural regions even in pre-modern times. To the extent that mass migration, imperial expansion, and long-distance trade engaged peoples of different societies in significant

[11] On the diffusion of technologies, see Arnold Pacey, *Technology in World Civilization: A Thousand-Year History* (Oxford, 1990); Richard W. Bulliet, *The Camel and the Wheel* (Cambridge, Mass., 1975); and Lynn White, Jr., *Medieval Technology and Social Change* (Oxford, 1962). On biological diffusions, see McNeill, *Plagues and Peoples*; Crosby, *Ecological Imperialism*; Andrew M. Watson, *Agricultural Innovation in the Early Islamic World: The Diffusion of Crops and Farming Techniques, 700–1100* (Cambridge, 1983); and Lynda N. Shaffer, "Southernization," *Journal of World History*, 5 (1994): 1–21.

[12] See Jerry H. Bentley, *Old World Encounters: Cross-Cultural Contacts and Exchanges in Pre-Modern Times* (New York, 1993), which examines cases of conversion encouraged by the voluntary association of host peoples with the cultural and religious traditions of foreign merchants.

cross-cultural interactions, these interactions might serve as a basis for the periodization of world history in pre-modern as well as modern times.

The remainder of this essay will outline a periodization of world history consisting of six major eras distinguished principally by differing dynamics of cross-cultural interactions that worked their effects across the boundary lines of societies and cultural regions. The six eras are: an age of early complex societies (3500–2000 B.C.E.), an age of ancient civilizations (2000–500 B.C.E.), an age of classical civilizations (500 B.C.E.–500 C.E.), a post-classical age (500–1000 C.E.), an age of transregional nomadic empires (1000–1500 C.E.), and a modern age (1500 C.E. to the present).

CROSS-CULTURAL INTERACTIONS began to influence human affairs from the earliest days of history. Human groups embarked on long-distance travels almost as soon as *Homo sapiens sapiens* emerged as a species some 35,000 to 40,000 years ago. By about 15,000 B.C.E., humans had spread to almost all of the earth's habitable regions. By analyzing the characteristics and distribution of language families, blood types, and material remains, scholars have been able to trace the prehistoric movements of some peoples with remarkable precision.[13] Although surviving evidence does not permit insights into the experiences of migrating peoples, their travels certainly led them into cross-cultural encounters even in prehistoric times. Widely spread tools, weapons, and deities in particular suggest communications across long distances by prehistoric peoples.[14]

Beginning in the late fifth millennium B.C.E., a series of innovations in transportation technology facilitated the establishment of links between human societies. About 4300 B.C.E., humans first domesticated horses, and by 4000 B.C.E., inhabitants of the Ukrainian Sredni Stog culture had probably begun to ride their horses. Beginning about the mid-fourth millennium B.C.E., Mesopotamians and Egyptians constructed seaworthy sailing vessels, enabling them to ply the waters of the Persian Gulf, Arabian Sea, Red Sea, and Mediterranean Sea. During the same era, wheeled carts and wagons appeared in Mesopotamia and the steppe region of Ukraine and southern Russia.[15]

Improving transportation technologies underlay cross-cultural interactions during the centuries between about 3500 and 2000 B.C.E. This first period of global history, the age of early complex societies, witnessed the establishment of sedentary agricultural societies in Mesopotamia, Egypt, India, and China. Yet these societies did not develop in isolation. Mesopotamians and Egyptians traded with each other at least by 3500 B.C.E., and a large body of archaeological evidence survives to show

[13] Irving Rouse, *Migrations in Prehistory: Inferring Population Movement from Cultural Remains* (New Haven, Conn., 1986). See also David W. Anthony, "Migration in Archeology: The Baby and the Bathwater," *American Anthropologist*, 92 (1990): 895–914.

[14] See Robert J. Wenke, *Patterns in Prehistory: Humankind's First Three Million Years*, 3d edn. (New York, 1990); and two works of Marija Gimbutas, *The Goddesses and Gods of Old Europe, 6500–3500 B.C.: Myths and Cult Images*, updated edn. (Berkeley, Calif., 1982); and *The Civilization of the Goddess: The World of Old Europe*, Joan Marler, ed. (San Francisco, 1991).

[15] David W. Anthony and Dorcas R. Brown, "The Origins of Horseback Riding," *Antiquity*, 65 (1991): 22–38; Lionel Casson, *The Ancient Mariners: Seafarers and Sea Fighters of the Mediterranean in Ancient Times*, 2d edn. (Princeton, N.J., 1991).

that, during the third and second millennia B.C.E., trade passed throughout the region from Egypt, Syria, and Anatolia in the west to Afghanistan and the Indus River valley in the east. Trade was especially important for Sumer in southern Mesopotamia, a land lacking natural resources. In order to establish and maintain their complex society, Sumerians traded textiles and grain for luxury goods such as lapis lazuli, which came from as far away as Afghanistan, as well as raw materials such as copper and tin. Cultural exchanges inevitably accompanied commercial transactions: it is likely that Egyptians adopted art motifs, boat designs, mud-brick construction, and writing from Mesopotamians.[16] China had no direct contact with agricultural societies to the west, but nomadic and migratory peoples provided indirect links between the regions of Eurasia.

For purposes of global periodization, it bears pointing out that during this age of early complex societies, cross-cultural interactions had ramifications that went far beyond the experiences of Mesopotamia and Egypt. The early complex societies generated states and social structures that depended on cross-cultural interaction. During this first age of global history, for example, migration and trade promoted the diffusion of horse domestication and bronze metallurgy, both of which influenced the development of states and societies from China to Egypt.

The earliest migrations of Indo-European peoples took place during the age of early complex societies, and they helped to diffuse horse domestication and related transportation technologies throughout much of Eurasia. From their homeland—probably in the steppe regions of modern-day Ukraine and southern Russia—some Indo-Europeans ventured east to Siberia and the Tarim Basin as early as the fourth millennium B.C.E.; while others migrated west to Anatolia and Eastern Europe soon after 3000 B.C.E. Stunning evidence of the eastern migrations has recently come to light in the form of desiccated but remarkably well-preserved corpses of Caucasian individuals unearthed in China's Xinjiang province.[17] Indo-European migrants owed their mobility to their horses and wheeled vehicles, and they introduced their technologies of transportation to the lands they entered. It is possible or even likely that violence accompanied the migrations and that horses helped the Indo-Europeans establish themselves forcibly in new lands. In any case, the diffusion of horses and related transportation technologies soon became crucial for purposes of

[16] See Casson, *Ancient Mariners*; Shereen Ratnagar, *Encounters: The Westerly Trade of the Harappa Civilization* (Delhi, 1981); Philip L. Kohl, "The Balance of Trade in Southwestern Asia in the Third Millennium B.C.," *Current Anthropology*, 19 (1978): 463–75; Kohl, "The Use and Abuse of World Systems Theory: The Case of the 'Pristine' West Asian State," in C. C. Lamberg-Karlovsky, ed., *Archaeological Thought in America* (Cambridge, 1989), 218–40; and P. R. S. Moorey, "On Tracking Cultural Transfers in Prehistory: The Case of Egypt and Lower Mesopotamia in the Fourth Millennium B.C.," in Michael Rowlands, Mogens Larsen, and Kristian Kristiansen, eds., *Centre and Periphery in the Ancient World* (Cambridge, 1987), 36–46.

[17] The earliest corpses so far studied date from about 2000 B.C.E., and their material culture included horses, wheeled carts, and fabrics featuring weaves similar to those associated with Indo-European communities in Northern Europe. Detailed studies of the desiccated corpses are not yet available, but for a preliminary report, see Victor H. Mair, "Prehistoric Caucasoid Corpses of the Tarim Basin," *Journal of Indo-European Studies*, 23 (1995): 281–307. See also the series of articles following Mair's introductory essay in the same issue of the journal and two short articles elsewhere: Victor H. Mair, "Mummies of the Tarim Basin," *Archaeology*, 48 (March–April 1995): 28–35; and Evan Hadingham, "The Mummies of Xinjiang," *Discover*, 15 (April 1994): 68–77. On the Indo-European migrations in general, see J. P. Mallory, *In Search of the Indo-Europeans: Language, Archaeology, and Myth* (London, 1989).

establishing and maintaining states and social hierarchies in the early complex societies.[18]

Considerable debate revolves around the origins of bronze technology and particularly the question of whether it was the result of a single, unique discovery or of multiple, independent inventions.[19] In either case, bronze technology certainly diffused from its point(s) of origin. Ruling elites sought to control the production of bronze weaponry, which enabled them to build and maintain states. Meanwhile, elites also prized bronze utensils, since their high cost indicated high social status. The search for relatively rare deposits of copper and tin ores stimulated trade with neighboring peoples, as well as military campaigns designed to establish control over the deposits. Thus, as in the case of horses and related transportation technologies, the diffusion of bronze metallurgy had significant political and social implications for the early complex societies.

By about 2000 B.C.E., spoke-wheeled chariots had appeared on the Eurasian steppes.[20] These high-performance vehicles had political and military implications that inaugurated a second era of global history, the age of ancient civilizations, extending from about 2000 to 500 B.C.E. After about 1700 B.C.E., techniques of chariot warfare diffused across Eurasia and into North Africa. After about 1100 B.C.E., the technology of iron metallurgy also diffused from its homeland of Anatolia throughout Eurasia and much of Africa. Migrations of Bantu peoples resulted in the spread of iron metallurgy to the great lakes region of East Africa and southern Nigeria by the sixth or seventh century B.C.E., possibly as early as the ninth century B.C.E.[21] In Mesopotamia, Egypt, and China, conquerors relied on chariot-mounted

[18] The nature and results of the Indo-European migrations are matters of ongoing debate. For two contrasting and controversial views, see Colin Renfrew, *Archaeology and Language: The Puzzle of Indo-European Origins* (New York, 1988); and Marija Gimbutas, "The Indo-Europeanization of Europe: The Intrusion of Steppe Pastoralists from South Russia and the Transformation of Old Europe," *Word*, 44 (1993): 205–22. For two judicious navigations through the literature on Indo-Europeans, see Mallory, *In Search of the Indo-Europeans*; and David W. Anthony, "The Archaeology of Indo-European Origins," *Journal of Indo-European Studies*, 19 (1991): 193–222.

