

## Text 09

# The size of Hunter Gatherers

By Jared Diamond

One straight forward example of what archeologists have learned from skeletons concerns historical changes in height. Skeletons from Greece and Turkey show that the average height of hunter-gatherers toward the end of the ice ages was a generous 5' 9" for men, 5' 5" for women. With the adoption of agriculture, height crashed, and by 3000 B. C. had reached a low of only 5' 3" for men, 5' for women. By classical times heights were very slowly on the rise again, but modern Greeks and Turks have still not regained the average height of their distant ancestors.

Another example of paleopathology at work is the study of Indian skeletons from burial mounds in the Illinois and Ohio river valleys. At Dickson Mounds, located near the confluence of the Spoon and Illinois rivers, archaeologists have excavated some 800 skeletons that paint a picture of the health changes that occurred when a hunter-gatherer culture gave way to intensive maize farming around A. D. 1150. Studies by George Armelagos and his colleagues then at the University of Massachusetts show these early farmers paid a price for their new-found livelihood. Compared to the hunter-gatherers who preceded them, the farmers had a nearly 50 per cent increase in enamel defects indicative of malnutrition, a fourfold increase in iron-deficiency anemia (evidenced by a bone condition called porotic hyperostosis), a threefold rise in bone lesions reflecting infectious disease in general, and an increase in degenerative conditions of the spine, probably reflecting a lot of hard physical labor. "Life expectancy at birth in the pre-agricultural community was about twenty-six years," says Armelagos, "but in the post-agricultural community it was nineteen years. So these episodes of nutritional stress and infectious disease were seriously affecting their ability to survive."

## Text 10

# A Result of Crowded Cities

By Jared Diamond

Agriculture encouraged people to clump together in crowded societies, many of which then carried on trade with other crowded societies, led to the spread of parasites and infectious disease. (Some archaeologists think it was the crowding, rather than agriculture, that promoted disease, but this is a chicken-and-egg argument, because crowding encourages agriculture and vice versa.) Epidemics couldn't take hold when populations were scattered in small bands that constantly shifted camp. Tuberculosis and diarrheal disease had to await the rise of farming, measles and bubonic plague the appearance of large cities.

## Text 14

# The Social Class of Hunters Gathers

By Jared Diamond

Besides malnutrition, starvation, and epidemic diseases, farming helped bring another curse upon humanity: deep class divisions. Hunter-gatherers have little or no stored food, and no concentrated food sources, like an orchard or a herd of cows: they live off the wild plants and animals they obtain each day. Therefore, there can be no kings, no class of social parasites who grow fat on food seized from others. Only in a farming population could healthy, non-producing elite set itself above the disease-ridden masses. Skeletons from Greek tombs at Mycenae c. 1500 B. C. suggest that royals enjoyed a better diet than commoners, since the royal skeletons were two or three inches taller and had better teeth (on the average, one instead of six cavities or missing teeth). Among Chilean mummies from c. A. D. 1000, the elite were distinguished not only by ornaments and gold hair clips but also by a fourfold lower rate of bone lesions caused by disease.