



Text Annotation:

As you read Plagues and Peoples by William McNeill, use the codes described below to annotate the text. This is due in class tomorrow.

1. Highlight key terms and underline their definitions.
2. Circle unfamiliar words and define them in the right margin
3. Note the topic of each paragraph and the author's argument (what she is attempting to prove) in the left margin
4. List the main topics/arguments of the text at the end or on the back. Number or color-code each of these.
5. Code the text with the numbers/colors in step four by writing them next to the lines where key information for each topic/argument is discussed.
6. In the top right corner on the first page write a short summary of the text, no more than 10 words.

thousands of miles between China and the Middle East. For such an event to become probable, a far more variegated bridge of human travelers was needed so as to scatter susceptibles all across the intervening distances in sufficient number to permit an infectious chain to run all across Asia.

Only when caravan trade became well established could such conditions arise. Nearly two centuries elapsed before regular and relatively large-scale trade came to be organized between China and Syria, following the routes these Chinese imperial emissaries had traversed. Costs of such travel were large. Camels and caravan personnel had to be maintained throughout the months of plodding between northwestern China and western Asia. Protection from confiscation en route had to be arranged. This meant payments for protection that were large enough to maintain formidable bodies of professional military men along the way. Last but not least, large numbers of persons had to have adequate motivation for undertaking such arduous enterprise: profit, adventure, imperial command or some combination of these inducements had to exert a stable impulse upon suitable numbers of men before regular exploitation of the possibility of moving back and forth between eastern and western Asian centers of civilization became a reality. Of these, profit was the most pervasive and, for long-continued enterprise, probably the most dependable. Profitable trading in turn depended on the supply and demand for goods valued highly enough in each civilized community that they could command the prices needed to meet the risks and costs of such a long and dangerous journey.

There is some evidence in Chinese texts to suggest that the opening to the West was exploited from the Chinese side with some vigor for a brief time after 126 B.C., but soon broke down, when the impulse of imperial command slackened. Then during the first century A.D., movement picked up again. New and more stable political conditions established themselves throughout the length of what Romans soon began to call the Silk Road, since silk from China became the principal commodity carried westward in this manner. This trade

reached a climax about A.D. 100, as the ladies of Rome and other Mediterranean cities began to dress themselves in semi-transparent silks. These were produced in Antioch by unraveling stout silk cloth imported from China and reweaving the thread into a loose web that achieved the desired transparency.⁴⁴

The establishment of a regular caravan trade across Asia had important consequences for the continent's macroparasitic patterns. Traders accompanying their goods could be taxed, and taxed they were by local potentates along the way. Protection payments (whether in kind or in cash) hired guards; when such guards were not actually engaged in accompanying caravans, they were of course available for enforcing and extending their leader's sway at the expense of rivals. Trade thus sustained and provoked political consolidation of a string of states extending along the caravan route, all the way from Roman Syria to the northwestern border of China.

Successful rulers within this belt of semi-desert lands were either steppe nomads themselves or but recently descended from such folk. (Nomadry encouraged, indeed required, courage and other military virtues for defense of herds and pasturage, and their horses gave nomads a mobility superior to that which cultivators could attain, making concentration of superior force in course of a sudden raid relatively easy.) Interpenetration between nomad tribesmen of the steppelands and masters of the oases of central Asia became correspondingly intimate; state structures of hitherto unequalled extent and stability resulted.⁴⁵

For a long time the resulting symbiosis was delicate and liable to frequent upset. By taking too much from caravan personnel, merchants' incentive to undertake the risks of travel could be snuffed out. Yet by not paying enough to support a superior military establishment along the trade route, merchants invited more distant nomad groups to push southward from the open steppe and try to seize as booty what they were not yet in a position to tax as rulers. The instability was not unlike the ecological instability characteris-

tic of a new infection. And as is also the case with many new infections, fully stable trade and protection systems were never achieved. It is not therefore really surprising that the pace of trade seems to have slackened even before the middle of the second century A.D., owing to political (and perhaps epidemiological) difficulties along the way.⁴⁶

Organization of sea contacts between Mediterranean, Indian, and Chinese peoples proceeded on almost the same temporal rhythm. A Greek explorer "discovered" the monsoons of the Indian Ocean some time before the Christian era. Thereafter, traders whom the Indians called "Yavanas," that is, "Ionians," continued to appear along Indian coasts, issuing from ports on the Red Sea, though it is impossible to estimate the number and frequency of such voyages. Other seafarers opened sea communications across the Bay of Bengal and throughout the South China Sea. Peoples of Indonesia and the southeastern Asian mainland took a leading part in this development, although seafarers living in India itself also participated.