[19] Bronze technology almost certainly diffused from Southwest Asia, where it appeared in the late fourth millennium B.C.E., to the Mediterranean basin and the Indus River valley. Since there are very few signs of bronze metallurgy in China before the second millennium B.C.E., many scholars have thought that bronze technology also diffused to China. See two articles by Cyril Stanley Smith, "Bronze Technology in the East," in Mikulas Teich and Robert Young, eds., *Changing Perspectives in the History of Science: Essays in Honour of Joseph Needham* (London, 1973), 21–32; and "The Early History of Casting, Molds, and the Science of Solidification," in Smith's collected essays, *A Search for Structure: Selected Essays on Science, Art, and History* (Cambridge, Mass., 1981), 127–73. For an argument that bronze technology in China was the result of independent invention, see Ping-ti Ho, *The Cradle of the East: An Inquiry into the Indigenous Origins of Techniques and Ideas of Neolithic and Early Historic China, 5000–1000 B.C.* (Hong Kong, 1975), 177–221. K. C. Chang, *The Archaeology of Ancient China*, 4th edn. (New Haven, Conn., 1986), discusses several Chinese bronze artifacts from the third millennium B.C.E. Since he does not directly address the question of diffusion and independent invention, however, Chang seems to have softened his position since the third edition of his work (New Haven, 1977), 274–79, which argued explicitly for the independent invention of Chinese bronze metallurgy. The relevant volume of Joseph Needham, *Science and Civilisation in China*, 6 vols. (Cambridge, 1954–), has not yet appeared, but it will undoubtedly shed light on the origins and spread of bronze throughout Eurasia.

[20] For a preliminary report on the earliest known chariots, see David W. Anthony and Nikolai B. Vinogradov, "Birth of the Chariot," *Archaeology*, 48 (March–April 1995): 36–41.

[21] Theodore A. Wertime and James D. Muhly, eds., *The Coming of the Age of Iron* (New Haven, Conn., 1980); Jan Vansina, *Paths in the Rainforests: Toward a History of Political Tradition in Equatorial Africa* (Madison, Wis., 1990), 47–69, esp. 58–61.

warriors, and later on iron weapons as well, to build powerful imperial states such as the Babylonian and Assyrian empires in Mesopotamia, the New Kingdom in Egypt, and the Shang and Zhou dynasties in China.

Improving technologies of transportation underwrote a noticeable expansion of cross-cultural trade during the age of ancient civilizations. China was too distant to trade directly with the other ancient civilizations, although nomadic peoples linked China indirectly to other Eurasian societies. Further west, however, trade links proliferated. During the centuries from about 2000 to 1600 B.C.E., for example, Assyrian merchants organized a trading network that connected lands as distant as Afghanistan, Persia, Mesopotamia, Arabia, Syria, and Anatolia. Major products exchanged included tin from Afghanistan, grain and textiles from Mesopotamia, copper from Arabia, wood and wine from Syria, and copper, silver, and gold from Anatolia. The ancient civilizations conducted trade on an impressive scale: one document mentions a single shipment of eighteen tons of copper from Oman in Arabia to Mesopotamia, and scholars have calculated that over the period from approximately 1810 to 1765 B.C.E., Assyrian merchants transported about eighty tons of imported tin and 100,000 textiles manufactured in their home city of Assur (in northern Mesopotamia) to Kanesh (in Anatolia), returning to Assur with some ten tons of silver.[22]

Migration and trade also facilitated cultural exchanges during the age of ancient civilizations. Chinese ruling elites of the Western Zhou dynasty (1027–771 B.C.E.) seem to have enlisted Persian magi as religious and ritual specialists.[23] Meanwhile, after about 1050 B.C.E., alphabetic writing spread from Phoenicia, where scribes used twenty-two consonants to represent individual sounds, to Greece, where vowels also found places in the alphabet. Within the next few centuries, alphabetic writing spread along trade routes throughout the Mediterranean basin and Southwest Asia and beyond to northern India.

Cross-cultural interactions also had effects that went beyond the ancient civilizations themselves. From a long-term point of view, one of the most important processes of this era was the expansion of the zone of cultivation. During the age of ancient civilizations, agriculture spread well beyond the heartlands of early complex societies and took root in Anatolia, Persia, Europe, the Ganges River valley, southern China, parts of Central Asia, and much of sub-Saharan Africa, among other places. Expansion of the zone of cultivation had dramatic effects on world population. Historical demographers estimate that in 3000 B.C.E., human numbers stood at about 14 million. By 2000 B.C.E., they had almost doubled to 27 million; by 1000 B.C.E., they had reached 50 million; and by 500 B.C.E., at the end of the age of ancient civilizations, they had doubled again to 100 million.[24] Meanwhile,

[22] Mogens Trolle Larsen, "Commercial Networks in the Ancient Near East," in Rowlands, Larsen, and Kristiansen, *Centre and Periphery in the Ancient World*, 47–56; John Gledhill and Mogens T. Larsen, "The Polanyi Paradigm and a Dynamic Analysis of Archaic States," in Colin Renfrew, Michael J. Rowlands, and Barbara Abbot Segraves, eds., *Theory and Explanation in Archaeology: The Southampton Conference* (New York, 1982), 197–229; Kohl, "Use and Abuse of World Systems Theory"; and Philip L. Kohl, "The 'World-Economy' of West Asia in the Third Millennium B.C.," in M. Taddei, ed., *South Asian Archaeology, 1977*, 2 vols. (Naples, 1979), 1: 55–85.

[23] Victor Mair, "Old Sinitic **M^{y}ăg*, Old Persian *Maguš*, and English 'Magician,'" *Early China*, 15 (1990): 27–47.

[24] Colin McEvedy and Richard Jones, *Atlas of World Population History* (Harmondsworth, 1978),

as the zone of cultivation expanded, peoples on the margins of agricultural society either became absorbed into the cultivators' society or took up a nomadic lifestyle as a specialized adaptation to agriculture and the challenges that it posed.[25] When they migrated in large numbers, nomadic or semi-nomadic peoples profoundly influenced settled states and societies. During the age of ancient civilizations, for example, continuing migrations of Indo-European peoples transformed societies from India to the British Isles. Thus, both by increasing human numbers in settled societies and by encouraging the formation of nomadic societies, expansion of the zone of cultivation shaped the experiences of human communities throughout the Eastern hemisphere.

A third period of global history, the age of classical civilizations, unfolded during the millennium from about 500 B.C.E. to 500 C.E. The classical civilizations differed from the early complex societies and the ancient civilizations in several important ways. Historians have long associated classical civilizations with the development of cultural and religious traditions, such as Confucianism, Buddhism, Greek philosophy, and Christianity, that influenced beliefs and values in their respective societies over the long term. The classical civilizations also organized states on a much larger scale than had earlier societies: the Han dynasty in China embraced far more territory than the Shang and Zhou dynasties, the Achaemenid dynasty in Persia dwarfed earlier Mesopotamian states, the Mauryan dynasty absorbed numerous regional kingdoms in India, and the Roman empire brought all the lands of the Mediterranean basin under its control. As a result of their larger scale of organization, the states generated by the classical civilizations pacified much larger territories than had their predecessors.

In addition, improving networks and technologies of transportation quickened the pace of cross-cultural interactions. The classical civilizations all invested considerable resources in the construction of roads and bridges: while the results of Roman engineering are best known today, Persian, Chinese, and Indian states also built extensive transportation networks. These construction projects enabled classical civilizations to extend administrative oversight and to project military power more effectively than their predecessors to the far corners of their realms. Meanwhile, camels became increasingly important transport animals during classical times. Though domesticated shortly after 3000 B.C.E. and used as pack animals from at least the thirteenth century B.C.E., camels did not become prominent in long-distance trade and transportation networks until the invention of an efficient saddle between about 500 and 100 B.C.E. Thereafter, use of camels spread rapidly throughout much of Asia and Africa.[26] Improving networks and technologies of transportation encouraged economic development and economic integration within

342–51. On the Bantu migrations and their role in spreading agriculture, see Vansina, *Paths in the Rainforests*, 47–69; and S. Lwanga-Lunyiigo and J. Vansina, "The Bantu-Speaking Peoples and Their Expansion," in J. Ki-Zerbo, *et al.*, eds., *General History of Africa*, 7 vols. (Berkeley, Calif., 1981–), 3: 140–62.

[25] Apart from the classic work of Owen Lattimore, *Inner Asian Frontiers of China*, 2d edn. (New York, 1951), see also Anatoly M. Khazanov, *Nomads and the Outside World*, J. Crookendon, trans., 2d edn. (Madison, Wis., 1994).

[26] See Bulliet, *Camel and the Wheel*, 28–110; and William H. McNeill, "The Eccentricity of Wheels, or Eurasian Transportation in Historical Perspective," *AHR*, 92 (December 1987): 1111–26.

the precincts of the classical civilizations, and they placed these civilizations in a strong position to take part in trade and exchange relationships with other lands.

The classical civilizations began to emerge as early as the mid-sixth century B.C.E., with the appearance of the Achaemenid dynasty in Persia. Both the volume of cross-cultural trade and the intensity of cross-cultural interactions increased particularly during Hellenistic times, as classical civilizations in Persia and the Mediterranean basin engaged each other politically, militarily, economically, and culturally. Prominent venues of cross-cultural interaction were the many cities established by the conqueror Alexander in Persia and Bactria. Originally populated by soldiers and administrators, these cities soon attracted Greek merchants and bankers, who linked them to a Mediterranean basin already moving toward economic integration. Graphic evidence of cross-cultural interaction came from the school of Buddhist art that emerged in the north Indian kingdom of Gandhara: Hellenistic communities in Bactria attracted Mediterranean artists, who influenced the development of Buddhist art.[27] Meanwhile, Bactria and the north Indian commercial center at Taxila became busy crossroads of international traffic. This pattern continued after the death of Alexander. The Seleucids pacified and controlled trade routes between Bactria and the Mediterranean, while the Ptolemies controlled trade routes south to Nubia, also clearing the Red Sea of pirates and constructing ports such as Berenice. As a result of substantial investments in military campaigns and policing activities, then, the Hellenistic states established a solid foundation for cross-cultural trade and interaction.

A high point of cross-cultural interaction during classical times came with the elaboration of the intricate and well-articulated network of the so-called silk roads, both terrestrial and maritime. The establishment and maintenance of these trade routes depended on states such as the Han, Kushan, Parthian, and Roman empires, which pacified vast stretches of Eurasia and reduced the risks involved in long-distance trade. The terrestrial silk roads enabled commerce to move from China through Central Asia and Persia to the Mediterranean basin. The sea lanes linked lands from South China, through Southeast Asia, Ceylon, and India, to Persia and East Africa. One sea lane may have enabled Malayan mariner-merchants to sail directly from the islands of Southeast Asia to Madagascar and ports in East Africa. From the Persian Gulf, the Red Sea, and the East African ports, it was a simple matter to gain access to the Mediterranean basin.[28] The volume of trade conducted over the silk roads in classical times was not impressive by the standards of later ages. By the standards of earlier eras, however, it was quite large, though

[27] See Jean W. Sedlar, *India and the Greek World: A Study in the Transmission of Culture* (Totowa, N.J., 1980); and Mortimer Wheeler, *Flames over Persepolis, Turning-Point in History* (New York, 1968). See also Frank L. Holt, *Alexander the Great and Bactria: The Formation of a Greek Frontier in Central Asia* (Leiden, 1989).

[28] On the general patterns of trade during classical times, see Curtin, *Cross-Cultural Trade in World History*, 60–108; Simkin, *Traditional Trade of Asia*, 1–49; Manfred G. Raschke, "New Studies in Roman Commerce with the East," in H. Temporini and W. Haase, eds., *Aufstieg und Niedergang der römischen Welt* (Berlin, 1978), 2: 9: 2, 604–1361; Ying-shih Yü, *Trade and Expansion in Han China: A Study in the Structure of Sino-Barbarian Economic Relations* (Berkeley, Calif., 1967); and Vimala Begley and Richard Daniel De Puma, eds., *Rome and India: The Ancient Sea Trade* (Madison, Wis., 1991). On the terrestrial and maritime routes of the silk roads, see Wang, *Nanhai Trade*; Lionel Casson, ed., *The "Periplus Maris Erythraei"* (Princeton, N.J., 1989); and J. Innes Miller, *The Spice Trade of the Roman Empire, 29 B.C. to A.D. 641* (Oxford, 1969).

precision about its volume is impossible. To mention the most important commodities, it involved silk from China, spices and gems from Southeast Asia and India, horses and jade from Central Asia, aromatics from Arabia, and manufactured, value-added products and bullion from the Mediterranean basin.

Apart from its volume, trade over the silk roads during classical times was important for at least four reasons. In the first place, it had enormous significance for elites in lands participating in cross-cultural trade. Central Asian horses were crucial to Chinese military forces, and Chinese silks became essential apparel for fashionable women in Rome. Furthermore, political elites benefited from trade by controlling it and taxing it. In the second place, traffic over the trade routes facilitated the spread of religious and cultural traditions. The early diffusions of Hinduism, Buddhism, and Christianity—not to mention the explosive expansion of Manichaeism—were processes that took excellent advantage of the trade routes of the classical era.[29]

In the third place, trade routes served not only as commercial and cultural highways but also as avenues for the dissemination of pathogens, which in turn caused destructive epidemics of disease. During the second and third centuries C.E., epidemic diseases reduced the populations of China and the Mediterranean basin by about 25 percent and quite likely plagued other lands as well. This demographic decline aggravated existing political and economic problems, thus weakening the classical empires themselves, while also undermining the economic activity that supported long-distance trade.[30] Finally, long-distance trade strengthened nomadic peoples of Central Asia to the point that they posed a threat to settled societies throughout Eurasia. Nomadic peoples transported many of the commodities that traveled by caravan over the silk roads of Central Asia, and they prospered accordingly. They not only profited from the carriage and protection services that they provided but also gained access to tools, weapons, and technologies that strengthened them militarily. Indeed, beginning about the third century C.E., nomadic peoples toppled states in much of settled, agricultural Eurasia.[31] Thus, while long-distance trade helped in the establishment and maintenance of the classical empires, it also led to their decline and dissolution as well.

The collapse of the Han and Roman empires brought this age of classical civilizations to an end. They had served as the political and economic anchors of long-distance trade and exchange networks across Eurasia, and there were no immediate successors to provide police services and maintain the stability that favored long-distance trade. The Byzantine and Sassanid empires survived the

[29] See Bentley, *Old World Encounters*, 29–66; Sedlar, *India and the Greek World*; James Heitzman, *The Origin and Spread of Buddhist Monastic Institutions in South Asia, 500 B.C.–300 A.D.* (Philadelphia, 1980); Heitzman, "Early Buddhism, Trade and Empire," in Kenneth A. R. Kennedy and Gregory L. Possehl, eds., *Studies in the Archaeology and Palaeoanthropology of South Asia* (New Delhi, 1984), 121–37; E. Zürcher, *The Buddhist Conquest of China*, 2 vols. (Leiden, 1959–72); and Samuel N. C. Lieu, *Manichaeism in the Later Roman Empire and Medieval China*, 2d edn. (Tübingen, 1992).

[30] See McNeill, *Plagues and Peoples*, 106–47. For the populations of China and Europe, see McEvedy and Jones, *Atlas of World Population History*, 18–39, 166–75.

[31] For an intriguing analysis showing how Chinese wealth strengthened nomadic peoples, see Thomas J. Barfield, *The Perilous Frontier: Nomadic Empires and China* (Cambridge, Mass., 1989). See also Barry Cunliffe, *Greeks, Romans and Barbarians: Spheres of Interaction* (New York, 1988); Patrick J. Geary, *Before France and Germany: The Creation and Transformation of the Merovingian World* (New York, 1988); and the classic work of Frederick J. Teggart, *Rome and China: A Study of Correlations in Historical Events* (Berkeley, Calif., 1939).

collapse of the classical world, and, despite their wars, a good deal of trade passed between the two states. Beyond Byzantium and Persia, however, the disappearance of the classical empires brought a temporary end to large-scale political organization. Long-distance trade became a riskier proposition than during earlier centuries, and demographic losses and shrinking economies also contributed to the decline of the silk roads trading network. During the two centuries following the fall of the Han and Roman empires, cross-cultural interaction did not entirely disappear, but it became much less prominent than during the classical era.

Beginning in the late sixth century C.E., there was a revival of cross-cultural interaction. The result was a fourth era of global history, which for lack of a better term I call the post-classical age, extending from about 500 to 1000 C.E. As in the age of classical civilizations, cross-cultural interaction during the post-classical era depended on political stability and economic stimulus provided by well-organized and wealthy states. In post-classical times, the political and economic foundations of cross-cultural interaction were the Tang empire in China, the Abbasid empire in Southwest Asia, and the Byzantine empire in the eastern Mediterranean basin. All three states maintained order over large territories, and they also generated powerful economies. As a result, the three empires served as political and economic anchors of the post-classical world order.

In several ways, cross-cultural interaction brought the various regions of the post-classical world into communication with each other. One process sponsoring cross-cultural interaction was the round of imperial expansion that led to the establishment of the Tang and Abbasid states. Tang expansion engaged Chinese in encounters most notably with Southeast Asian and Central Asian peoples, with political, economic, and cultural results for all parties concerned.[32] Meanwhile, the Abbasid state represented the early expansion of Islam beyond its Arabian homeland and the engagement of Islam with older cultural traditions. The Byzantine state was not the result of a new imperial creation so much as the continuation of the classical Roman empire, but the political realities of empire forced it, too, into interaction with other regions, particularly with the Abbasid realm and the northern lands of Russia and Scandinavia. Beyond the Tang, Abbasid, and Byzantine experiences, imperial expansion occasioned processes of cross-cultural interaction in other lands during the post-classical era. The Carolingian empire brought Christian Mediterranean society into confrontation with that of Germanic Northern Europe, while the Tibetan empire mounted a temporary but sharp challenge to Tang China.

As in the classical era, trade worked alongside imperial expansion to encourage cross-cultural interaction during post-classical times. Political stability provided by the Tang, Abbasid, and Byzantine states encouraged merchants to revive the trading network of the silk roads. Caravan trade once again crossed Central Asia between China and the Mediterranean basin, while maritime trade linked the regions of the Indian Ocean basin. In some ways, then, long-distance commerce in post-classical times depended on a reconstitution of the ancient silk roads trading network.[33]

[32] See the volumes of Edward H. Schafer cited earlier: *The Golden Peaches of Samarkand* and *The Vermilion Bird*.

[33] On long-distance trade in this era, see Curtin, *Cross-Cultural Trade in World History*, 90–108;

In several respects, however, patterns of long-distance trade in post-classical times differed from those of the earlier era. In the first place, Western Europe participated in Eurasian trade in more indirect fashion than before. During the centuries from 500 to 1000 C.E., Western Europeans engaged in a limited amount of direct trade with the Byzantine realm and Islamic states in the Mediterranean basin. Recent studies have shown, however, that Western Europeans continued to participate in the larger commercial life of Eurasia by way of indirect trade routed through Scandinavia and Russia.[34]

In the second place, the volume of long-distance trade was much greater during the post-classical era than during the classical age. While it is impossible to calculate the value of that trade, it is clear that its volume dwarfed that which passed over the silk roads of classical times. Trade passing overland benefited from the organization of nomadic peoples, who provided transportation and protection services that facilitated commerce through Central Asia. Particularly important in this connection were the Uighurs, who from the mid-seventh to the mid-eighth century organized and controlled trade routes between China and the Byzantine empire. The Uighurs expropriated their fair share (at the very least) of the trade through Central Asia. Their services, however, helped to boost dramatically the volume of overland trade conducted during the post-classical era. In its turn, a high volume of long-distance trade signaled an increased tempo of cross-cultural interaction.[35] Meanwhile, maritime commerce in the Indian Ocean basin burgeoned during the post-classical era. Trade linking South China with Ceylon and India grew to such proportions that the kings of Srivijaya, based at Palembang in southeastern Sumatra, organized an island-based empire that for much of the time between the seventh and thirteenth centuries controlled commerce through Southeast Asian waters. Chinese mariners traveled as far west as Ceylon and India, while Indian, Persian, and Arabian merchants ventured throughout the Indian Ocean basin and beyond to China. During the eighth century, the Chinese port city of Guangzhou had a population estimated at 200,000, including large numbers of merchants from Southeast Asia, India, Persia, and Arabia. In the year 879, the Tang rebel Huang Chao sacked Guangzhou and reportedly slaughtered 120,000 foreigners during his brief reign of terror there.[36] Even more than in the case of overland trade, then, maritime commerce expanded to large proportions during the post-classical era.

In the third place, the regions of sub-Saharan East and West Africa became much

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Simkin, *Traditional Trade of Asia*, 49–124; Wang, *Nanhai Trade*; Hourani, *Arab Seafaring in the Indian Ocean*; L. Rabinowitz, *Jewish Merchant Adventurers: A Study of the Radanites* (London, 1948); and the two volumes of Chaudhuri: *Trade and Civilisation in the Indian Ocean* and *Asia before Europe*.

[34] See especially Richard Hodges and David Whitehouse, *Mohammed, Charlemagne and the Origins of Europe: Archaeology and the Pirenne Thesis* (Ithaca, N.Y., 1983).

[35] On the Uighurs, see Colin Mackerras, *The Uighur Empire according to the T'ang Dynastic Histories* (Columbia, S.C., 1972); Barfield, *Perilous Frontier*, 131–63; and V. Minorsky, "Tamim Ibn Bahr's Journey to the Uighurs," *Bulletin of the School of Oriental and African Studies*, 12 (1948): 275–305. On the silk trade during this era, see Liu Xinru, "Silks and Religions in Eurasia, c. A.D. 600–1200," *Journal of World History*, 6 (1995): 25–48.