One conspicuous result of the development of seafaring in the Indian Ocean and the South China Sea was the transplantation of Indian court culture to the river valleys and some of the islands of southeastern Asia, beginning not long before the Christian era. Broad new regions, climatically warmer and sometimes wetter, but otherwise quite similar to the Ganges Valley, thus opened up for civilized development. For many centuries the new states of southeastern Asia remained relatively isolated transplants, surrounded by untamed jungle whose slow retreat before agricultural settlement is still incomplete in our own time. The comparative slowness of civilized expansion in this environment is almost certainly connected with the health consequences of trying to concentrate dense human populations within a well-watered tropical landscape. Intensification of microparasitism—with malaria and dengue fever perhaps in the lead, water-borne infections of the alimentary tract close behind, and an extremely complex series of multicelled parasites available to batten upon what

remained—presented formidable obstacles to the growth of population in southeastern Asia toward anything like the densities that sustained Chinese and Indian civilizations. Or so one may legitimately infer from the fact that strong and massive states equivalent to the Chinese or even Indian empires did not in fact arise in southeastern Asian river valleys at any time, despite the obvious fact that the geographical areas in question provided ample space for a powerful civilization to arise there.⁴⁷

Nevertheless, the development of court life in southeastern Asia sustained trade in much the same way that the emergence of barbarian chieftains around the shores of the Mediterranean had sustained the trade patterns supporting urban civilization in that environment. There was one important difference, however. Food staples did not figure importantly in the trade of the southern seas, as was the case within the Mediterranean. Urban and court populations of southeastern Asia depended, as elsewhere in that continent, on food collected as rents and taxes from peasants living relatively close by, i.e., mainly upriver.

The development of this vast, if loosely reticulated, trade net across the southern seas was signalized by the arrival in China of “Roman” merchants in A.D. 166. They styled themselves ambassadors from Marcus Aurelius, and though their gifts were less impressive than the Chinese chronicler thought fitting, the event was nonetheless sufficiently out of the ordinary to have been officially recorded at the Han court.⁴⁸ An even more convincing demonstration of the scale of trade during the first two Christian centuries was the excavation in 1945–48 of a trading station on the coast of southern India near modern Pondicherry. Roman merchants established a trade base there in the age of Augustus (d. A.D. 14), and seem to have occupied the site until about A.D. 200.⁴⁹ This archaeological discovery backs up the remark of the geographer Strabo (ca. 63 B.C.–A.D. 24) to the effect that trade with India had assumed a much enlarged scale in his own time.⁵⁰ During the two centuries that followed the beginning of

the Christian era, therefore, it seems certain that trade between the eastern Mediterranean, India and China operated on a regular basis and attained a scale that dwarfed all earlier exchanges across such distances. Caravans passed overland across the oases and deserts of central Asia by regular stages, while ships traveled freely across the Indian Ocean and its adjacent waters.

Regular movement to and fro across such distances implied exchange of infections as well as goods.⁵¹ Chances of an unfamiliar infection spreading among susceptible populations certainly multiplied, and there is reason to suppose that before the end of the second century A.D. epidemic disasters in fact struck severe blows to Mediterranean populations, and probably afflicted the population of China as well. In between, nearer the center of the web of civilized life in the Old World, signs of disastrous population decay arising from unaccustomed exposure to lethal epidemics do not seem to exist. Either the populations of Middle Eastern and Indian cities had little to fear from diseases previously established among the Chinese and Mediterranean populations, but did have diseases of their own to export with lethal effect; or surviving records are so imperfect that disease disasters in Middle Eastern and Indian landscapes cannot now be detected.

Indirect evidence suggests that exposure to new infections had little effect in either India or the Middle East. In Mesopotamia, for example, a survey of ancient canal systems concluded that population crested between A.D. 200 and 600, just in the age when epidemics were cutting deeply into Roman and Chinese populations.⁵² In India, the political consolidation and cultural efflorescence of the Gupta age (A.D. 320–535) also suggests (though scarcely proves) that no particularly severe demographic disasters afflicted that country as a result of the merging of previously separate disease pools in the first Christian centuries.

It is easier to understand this seemingly contradictory situation if one remembers how little effect the disease circulation created by the opening of the oceans after A.D. 1500 had on

Europe, where the ships and sailors responsible for the new patterns of disease circulation were at home. Lisbon and London became infamous for the fevers and fluxes ships occasionally brought back from foreign shores, but western Europe as a whole was scarcely affected, even though millions of Amerindians and other vulnerable peoples were suffering catastrophic die-offs. By the sixteenth century, clearly, Europe had much to give and little to receive in the way of new human infections. In the first Christian centuries, however, Europe and China, the two least disease-experienced civilizations of the Old World, were in an epidemiological position analogous to that of Amerindians in the later age: vulnerable to socially disruptive attack by new infectious diseases.

The Roman world assuredly met serious epidemiological disaster between the second and sixth centuries A.D. Roman data, however scant, are far better studied than is the case elsewhere, and it therefore seems best to survey the disease record of Europe in the centuries following the establishment of regular transport across Eurasia before considering what took place in other parts of the world.

Outbreaks of disease were, of course, nothing new in Roman history in the second century A.D. Livy records at least eleven cases of pestilential disaster in republican times, the earliest dated 387 B.C.⁵³ Another epidemic struck the city of Rome in A.D. 65,⁵⁴ but these experiences paled before the disease that began spreading through the Roman empire in A.D. 165. It was brought to the Mediterranean initially by troops that had been campaigning in Mesopotamia, and dispersed generally throughout the empire in the following years. As usual, it is not possible to identify this "plague" definitely with any modern disease, though smallpox (or a disease ancestral thereto) has often been suggested.⁵⁵ The disease remained epidemic for at least fifteen years, breaking out in different places from year to year and returning sometimes to cities previously affected.

Despite the scanty evidence, it is reasonable to conclude