[36] See George Coedès, *The Indianized States of Southeast Asia*, S. B. Cowing, trans. (Honolulu, 1968), 81–188; O. W. Wolters, *Early Indonesian Commerce: A Study of the Origins of Srivijaya* (Ithaca, N.Y., 1967); Hourani, *Arab Seafaring in the Indian Ocean*; and Chaudhuri's two volumes: *Trade and Civilisation in the Indian Ocean* and *Asia before Europe*.

more engaged in the larger trading world of the Eastern hemisphere during the post-classical age than in earlier centuries. The maritime commerce of the Indian Ocean basin increasingly drew the port cities of East Africa into the commercial life of the larger world. The coastal cities then became economic magnets that helped structure economic activity in the East African hinterlands.[37] Meanwhile, caravan trade across the Sahara desert became more frequent and regular than before, drawing sub-Saharan West Africa into increased commerce with North Africa and the Mediterranean basin, while also laying the groundwork for rulers to found powerful states.[38] The full implications of this long-distance trade involving East and West Africa became apparent only in a later age. That trade warrants mention here, however, because it was the commercial dynamic of the post-classical era that brought East and West Africa into the larger trading world. For purposes of this essay, it also bears pointing out that the prominence of East and West Africa in the larger trading world shows that a periodization based on cross-cultural interaction has application well beyond Europe and Asia in pre-modern times. While it does not have the capacity to integrate southern Africa, the Americas, or the Pacific islands into a periodization scheme before modern times, it does make it possible to establish a context for the periodization of almost all the Eastern hemisphere, including large regions of sub-Saharan Africa, as well as North Africa, Europe, and Asia.

Thus processes of imperial expansion and long-distance trade helped to bring the various regions of the Eastern hemisphere into sustained interaction with each other during the post-classical era. Alongside their political and economic consequences, two results of these interactions warrant mention: the diffusion of agricultural crops and the spread of religious and cultural traditions. The spread of early ripening rice from Southeast Asia to China underwrote increased agricultural production and demographic growth in East Asia. Even more important diffusions took place in the Islamic world, from India to Iberia and North Africa. As Islamic administrators, soldiers, and merchants traveled throughout this vast zone, they transported plants from one region to another. Most diffusions went from India to Southwest Asia, North Africa, Southern Europe, and the Mediterranean islands. The transplants included staple crops such as sugar cane, rice, and new varieties of wheat; vegetable crops such as spinach, artichokes, and eggplants; fruit crops such as oranges, lemons, limes, bananas, mangoes, and melons; and industrial crops such as cotton, indigo, and henna. These diffusions brought improved diets, increased agricultural production, and population growth in all the lands they touched.[39]

Meanwhile, the centuries from 500 to 1000 C.E. also witnessed a remarkable diffusion of religious and cultural traditions, including the extension of Confucian values to Southeast Asia; widespread conversion to Buddhism in Central Asia, China, Korea, Japan, and Southeast Asia; the establishment of Manichaean

[37] See John Middleton, *The World of the Swahili: An African Mercantile Civilization* (New Haven, Conn., 1992); Derek Nurse and Thomas Spear, *The Swahili: Reconstructing the History and Language of an African Society, 800–1500* (Philadelphia, 1985); and the rich archaeological study by H. Neville Chittick, *Kilwa: An Islamic Trading City on the East African Coast*, 2 vols. (Nairobi, 1974).

[38] On the caravan trade, see E. W. Bovill, *The Golden Trade of the Moors*, 2d edn. (London, 1968). On early West Africa in general, see Nehemia Levtzion, *Ancient Ghana and Mali* (London, 1973).

[39] See Shaffer, "Southernization"; and Watson, *Agricultural Innovation in the Early Islamic World*.

communities in Central Asia and China; the establishment of Islam throughout North Africa and Southwest Asia, as well as its introduction to northern India and parts of Central Asia; the establishment of Nestorian Christian communities in Central Asia and China; the conversion of Russia and Eastern Europe to Orthodox Christianity; the conversion of Western and Northern Europe to Roman Catholic Christianity; and the spread of literacy and formal education throughout much of the Eastern hemisphere.[40] Thus, in an era sometimes labeled a "dark age," cross-cultural interactions fostered religious and cultural exchanges that shaped the history of the Eastern hemisphere well into modern times. These exchanges have worked enormous influence over the long term of history, and they deserve recognition when it comes to global periodization.

The post-classical era did not come to an end in the same way as the age of classical civilizations, as a casualty of epidemic disease, demographic catastrophe, and collapse of the states that maintained order on a large scale. Instead, it fell under the shadow of a fifth period of global history—an age of transregional nomadic empires, extending from about 1000 to 1500 C.E.—when cross-cultural interactions proceeded according to dynamics different from those of the post-classical era. Nomadic peoples established empires incorporating vast stretches of the Eurasian land mass, and they sponsored direct interactions between distant peoples. During the eleventh century, the Saljuq Turks built an empire extending from Central Asia into Southwest Asia and Anatolia. About the same time, the Khitan people established an empire in the steppelands north and west of China. During the twelfth century, the Jurchen, a semi-nomadic people from Manchuria, overcame the Khitan and incorporated northern China itself into their own empire. The most dramatic development of this period came during the thirteenth century, when the Mongols and their allies overran most of Eurasia and established the largest empire in human history, stretching from China, Manchuria, and Korea in the east to Russia and the Danube in the west. Even after the collapse of their Yuan dynasty in China (1368), the Mongols played a prominent role in Central Asia. Meanwhile, from the fourteenth until the early sixteenth century, Timurid conquerors built an impressive empire in Central Asia, India, Southwest Asia, and Anatolia. The migrations, conquests, and empire-building efforts of nomadic peoples guaranteed that cross-cultural interactions would take place in more intensive and systematic fashion than in earlier eras. Indeed, in the case of the Mongols, the establishment of a vast, transregional empire underwrote direct interaction between peoples from lands as distant as China and Europe.

It was significant that most of the nomads' empires had their bases in Central Asia, a region crucially important to overland trade between China and points west. As a result of the nomads' empires and their strong commercial interests, trade over the terrestrial silk roads became less risky than ever before in history, and its volume rose correspondingly. Trade over the sea lanes of the Indian Ocean also

[40] The processes promoting these religious and cultural developments varied considerably. For details, see Bentley, *Old World Encounters*, 67–110. See also Christopher I. Beckwith, *The Tibetan Empire in Central Asia* (Princeton, N.J., 1987), 173–96; Victor H. Mair, *Painting and Performance: Chinese Picture Recitation and Its Indian Genesis* (Honolulu, 1988); and Hugh R. Clark, "Muslims and Hindus in the Culture and Morphology of Quanzhou from the Tenth to the Thirteenth Century," *Journal of World History*, 6 (1995): 49–74.

expanded, and the Indian Ocean basin moved toward economic integration. Recognizing the well-articulated and systematic nature of long-distance trade during the age of nomadic empires, Janet L. Abu-Lughod recently postulated a distinctive "world system" in the period 1250 to 1350 C.E.[41]

Mass migration, imperial expansion, and long-distance trade sustained cross-cultural interaction during the age of the nomadic empires as in earlier eras. The principal difference was that, by the early fourteenth century, those interactions had become much more frequent, regular, intense, and systematic than during previous eras. Ambassadors and missionaries traveled the trade routes alongside soldiers and merchants. The age of the nomadic empires witnessed the establishment of diplomatic contacts and religious missions over distances not previously spanned. Islamic merchants helped to establish a footing for their faith at the extreme ends of the Eastern hemisphere, in Southeast Asia and West Africa. Meanwhile, conquerors established Islamic communities in northern India and Anatolia.[42]

So far as the conquest of distance is concerned, the most impressive cross-cultural interaction during the age of the nomadic empires involved the establishment of direct relations between Western Europeans and the Mongol rulers of China. Diplomatic initiatives stood behind some of the contacts between Europeans and Mongols: at various times, each side sought an alliance with the other against Muslims in Southwest Asia. Europeans also sought to convert the Mongols to Christianity and to establish a Christian community in China.[43] Whether their inspiration was diplomatic or evangelical, these efforts largely failed. The facts remain, however, that conditions were such that peoples could conceive and mount such enterprises during the thirteenth and fourteenth centuries, and many people on both the Mongol and the European side invested considerable energy in diplomatic and evangelical efforts.

William H. McNeill has suggested that cross-cultural interactions dating from this period had repercussions throughout much of the Eastern hemisphere. He has argued more specifically that the emergence of a vigorous market economy in Song China and the diffusion of technological innovations from China stimulated economic growth throughout Eurasia. McNeill's view of things has wide-ranging implications: if he is right, the remarkable round of economic, technological, and commercial development that took place in Song China would help to explain the

[41] Janet L. Abu-Lughod, *Before European Hegemony: The World System, A.D. 1250–1350* (New York, 1989). A recent analysis offers useful insights on this age of nomadic empires: S. A. M. Adshead, *Central Asia in World History* (London, 1993). On long-distance trade during the age of nomadic empires, see Curtin, *Cross-Cultural Trade in World History*, 109–35; Simkin, *Traditional Trade of Asia*, 127–41; and Chaudhuri's two volumes: *Trade and Civilisation in the Indian Ocean* and *Asia before Europe*.

[42] On the expansion of Islam during this age of nomadic empires, see especially Nehemia Levtzion, ed., *Conversion to Islam* (New York, 1979); Ross E. Dunn, *The Adventures of Ibn Battuta, a Muslim Traveller of the 14th Century* (Berkeley, Calif., 1989); S. M. Ikram, *Muslim Civilization in India*, Ainslie T. Embree, ed. (New York, 1964); Aziz Ahmad, *Studies in Islamic Culture in the Indian Environment* (Oxford, 1964); Speros Vryonis, *The Decline of Medieval Hellenism in Asia Minor and the Process of Islamization from the Eleventh through the Fifteenth Century* (Berkeley, 1971); and Claude Cahen, *Pre-Ottoman Turkey*, J. Jones-Williams, trans. (New York, 1968).

[43] On relations between Europeans and the Mongols, see especially Jean Richard, *La papauté et les missions d'orient au moyen âge (XIII^e–XV^e)* (Rome, 1977); Igor de Rachewiltz, *Papal Envoys to the Great Khans* (Stanford, Calif., 1971); and Morris Rossabi, *Voyager from Xanadu: Rabban Sauma, First Eastern Emissary to the West* (New York, 1992).

growth of trade throughout the Eastern hemisphere, the technological superiorit that settled agricultural societies eventually gained over nomadic peoples, and th later emergence of Europe as a world power.[44] Thus cross-cultural interactions c the period 1000 to 1500 C.E. rank as processes of high significance for the history o the Eastern hemisphere and ultimately of the world as a whole.

As in the classical era, cross-cultural interactions not only served as a foundatio for the age of nomadic empires but also helped bring it to an end. Frequent an regular trade over long distances facilitated the spread of diseases as well a commodities and religious faiths. The culprit during the age of nomadic empire was bubonic plague, which caused lethal epidemics in much of Eurasia and Nortl Africa beginning about the mid-fourteenth century. Wherever it struck, bubonic plague disrupted economies and societies, and it wrecked the structures tha supported long-distance trade, travel, and communication during the age of the nomadic empires. Between 1300 and 1400 C.E., the population of Europe declinec about 25 percent, from an estimated 79 million to 60 million. Between 1200 anc 1400, the population of China—devastated by Mongol conquests as well as bubonic plague—plunged from about 115 million to 75 million.[45] Cross-cultural interaction did not cease altogether, but during the second half of the fourteenth century it became less regular, intense, and systematic than during the previous 300 years. Once again, then, cross-cultural interaction had wide-ranging ramifications that influenced the lives of peoples throughout much of the Eastern hemisphere.

When the pace of cross-cultural interaction quickened again, it followed a set of dynamics different from those that operated during the age of the nomadic empires. By the early fifteenth century, Western Europeans had borrowed, invented, accumulated, and refined a technological complex that enabled them to become much more prominent than before on the world stage. Scholars have advanced differing explanations for European prominence: some attribute it in neo-Weberian fashion to the internal development of European energies, while others ascribe it in neo-Marxist fashion to European exploitation of other peoples.[46] In any case, partly as a result of their technological advantage, and partly with the unexpected aid of diseases that ravaged populations in the Americas and the Pacific islands, Western Europeans embarked on campaigns of expansion that vastly magnified their influence in the world.[47] These campaigns opened a sixth era of world history—the

[44] William H. McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago, 1982), 24–62, esp. 50–62; and "*Rise of the West* after Twenty-Five Years." See also two works by E. L. Jones: *The European Miracle: Environments, Economies and Geopolitics in the History of Europe and Asia*, 2d edn. (Cambridge, 1987); and *Growth Recurring: Economic Change in World History* (Oxford, 1988).

[45] For the populations of Europe and China, see McEvedy and Jones, *Atlas of World Population History*, 18–39, 166–75. For studies of bubonic plague and its effects, see McNeill, *Plagues and Peoples*, 149–98; and Michael W. Dols, *The Black Death in the Middle East* (Princeton, N.J., 1977). Abu-Lughod identifies plague as the principal agent that destroyed the complex system of interregional trade that had developed during the thirteenth and fourteenth centuries: see *Before European Hegemony*, 170–75, 183, 352–73.

[46] Compare the analyses of Jones in *European Miracle* and *Growth Recurring* with those of Wallerstein, *Modern World-System*; and J. M. Blaut, *The Colonizer's Model of the World: Geographical Diffusionism and Eurocentric History* (New York, 1993).

[47] On the Europeans' technology, see Carlo Cipolla, *Guns, Sails and Empires: Technological Innovation and the Early Phases of European Expansion, 1400–1700* (New York, 1965); and Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West, 1500–1800* (Cambridge, 1988). On the

modern age, extending from 1500 to the present, a period during which all the world's regions and peoples ultimately became engaged in sustained encounter with each other, thus a period that inaugurated a genuinely global epoch of world history.

CROSS-CULTURAL INTERACTION must figure prominently as a criterion in any effort to establish a periodization of world history in modern times. Indeed, this point is clear enough that there is no need to belabor it. Cross-cultural interactions in modern times have taken many forms, and they lend themselves to analysis from several different angles. Some of the most dramatic results of modern cross-cultural interactions have arisen from the transportation of plants, animals, humans, and microorganisms across biological boundary lines. The demographic and ecological results of the "Columbian exchange," for example, have influenced the lives of all peoples on the planet.[48] Alongside biological exchanges, processes of cross-cultural interaction have brought political, social, and economic consequences. Europeans' military and transportation technologies progressively strengthened their hand with respect to the other peoples they encountered, and their technological advantages help to explain their prominence in modern times.[49] Interactions between different peoples have also had tremendous social and cultural repercussions in modern times, as the development and expression of ethnic identities have faithfully reflected their larger intercultural context.[50] Indeed, from almost every conceivable point of view, cross-cultural interactions have profoundly influenced the experiences of the global human community in modern times. Allowing for the usefulness of sub-periods—early modern, industrial, new imperial, contemporary, postmodern, and the like—the modern era as a whole stands out as one distinct from earlier epochs because of the intensity and systematic nature of the cross-cultural interactions that have driven it.

In the modern world as in earlier periods of history, developments internal to individual societies have helped to shape the experiences of the world's peoples. Yet throughout history, cross-cultural interactions also have influenced lives and

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role of diseases in abetting European expansion, see McNeill, *Plagues and Peoples*, 199–234; and Crosby's two volumes: *Columbian Exchange* and *Ecological Imperialism*.

[48] The best guides to large-scale processes of biological exchange are Crosby's two volumes: *Columbian Exchange* and *Ecological Imperialism*.

[49] For only a few relevant works, see Wallerstein, *Modern World-System*; Wolf, *Europe and the People without History*; and two volumes of Daniel R. Headrick: *Tentacles of Progress* and *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (New York, 1981).

[50] To cite only a few especially rich items from a voluminous literature, see Helms, *Ulysses' Sail*; Stuart B. Schwartz, ed., *Implicit Understandings: Observing, Reporting, and Reflecting on the Encounters between European and Other Peoples in the Early Modern Era* (Cambridge, 1994); Michael Adas, *Prophets of Rebellion: Millenarian Protest Movements against the European Colonial Order* (1979; New York, 1987); John Thornton, *Africa and Africans in the Making of the Atlantic World, 1400–1680* (New York, 1992); James Axtell, *The European and the Indian: Essays in the Ethnohistory of Colonial North America* (New York, 1981); Richard White, *The Middle Ground: Indians, Empires, and Republics in the Grat Lakes Region, 1650–1815* (Cambridge, 1991); Greg Dening, *Islands and Beaches: Discourse on a Silent Land—Marquesas, 1774–1880* (Honolulu, 1980); David Hanlon, *Upon a Stone Altar: A History of the Island of Pohnpei to 1890* (Honolulu, 1988); and David A. Chappell, "Frontiers and Ethnogenesis," *Journal of World History*, 4 (1993): 267–75.

fortunes across the boundary lines of societies and cultural regions. Indeed, they have often influenced ostensibly internal developments. As historians view the past from broad, comparative, and global perspectives, they will need to bear in mind the roles of cross-cultural interactions in shaping the world's common history.

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The Problem of Interactions in World History

PATRICK MANNING

JERRY BENTLEY, in proposing a periodization of world history, offers us more than a set of periods. He defends a specific criterion for evaluating world-historical change, develops his set of periods out of that criterion, and utilizes the periods to suggest long-term interpretations of history.

His criterion focuses on cross-cultural interaction. More precisely, he identifies three main kinds of processes (mass migration, empire building, and long-distance trade) as having had "significant repercussions across the boundary lines of societies and cultural regions." In applying his criterion to develop a periodization, Bentley relies on documented changes in the scale and character of these three "kinds of processes" to identify six major periods in the history of the Afro-Eurasian land mass.[1] Then, within the framework of this periodization, he offers a narrative of periodic expansion in scale and transformation in character of cross-cultural interactions. The latter point is worthy of underscoring: if Bentley's interpretation focused mainly on expansions in the scale of cross-cultural contacts, we would have yet another narrative of progress. Instead, he sidesteps a linear interpretation of world history by emphasizing successive changes in the character of cross-cultural interactions along with their growing magnitude.[2]

I find Bentley's presentation to be elegant and comprehensive, and I am inclined to accept cross-cultural interaction as an appropriate criterion for periodizing world history. But the implications of Bentley's scheme may be broader than they first appear.[3] For if one accepts cross-cultural interaction as the criterion for periodization in world history, one tends at the same time to accept such interactions as the main subject matter of world history. This big step requires some discussion.

[1] Jerry Bentley, "Cross-Cultural Interaction and Periodization in World History," *AHR*, 101 (June 1996): 752, 756. Bentley restricts his argument to contiguous regions of Afro-Eurasia. As I will note below, certain alternative perspectives would call for the inclusion of the Americas in interpretations of world history even before 1492.

[2] Bentley defines his periods in large measure by the emergence of new technologies and by successive expansions in the scale of commerce, population, and administrative units. In addition, however, he portrays each period as having distinct character. Thus he emphasizes the spread of literacy in the period of early complex societies and the exchange of artistic traditions in the classical era. He also associates cyclical change with his periods, as with the spread of epidemic disease in the wake of population growth and migration.

[3] In calling it his scheme, I mean that it represents his enunciation of an approach shared implicitly among contemporary world historians. William H. McNeill may be considered to have laid groundwork for this scheme with his notion of periodic closure of a global ecumene. McNeill, *The Rise of the West: A History of the Human Community* (Chicago, 1963).

Bentley contrasts his scheme of periodization with those based on stages of social development or cycles of expansion and contraction. Schemes of evolutionary stages and of civilizational rise and fall have indeed structured much interpretation of world history.[4] Perhaps less centrally but still significantly, various other criteria have played roles in the long-run interpretation of history: these include the diffusion of technical advance, the experience of chosen peoples, the interaction and successive dominance of great powers, the development of "culture areas," the inevitability of progress, and the progress of human freedom.[5]

All of these criteria for evaluating world history entail some degree of interaction. But Bentley offers us a distinct and selective topical focus for world history. He focuses on the interaction itself, while in the other approaches interaction is placed at the service of some other purpose, often teleological. Just as urban history does not aspire to the study of everything about cities, world history does not aspire to the study of everything about the world: to try to study everything at once is far beyond our mortal powers of comprehension. Nor is world history a totalizing analysis centered on ethereal generalizations at the planetary level: such a history would effectively deny the individual any opportunity to participate in world history. While it is probably too early in the development of the field to attempt an authoritative characterization of its focus, one can suggest for a start that world history emphasizes the interaction of the pieces (be they community, societal, or continental) in human history and that it seeks to assess the experience of the whole of humanity through study of those interactions.

Bentley's clear and direct approach to periodization includes, of necessity, some simplification—streamlining his presentation at the cost of setting aside some issues worthy of discussion. First, Bentley documents his periodization primarily with results of recent research. One can only applaud the volume and the diversity of new research, as well as Bentley's mastery of it. Still, the work of periodization relies not only on new evidence but also on the conceptual frameworks within which

[4] Visions of evolutionary stages in history include those elucidated by Karl Marx, the marquis de Condorcet, G. W. F. Hegel, and others. Oswald Spengler and Arnold J. Toynbee contributed significantly to twentieth-century views of civilizational rise and fall. Karl Marx and Friedrich Engels, *The Communist Manifesto* (1848; Oxford, 1992); Marie Jean Antoine Nicolas Caristat, Marquis de Condorcet, *Tableau historique des progrès de l'esprit humain* (1796; Paris, 1900); G. W. F. Hegel, *Lectures on the Philosophy of World History* (London, 1968); Oswald Spengler, *The Decline of the West*, Charles Francis Atkinson, trans., 2 vols. (London, 1926–28); Arnold J. Toynbee, *A Study of History*, 12 vols. (London, 1934–61).

[5] This is but a partial list of available interpretive frameworks in world history. Technologically determined interpretations of world history remain influential, especially for long-term change; histories of chosen peoples (Romans, Jews, Chinese, and others) have contributed to the interpretation of world history. Writers from Leopold von Ranke to Paul Kennedy have interpreted the world through the interaction of great powers. Anthropologists and some historians have utilized "culture areas" as an alternative to civilizations in exploring world history. The interpretation of world history in terms of the progress of one era over the preceding, while derisively labeled "Whig history," remains widely practiced. In a more specialized view of progress, Hegel in the nineteenth century and Francis Fukuyama in more recent times have emphasized the progress of human freedom in history. Leopold von Ranke, "The Great Powers" (1833); Paul Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York, 1987); Herbert Butterfield, *The Whig Interpretation of History* (New York, 1951); Hegel, *Lectures on the Philosophy of World History*; Francis Fukuyama, *The End of History and the Last Man* (New York, 1992).

For a defense of an expanded world-system paradigm that conveniently reviews a wide range of historical frameworks, see Andre Gunder Frank and Barry K. Gills, eds., *The World System: Five Hundred Years or Five Thousand?* (London, 1993).

evidence is collected. Thus much of my commentary below focuses on conceptual frameworks in world history, their continuities and changes. In another simplification, Bentley abbreviates discussion of the modern period, assuming that the significance of cross-cultural interaction in recent times is evident.[6] Some writers, however—whose vision of global connections goes no further than diffusion and dominance—have found it possible to write interpretations of world history in the modern period that neglect or minimize interaction.[7] In discussing Bentley's periodization, I wish therefore to consider outlook as well as evidence and the modern era as well as earlier times.

Having indicated my largely favorable response to Bentley's interpretive framework, I wish nonetheless to pose three major questions. Two address the meaning of the framework itself, and the third addresses its application. These are questions of detail that, under certain circumstances, become fundamental: What is meant by "interaction"? What is meant by "cross-cultural"? What changes does this framework imply for the interpretation of world history?

HISTORIANS COMMONLY DESCRIBE the movement of cultural influences from one place to another through the use of such terms as "diffusion" and "dominance." When a language or system of government "diffuses," it keeps the same character in the new place and perhaps displaces its predecessor. When an empire or a technology comes to "dominate" a new area, it imposes its patterns to the detriment of those preceding. With such terms, scholars convey specific meanings for the general notion of interaction in history.

More broadly, interaction involves phenomena ranging from the collision of two billiard balls (where everything about them remains unchanged except their direction) to the development of a new life out of the linkage of sperm and egg (where interpenetration replaces collision and where two bodies unite to form another body). The notions of diffusion and dominance, as types of interaction that might best be placed between these poles, clearly fall short of exhausting the possibilities in interaction.

Bentley has focused on recent research revealing cross-cultural interaction: he gives particular emphasis to results established in the past decade, notably on the early importance of trade.[8] While the accomplishments in recent research are indeed formidable, I would rather add a step to the analysis and explore the framework in which the new results have been developed. That is, I would treat the term "interaction" as problematic and consider its changing conceptualization and application over time.

[6] As he puts it, "Legions of scholars have examined the effects of cross-cultural interactions in modern times." Bentley, "Cross-Cultural Interaction," 751.

[7] Rosenberg and Birdzell have assumed, in their widely cited interpretation of modern economic history, that there is no need to include interactions with areas beyond "the West" in their analysis. Paul Kennedy's study of great powers focuses on interactions among the powers, but he allows little role in his story for smaller or weaker polities. Nathan Rosenberg and L. E. Birdzell, Jr., *How the West Grew Rich: The Economic Transformation of the Industrial World* (New York, 1985); Kennedy, *Rise and Fall of the Great Powers*.

[8] Bentley, "Cross-Cultural Interaction," 753–56.

What varieties of "cross-cultural interaction" have existed in history? To what degree do terms such as "diffusion" and "spread" and "dominance" capture the relevant range of cross-cultural interactions? How have historians and social scientists (such as sociologists, anthropologists, archaeologists, and linguists) conceptualized "interaction"?

Edward Gibbon and the marquis de Condorcet, writing at the height of the Enlightenment, each created a text that has remained influential in thinking about world history. Gibbon's ten volumes are elaborately nuanced, while Condorcet had time only to give a sketch of his broad vision, yet each made his mark. Gibbon remains an icon for the notion of civilizational rise and fall, as Condorcet remains an icon for the vision of stages in human progress. Both of their analyses assumed the existence of cross-cultural interaction, yet neither specified how it took place.[9]

As the Enlightenment's focus on classification came to be supplemented by the nineteenth century's elaboration of positivism, concerns with cause and effect came to the fore. Thus Karl Marx's evolutionary scheme of human progress differed from that of Condorcet in that it had a cause—changes in mode of production propelled by contradictions within the productive system—and effects radiating into social and cultural arenas. Herbert Spencer's vision of social change, while politically antithetical to that of Marx, shared some of the same analytical framework. In this world of cause and effect, the *diffusion* of influences from one center to another was the relevant mechanism of interaction, and the *dominance* of social classes and economic orders was a major focus of world history.[10] These were the intellectual environments in which historians lived and worked as the historical profession formalized its organization at the end of the nineteenth century.

As the era of World War I reinforced new doubts about the inevitability and the benefits of material and moral progress, Oswald Spengler articulated these doubts in historical context. Spengler, in *The Decline of the West*, perhaps the most sophisticated interpretation of world history to that time, railed against "Darwinists," by which he meant the positivistic thinkers who perceived a mechanical sort of evolution in world history. Spengler's organic metaphor was biographic and self-contained: the birth, maturation, and death of each major civilization over a thousand-year life span, with a focus on its achievements in high culture.[11] All the

[9] Gibbon's notion of decline and fall finds its reflection in the gloomy prognostications of Oswald Spengler and in the downswings at the end of Bentley's cycles; Condorcet's stages parallel the opening of new periods. Edward Gibbon, *The Decline and Fall of the Roman Empire*, 6 vols. (London, 1776–78); Condorcet, *Tableau historique*; Spengler, *Decline of the West*.

Andrew M. Watson, in one of the fine recent studies to which Bentley refers, uses botannical and Arabic text data to trace a wave of agricultural innovation in the early Islamic world. His analysis of agricultural change, however, focuses dominantly on diffusion as the mechanism of change, and his conclusion contextualizes his results through a vision of civilizational rise and fall similar to that of Gibbon. Arnold Pacey's history of technology, in contrast, gives explicit consideration to varying mechanisms of transfer and innovation in technology. Watson, *Agricultural Innovation in the Early Islamic World: The Diffusion of Crops and Farming Techniques, 700–1100* (Cambridge, 1983); Pacey, *Technology in World Civilization: A Thousand-Year History* (Oxford, 1990).

[10] Marx and Engels, *Communist Manifesto*; Herbert Spencer, *The Evolution of Society* (selections from *Principles of Sociology* [London, 1876]), Robert L. Carneiro, ed. (Chicago, 1967).

[11] Spengler, *Decline of the West*. Probably Herbert Spencer was among those he targeted; Spencer's notion of evolution, however, was Lamarckian not Darwinian. It may be that Spengler drew on the thinking of Emile Durkheim in elaborating his organic metaphor. Durkheim, in his studies of suicide,

interactions of interest took place within each civilizational organism, rather than from one to another.

Arnold Toynbee, whose twelve-volume *Study of History* parallels that of Spengler in some ways, instead adopted a sociological approach on the organizational and military strength of civilizations. His "encounters" of civilizations emphasized the diffusion of influences and the dominance of some civilizations over others.[12]

World history has followed the path of Toynbee more closely than that of Spengler. William McNeill, whose 1963 *Rise of the West* is arguably the beginning of systematic academic study of world history, presented in that volume a narrative of civilizational rise and fall and periodic connection that focuses more on statecraft than on high culture and avoids explicit reliance on an organic metaphor.[13] McNeill's narrative showed a far more complex and balanced set of interactions among civilizations than his predecessors, but the mechanism of interaction remained the same: diffusion.

From the mid-twentieth century, there arose at least four new or revived frameworks for understanding interaction: Weberian sociology, systems analysis, Marxian analysis, and postmodernist thinking. The flowering of Weberian and Parsonian sociology from the 1950s brought an analytical focus on states, bureaucracies, and economic relations.[14] The revival of academic Marxism in the 1960s brought an interdisciplinary concentration on political economy.[15] Meanwhile, John von Neumann and Ludwig von Bertalanffy led in publicizing a newly explicit systems analysis. This approach, while still deterministic, emphasized complex interactions and feedback among numerous variables, rather than cause and effect.[16] It set individual variables in the context of the whole system in which they operated: it explicitly contrasted diffusion with other types of interaction.

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developed organic metaphors for human society. Durkheim, *Suicide: A Study in Sociology* (1897; New York, 1966).

[12] Toynbee, *Study of History*. Toynbee treated civilization as a "unit of analysis" rather than as an organism. His sections on "encounters" include "contacts between civilizations in space (encounters between contemporaries)" and "contacts between civilizations in time (Renaissances)," respectively Part IX (vol. 8, 88–629) and Part X (vol. 9, 1–166) of his study.

[13] William H. McNeill, for instance, developed his broad interpretation of world history after having spent some years championing the teaching of Western Civilization. If McNeill's analysis is patterned somewhat after that of Toynbee, his title echoes that of Spengler. For a work similar to that of McNeill but that did not have such an echo among historians, see Jacques Pirenne, *The Tides of History*, Lavett Edwards, trans., 2 vols. (New York, 1962), first published as *Les grands courants de l'histoire universelle* (Brussels, 1948).

[14] Positivistic sociology includes the work of Weber, which became widely influential after World War II (following translation and publication of new works), and that of Talcott Parsons; a focus on bureaucratization and on modernization flowed from this framework. Max Weber, *Economy and Society: An Outline of Interpretive Sociology*, Guenther Roth and Claus Wittich, eds., 3 vols. (New York, 1968), trans. of Weber, *Wirtschaft und Gesellschaft*, Johannes Winckelmann, ed., expanded 4th edn. (Tübingen, 1956); Talcott Parsons and Neil J. Smelser, *Economy and Society: A Study in the Integration of Economic and Social Theory* (Glencoe, Ill., 1956).

[15] As the publication of Weber's full study on economy and society led to a burst of work drawing on his framework in the 1960s, so also did the publication of Karl Marx's notes on the method of political economy combine with the current political climate to bring a burst of new studies in political economy. Karl Marx, *The Grundrisse*, David McLellan, ed. and trans. (New York, 1971).

[16] John von Neumann, *The Computer and the Brain* (New Haven, Conn., 1959); Ludwig von Bertalanffy, *Robots, Men and Minds: Psychology in the Modern World* (New York, 1967). Quantitative work arose in social and economic history in the 1950s, leading to study of more variables in a positivistic and deterministic fashion.

These frameworks, distinct yet overlapping, have each brought implications for the study of world history. Thus Immanuel Wallerstein's *Modern World-System* relies on his synthesis of Weberian bureaucratic analysis, Marxian class analysis, Braudelian concern with the *longue durée*, and the notion of a world system.[17] Another rising subfield within world history, focusing on biological and environmental change, came to rely on the insights of systems analysis.[18] The interdisciplinary nature of Weberian and Marxian analysis, and the emphasis on feedback in systems analysis, led logically to more complex lists of interactions in world history and to more complex maps of cause and effect.

The emergence of postmodernist philosophy brought a new challenge to the diffusionist model of cultural interactions. This outlook, arising almost contemporaneously in a series of fields (psychoanalysis, history, literary theory, and gender studies), brought a fundamental change in analytic orientation.[19] Postmodernism adopted the logic of systems and suspended that of cause and effect. It focused on interactions of various sorts but declined to divide variables into the independent and the dependent: it emphasized correlation of changes but downplayed determinism. The historical applications of postmodernist thinking have concentrated in national and local studies of history, rather than in world history.[20]

The field of world history is both advanced and backward in its handling of interaction. The simple fact of placing the various nations, civilizations, cultures, and regions of the world into a single framework addresses one of the most important prejudices limiting the understanding of our common human existence. Yet world history practitioners continue to use simplistic conceptions of interaction and continue to be insufficiently self-conscious in using them. German scholars of the nineteenth century, in publishing compendia on world history, assembled chapters on distinct national and civilizational histories, with no attempt to unify them.[21] Then Leopold von Ranke, Oswald Spengler, and H. G. Wells began the work of synthesis, developing single-author interpretations of civilizations in world

[17] Immanuel Wallerstein, *The Modern World-System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (New York, 1974). Subsequent volumes were published as: *The Modern World-System, II: Mercantilism and the Consolidation of the European World-Economy, 1600–1750* (New York, 1980); and *The Modern World-System, III: The Second Era of Great Expansion of the Capitalist World-Economy, 1730–1840s* (New York, 1989). Bentley's citations include echoes of Wallerstein's framework applied to earlier times: for instance, Philip L. Kohl, "The Use and Abuse of World Systems Theory: The Case of the 'Pristine' West Asian State," in C. C. Lamberg-Karlovsky, ed., *Archaeological Thought in America* (Cambridge, 1989), 218–40.

[18] Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Cambridge, 1986); see also William H. McNeill, *Plagues and Peoples* (Garden City, N.Y., 1976).

[19] For a range of interpretive statements on postmodernism, see E. Ann Kaplan, ed., *Postmodernism and Its Discontents: Theories, Practices* (London, 1988); Agnes Heller and Ferenc Feher, *The Postmodern Political Condition* (New York, 1988); David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Oxford, 1989); and Fredric Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham, N.C., 1991).

[20] For initial work in this vein, see Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*, A. M. Sheridan Smith, trans. (New York, 1973); for more recent work drawing on the same tradition, see Lynn Hunt, *The Family Romance of the French Revolution* (Berkeley, Calif., 1992); both of these studies focus on France.

[21] German compendia on world history began in the early nineteenth century, reached a peak late in that century, and continued into the twentieth century. See, for instance, Heinrich Leo, *Lehrbuch der Universalgeschichte*, 6 vols. (Halle, 1835–44); Wilhelm Oncken, ed., *Allgemeine Geschichte in Einzeldarstellungen*, 32 vols. in 4 series (Berlin, 1879–90).

history.[22] The civilization paradigm, with its focus on dominance, rise and fall, and diffusion, has remained dominant in world history until this day. Bentley's proposal for a *periodization* based on cross-cultural interaction raises the possibility of a *paradigm* based on cross-cultural interaction. Such a paradigm would set the history of civilizations into some more general context.

In a word, it is not sufficient to identify "interactions" in world history—one must also identify the type and character of interactions. Historians, in adopting such terms as "interaction" and "diffusion," have set them into distinct and competing analytical and philosophical systems, and thus their meanings become quite variable. For guidance in characterizing interactions in the past, world historians need to be aware of the development of world-historical debate and its relationship to broader trends in analytical modeling, from romanticism and positivism through systems analysis to postmodernism.[23]

THE CULTURAL ASPECT of cross-cultural interaction is problematic to the same degree as the notion of interaction. Bentley, in using the adjective "cultural" rather than the noun "culture," has avoided one of the pitfalls in recent debate on cultural analysis: do "cultures" exist as bounded entities? If we say that world history includes the study of "other cultures," are we assuming a clear frontier between "us" and "them"? Are interactions across cultural boundaries different from those within cultural limits?

Historians have developed their idea of "cultures" and "societies" over the past century, in relatively common interchange with sociologists.[24] During the same century, anthropologists have carried on a somewhat different discourse about the notions of "culture" and "society." In crude terms, the sociologists analyzed the "nations" and the anthropologists analyzed the "tribes." As long as world history retained its focus on great civilizations and declined to study the "tribes," historians could feel safe in ignoring the anthropological literature on cultural change and cultural interaction. But a growing concern with broad coverage and with interaction led historians to greater interest in those previously classified in "tribes" and thereby to a hesitant encounter with anthropology.

Anthropology, meanwhile, went through a remarkable set of conceptual shifts. Paradigms labeled as evolutionism, historicalism, diffusionism, functionalism, and

[22] Leopold von Ranke, *Weltgeschichte*, 8 vols. (1879–87); Spengler, *Decline of the West*; H. G. Wells, *The Outline of History: Being a Plain History of Life and Mankind* (London, 1920).

[23] The term "diffusion" seems to have entered the humanistic lexicon in the wake of Enlightenment-era scientific discoveries, and it has been used within several frameworks since. (Alfred Crosby, among others, has emphasized the benefits of the term "connections" in describing interaction: the term invokes a range of types of interaction without being either explicit or limiting.) Organic metaphors and evolutionary schemes became popular from the time of Spencer to that of Spengler. Mechanical metaphors then came to the fore, in the wake of great advances in physics in the early twentieth century. A return to an interest in evolutionary models has become evident within recent social science, perhaps in a reflection of the great advances in microbiology. Peter Novick, *That Noble Dream: The "Objectivity Question" and the American Historical Profession* (Cambridge, 1988); William H. Durham, *Coevolution: Genes, Culture, and Human Diversity* (Stanford, Calif., 1991).

[24] Collective terms for humans vary with the collectivity and with the approach of the analyst. Thus the meanings of the terms "nation," "race," "society," "commonwealth," "empire," and "culture" change with time and circumstance.

configurationalism succeeded each other from the 1870s through the 1950s. As the theories of anthropologists changed, so, too, did their definitions of culture: Alfred Kroeber and Clyde Kluckhohn, in a 1952 article, counted over 160 anthropological definitions of culture.[25]

The evolutionist school, following on the work of L. H. Morgan, accepted a broad succession of social organization from primitive to savage societies to civilization. Among the historicalist school, the American Clark Wissler developed the notion of "culture areas," which were determined through mapping cultural "traits" or "elements" at a given time. The concept of culture areas survived and entered the historical literature, but the concept of discrete "traits" came under severe anthropological critique in the 1930s, largely on the grounds that a specific cultural manifestation should not be abstracted from its context.[26] Nevertheless, George Peter Murdock gathered a huge amount of ethnographic data, essentially in the form of putative culture traits, into his Human Relations Area Files, where they have served as data for a number of global historical studies.[27] Meanwhile, diffusionists focused on the occasional invention of major social advances, functionalists emphasized the integrity of each society, and configurationists sought to synthesize the various frameworks.

From the 1960s, the decolonization of the modern world led to the decolonization of anthropology. Perhaps more than any other field of study, anthropology has undergone a self-conscious reevaluation of its methods, assumptions, theories, and practices, in reaction to the realization that the field has been as much a tool of colonial administration as a tool of scholarly inquiry.[28] In one contribution to the debate, Adam Kuper has shown the dramatic transformations in kinship theory over the past century, leading to the virtual abandonment of that field of study by anthropologists.[29] This and other chapters in the reevaluation of anthropology, coming in the era of systems analysis and postmodernism, led to devastating critiques of the earlier models and terminology for cultural contact. World historians naively continue to use the old models with impunity.[30]

World historians have gone little further in exploring anthropology than utilizing

[25] Felix M. Keesing, *Cultural Anthropology: The Science of Custom* (New York, 1958); A. L. Kroeber and C. Kluckhohn, "Culture: A Critical Review of Concepts and Definitions," *Peabody Museum Papers*, 47, 1 (Cambridge, Mass., 1952), as cited in Keesing, 18.

[26] Clark Wissler, *Man and Culture* (New York, 1923). Among the leading world historians, Philip D. Curtin has been most consistent in his references to "culture areas." See, for instance, Curtin, *Cross-Cultural Trade in World History* (Cambridge, 1984), x.

[27] George Peter Murdock, *Human Relations Area Files: Outline of Cultural Materials* (New Haven, Conn., 1950). Among the major studies that have relied heavily on these data are Orlando Patterson, *Slavery and Social Death: A Comparative Study* (Cambridge, Mass., 1982); and Frederic L. Pryor, *The Origins of the Economy: A Comparative Study of Distribution in Primitive and Peasant Economies* (New York, 1977).

[28] The founding of journals such as *Critical Anthropology* and *Dialectical Anthropology* thus meant not only the establishment of Marxist factions among anthropologists but also the beginnings of a transformation of the discipline as a whole.

[29] Adam Kuper, *The Invention of Primitive Society: Transformations of an Illusion* (London, 1988). For an analogous study linking anthropological theory to academic social history, see Henrika Kuklick, *The Savage Within: The Social History of British Anthropology, 1885–1945* (Cambridge, 1991).

[30] One well-known counter-example, in which historians joined with anthropologists to overturn a narrow and biased interpretation, is the rejection of C. G. Seligman's "Hamitic hypothesis," according to which all the history of eastern Africa could be interpreted through the percolation, over the millennia, of white racial influences from the north. Seligman, *Races of Africa* (London, 1936); Joseph

empirical results of anthropological studies and giving warm citations to the work of Clifford Geertz and Eric Wolf. Geertz's famous description of a Balinese cockfight and the police inquiry in its aftermath served as a marker of the complexity and contingency of life and of the limits on theorizing.[31] But it did not lead world historians to a thorough exploration of the anthropological literature on culture and cultural change. Eric Wolf, in *Europe and the People without History*, provides an anthropologist's history of the incorporation of peripheral regions into the political economy of the modern world; remarkably for an anthropologist, however, he does not address cultural change.[32]

As the debate has developed, postmodern cultural theorists have declined to use "culture" in the noun form. They do not speak of a culture as an identifiable social unit, nor do they speak of artifacts as pieces of culture. By the same logic, they are critical of the notion of cultural boundaries. They rely instead on adjectival forms, speaking of process rather than product: they analyze cultural production and cultural change rather than cultures or cultural traits. Thus Johannes Fabian, in analyzing the rise of the Shaba Swahili language in twentieth-century Zaire, focuses not on the *subject* of the language but on the *debate* over what was to be the vehicular language of Shaba; he challenges the notion that Swahili "diffused" to Shaba from some point in East or Central Africa, and he asserts that the language "emerged" as a range of speech patterns rather than descending from a single ancestral language.[33]

This debate on how to conceptualize culture is not over; indeed, it has hardly begun among historians. As a result, I think we may safely presume that for some time to come, historians will have to acknowledge the competition of two widely different conceptions of culture. In one, a "culture" is virtually a synonym for a "society" and consists of discrete elements. In the other, "cultural production" results from the interaction of individuals and groups and their contradictory ideas; in this approach, cultural change is the rule rather than the exception. Historians speaking of "cultural interaction" need to know that they cannot get far without acknowledging the contested and problematic nature of the term. Indeed, one may hope that by involving themselves in the study and conceptualization of cross-cultural interactions, historians will be able not only to survive the debate but also contribute significantly to its clarification.[34]

Ki-Zerbo, "General Introduction," in Ki-Zerbo, *et al.*, eds., *General History of Africa*, Vol. 1: *Methodology and African Prehistory* (Berkeley, Calif., 1981), 21.

[31] Clifford Geertz, "The Balinese Cockfight," in Geertz, *The Interpretation of Cultures: Selected Essays* (New York, 1973).

[32] Eric R. Wolf, *Europe and the People without History* (Berkeley, Calif., 1982).

[33] Johannes Fabian, *Language and Colonial Power: The Appropriation of Swahili in the Former Belgian Congo, 1880–1938* (Cambridge, 1986).

[34] On a somewhat analogous point, one may note that gender has yet to become a major conceptual issue in world history. A trend toward greater empirical inclusion of women in the world-historical narrative is evident, but the debates in feminist theory, linked to other developments in postmodernist thinking, have yet to address history at the global level.

ASSUMING THAT ONE ACCEPTS the presumptions of Bentley's analysis and the resultant periodization, what are the interpretive implications of these choices? The spans of time that Bentley proposes as his periods are not unfamiliar, and the terms he uses to characterize them carry a distinctly familiar ring.[35] Is this, then, a new set of labels for the same old periods developed for civilizational rise and fall or evolutionary stages? I think not. Bentley's approach to periodization can take us beyond restatement of old interpretations. And, when adopting the tool of cross-cultural contact for making sense of our global past, I would suggest three techniques for sharpening and deploying it.

First, consider a wide range of interactions. That is, historians should allow the meaning of "cross-cultural interaction" to extend to a range of issues beyond mass migration, imperial rise and fall, and commerce. If we include the exchange of food crops, domestic animals, and other technology, as Bentley has suggested, we may either find a new periodization or an independent confirmation of an existing one. For instance, the early movement of sorghum from its region of domestication in the African savanna to India and beyond, along with the westward movement of such Southeast Asian crops as bananas, yams, and taro, suggests the existence of little-known historical dynamics and might imply alternative periodizations. The tale of the domestication of the camel serves in some ways to reinforce a periodization including classical and post-classical periods, yet in other ways it bridges those two periods.[36]

Similarly, we may trace exchanges of music, dress, and other elements of material and expressive culture. If the sounds of music are difficult to recover for ancient times, the instrumentation can be explored through pictorial, archaeological, and written records. In the social history of dress, Fernand Braudel's exploration of early modern dress reveals the possibilities of a search for stylistic interactions on a global scale.[37]

Further, we might also consider cross-cultural connections in political institutions and family structure. Jan Vansina, in a synthesis of a generation's intensive, collaborative research on the historical linguistics of the Bantu-speaking peoples of Africa, has reconstructed a narrative of four millennia of successive political transformations in the equatorial forest. Institutions of matrilinearity and patrilinearity were invented, exchanged, transformed, and sometimes rejected along with

[35] To recapitulate, Bentley's periods are:
1. 3500–2000 B.C.E.: Early complex societies
2. 2000–500 B.C.E.: Ancient civilizations
3. 500 B.C.E.–500 C.E.: Classical civilizations
4. 500–1000 C.E.: Post-classical age
5. 1000–1500 C.E.: Transregional nomadic empires
6. 1500 C.E.–present: Modern age

[36] Watson, *Agricultural Innovation*; Richard W. Bulliet, *The Camel and the Wheel* (Cambridge, Mass., 1975).

[37] Braudel is particularly skillful in his display of the influence of sixteenth-century Spanish fashion, but one could equally explore the periodization accompanying earlier interregional connections reinforced through the use of turbans as headgear or the adoption of Hellenistic garb. Fernand Braudel, *Civilization and Capitalism, 15th-18th Century*; Vol. 1: *The Structures of Everyday Life: The Limits of the Possible*, Sian Reynolds, trans. (New York, 1979), 311–25; see also Frank L. Holt, *Alexander the Great and Bactria: The Formation of a Greek Frontier in Central Asia* (Leiden, 1989).

the changes in chiefdoms, age groupings, and religious associations.[38] The wealth of actual and potential results from historical linguistics suggests that, although the research is laborious, a great deal can be learned about past social evolution and social interaction through analysis of the remnants of the past in the languages of today.[39]

Second, be increasingly specific in identifying criteria and agents for cross-cultural contact. If trade was central to cross-cultural interaction, what dimension of trade was the locus of contact? Do we focus on merchants at the great marketplace at the terminus, on the transport workers by land and sea, or on the artisanal workers creating the product in workshop or mine? If the great bazaars of Samarkand and Damascus were the loci of transmission of new designs in tapestries, the ideas for the new designs may have occurred to weavers working in isolated villages. Merchants may have controlled the luxury goods and dominated contacts among the wealthy, but simple boatmen and teamsters may have been those who carried most of the seeds and cuttings or who passed on new techniques in saddling. The Tang monarchs could concentrate all the wealth and innovations of the world in their court, but they had to reach far and wide to get hold of the wealth, and they could never gain control of innovation itself. Overall, we may find that there have been different groupings of human agents for different types of linkages among societies. Some criteria for cultural interaction may highlight innovations in imperial capitals and civilizational heartlands; others may highlight innovations at the village level in steppes, forests, and across archipelagoes.[40]

Third, consider the changing character of cross-cultural interaction from period to period. We will need explanations of what brought continuity in cross-cultural interaction within periods and what brought the changes that ended each period and opened the next. Bentley emphasizes such changes in his period of nomadic domination and, to a lesser degree, in his emphasis on the development of cosmopolitan religious tradition in the classical era. In addition, we should be looking for changes in the character of the interaction as well as changes in the

[38] Jan Vansina, *Paths in the Rainforests: Toward a History of Political Tradition in Equatorial Africa* (Madison, Wis., 1990). See also Christopher Ehret and Merrick Posnansky, eds., *The Archaeological and Linguistic Reconstruction of African History* (Berkeley, Calif., 1982).

[39] Joseph Greenberg, in conducting field research in northern Nigeria that led him to a general classification of African languages, observed that the Hausa words for saddle and gun were borrowed ultimately from Arabic but that the Hausa had borrowed these terms (and presumably the items themselves) from their neighbors the Kanuri. An accumulation of such observations can contribute greatly to an understanding of world history. Greenberg went on in more recent work to classify the languages of Native Americans into three major groupings and to postulate the linkages of these groupings to major Eurasian language groups. Greenberg, "Linguistic Evidence for the Influence of the Kanuri on the Hausa," *Journal of African History*, 1, 2 (1964): 205–12; Joseph H. Greenberg and Merritt Ruhlen, "Linguistic Origins of Native Americans," *Scientific American* (November 1992): 94–99.

[40] Gills and Frank emphasize the contributions of artisans and miners, located far from the Mesopotamian heartland, to the wealth and coherence of Sumerian society; Bentley traces the spread of Buddhism through the agents of merchants but also notes the work of missionaries who accompanied merchants; while Liu Xinru emphasizes the breadth of the trade in silk as a religious artifact. Barry K. Gills and Andre Gunder Frank, "World System Cycles, Crises, and Hegemonic Shifts, 1700 BC to 1700 AD," in Frank and Gills, *World System*, 152–57; Jerry H. Bentley, *Old World Encounters: Cross-Cultural Contacts and Exchanges in Pre-Modern Times* (New York, 1993); Liu Xinru, "Silks and Religions in Eurasia, c. AD 600–1200," *Journal of World History*, 6, 1 (1995): 25–48.

results of interaction. Did the long-distance migrations of individuals become more common with the passage of time? Did they vary cyclically?[41]

Finally, an explicit contrasting of periodizations—those based on cross-cultural interaction, on rise and fall, on evolutionary change and perhaps other criteria—will clarify the strengths and weaknesses of each. For instance, Bentley, in his emphasis on cross-cultural interaction, appropriately restricts his analysis before 1500 to the Afro-Eurasian land mass. In contrast, an emphasis on evolutionary stages in world history surely ought to include the Americas and the Pacific before 1500, since a comparison of isolated regions seems a good way to test theses of evolutionary development.

The emphasis on cross-cultural interaction provides an attractive formulation of an analytical approach to world history. It is, however, just the beginning of the work. The follow-up to Bentley's proposal, in addition, must be conceptual as much as it is empirical. World historians, working within an inherited literature dominated by a focus on dominance and centrality in our global past, need to develop alternative metaphors for historical interaction and transformation, as well as a facility for exploring and comparing the implications of these images in interaction with the historical record. World history, integrated across time and space according to the criterion of cross-cultural interaction, has the potential to provide historians with a framework unifying historical problems and linking the particular to the general. The enterprise seems likely to provide its practitioners with an ample collection of debates—empirical, analytical, and philosophical—about the nature and implications of human interaction, within and across the lines that we are accustomed to labeling as cultural.

[41] One might go further and consider alternative ways of defining the continuities and changes across periods. The continuities within Bentley's periods appear as plateaus of active cross-cultural contact, separated by troughs of diminished contact; Bentley notes that episodes of epidemic disease and population decline mark the boundaries between these periods. But times of intensive cross-cultural interaction might also have been times of rapid change, and thus one could suggest treating the peak periods of interaction as the boundaries between periods, with the continuities being reflected in the periods of lesser interaction.

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