Neolithic revolution in archaeology

History, Revolution

While archaeologists are agreed on the implication of the Neolithic Revolution, it has not been so simple to determine exactly whenfoodproduction began. In the first place, the classification of food production is dependent on our perceptive of domestication, an indefinite concept itself. Domestication can be distinct as the exploitation of plants and animals by humans in such a way as to cause some genetic, or morphological, change; more broadly, it is seen as a range of relationships between people, plants, and animals (Anne Birgitte Gebauer and T. Douglas Price , eds. , 1992).

On one end of the range are morphologically domesticated plants like wheat, barley, peas, lentils, and bitter vetch. In these plants, changes brought concerning by artificially induced selective processes can be renowned by pale botanists studying the remains of seeds. Some morphologically domesticated plants, together with maize, dates, banana, and breadfruit, have been so altered that they are forever tied to people, for they have lost their autonomous power of seed dispersal and germination.

On the other end of the same range are plants that have been " domesticated" solely in terms of the growing space people offer for them. These plants, referred to as cultivated plants, are difficult if not viable to differentiate from wild plants, for their domestication is a matter of ecological rather than morphological change. In the middle range of the continuum lie all extents of domestication and cultivation. consequently, determining whether or not a pastculturehas cultivated plants often involves a fair amount of detective work.

For example, the presence of seeds at Nahal Oren in Israel (ca. 18, 000 B. C.) of exactly the same cereal plants later domesticated indicates that certain plants might have been selected and cultivated at a very early date (Luigi Luca Cavalli-Sforza and Francesco Cavalli-Sforza, 1996). Determining the degree of animal domestication also entails some inference and guesswork. As with plants, some animals (in the Near East, dogs, sheep, goats, cattle, and pigs) became hereditarily changed in time. But morphological changes did not take place for many generations, and in several instances they never took place at all. In these cases, paleozoologists should rely on other clues.

The high percentage of gazelle bones in some early Neolithic sites, for illustration—three times more than any other species—probably indicates their " domestication" or at the very least their selective exploitation. In recent times the red deer, eland, and musk-ox have, for all realistic purposes, been domesticated perhaps in the same mode that the gazelle was in the early Neolithic. As with plants, some animal species are more easily cultivated than others. Studies on the herding behavior of animals suggest that definite species may be predated for domestication (Charles Heiser, 1990).

The evolution from extensive dependence on gazelle to the domestication of sheep and goats may have resulted from the fact that sheep and goats utilize a wider range of foods, are added dependent on water supplies, and are better integrated into an inactive community. Because it is hard to determine the extent of domestication in past cultural systems, assigning

agricultural status to a society is often a somewhat arbitrary decision that involves some ambiguity In short, there are extents of food production.

Anthropologists and archaeologists can, though, agree on a working definition of food production. This definition posits two minimum requirements: first, there should be a reasonably competent level of food procurement (food acquired through direct production should amount to over half the community's dietary needs for part of the year); and second, both plant and animal domesticates are no longer bound to their natural habitat (that is, plants and animals can survive, with human assistance, in environments to which they are not obviously adapted).

The Neolithic Revolution was the result of the development of settled agriculture around 6, 000 BC, which facilitated human beings for the first time to make nature grow what they wanted instead of living on what she reluctantly provided. The food surplus thus garnered supported a larger population—five or more times as large as from hunting and gathering—and permitted a small minority of them to specialize in other kinds of work, as craftsmen (especially of the new, highly finished stone tools which gave the modern name to the period), artists, warriors, priests, and rulers, and to construct the first towns and cities.

The city (civis) gave its name to civilization, which formed the culture, the arts and crafts, the temples and palaces, and—it must be said—the weapons and fortifications, that have characterized history ever since. Principally, it created history itself: writing, invented for the purposes of management and ritual, had as by-product the preservation, more consistent than oral

tradition, of a record of events, and so entree to the past beyond human memory.

The huge rise in the scale of organization stemming from this first revolt and the consequent growth in communal wealth and power created the first kingdoms and empires, and enabled them to grow, mainly by conquest, to ecumenical size. Over the next several millennia political entities as large as Sumeria, Egypt, China, Persia, and Rome and, by an independent and later improvement, the Inca and Aztec empires in the Western hemisphere governed stretches of the earth's surface larger than most contemporary nation states.

It was a mega-revolution in human society. Though it brought wealth and power to the few, it had venomous as well as beneficial effects for the many. Subsequent to the casual, care-free, imprudent life of hunting and gathering in humanity's Eden, it symbolized for most a decline into heavy and continuous labor: ' In the sweat of thy brow shalt thou eat bread. ' It also meant yielding part of the excess food to the organizers and defenders of the community: to emend Marx, ' All history is the history of the struggle for income.'

The prevailing elite, whether slave owners, tribute takers, or feudal lords, proscribed the scarce resource, the land, and so were able to take out ' surplus value' from the food producers and use it to ' live like lords' and inflate their p of command. The struggle for survival and conquest made combat the normal state of relations between neighboring communities. But there were benefits, in the inner peace which reigned for long periods within the borders, and the high culture, the arts of painting, sculpture, poetry,

drama, music, and dance which could glee some of the people some of the time.

Compared with pre-history, it was a life on a higher plane of subsistence. There were even professionals, officials, priests, doctors, and lawyers, however they were for the most part subservient to the rich and influential, servants rather than masters (accept perhaps in the very few theocracies known to history). They were yet key players in the process. They invented, or set on a more enduring basis than oral tradition, all the arts and sciences: bureaucracy, organized religious conviction, philosophy, mathematics, astronomy, medicine, law. especially, the priests and bureaucrats invented writing, and so made history itself possible.

That is why history begins with the cities of the Neolithic Revolution and not before. One other service was given by the European clergy, which made medieval Europe different from other civilizations and tiled the way for a further round of worldwide social change. as of the separation of church and state and the resultantequalityof the Gelasian ‘ two swords’, political control was never combined in Europe. A space was left between Empire and Papacy through which independent thought, protest, and innovation could creep in and prevent the built-in stasis of most empires and theocracies.

The Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment, all found nutritious soil in which to grow, and independent thinkers, innovators and inventors could practice unregulated paths. Thus Europe, rather than some other area, became the origin of the next great social revolution. The earliest center of the Neolithic Revolution was southwestern Asia, more specifically the thousand miles between western

Iran and Greece, including parts of what today are Iraq, Syria, Lebanon, Jordan, Israel, and the Anatolian plateau of Turkey (Wesley Cowan and Patty Jo Watson, eds. , 1992).

From about 8900 B. C. , semi settled or semi permanent " protoneolithic" communities subsisted in northern Iraq, where the people de- pended in part on domesticated sheep for their survival. These settlements, with a typical population of 100 to 150, must not be seen as villages or protocities, since they were not occupied year-round and did not house the diversity of occupations and classes we associate with an urban economy. One instance of such a settlement was Jericho, which housed a protoneolithic community by 7800 B C (Kathleen Kenyon, 1994). Between 7000 and 6000 B. C. , " aceramic" (i. e., before pottery) Neolithic sites were occupied in parts of Iraq and Iran; several scholars see signs of this period as early as 8000 B. C (Daniel Zohary and Maria Hopf, 1994).

Neolithic cultures with pottery existed at Catal Huyuk in Anatolia (Turkey) by 6800 B. C. and in Iran by 6500 B. C. By 5600 B. C. , Neolithic settlements with pottery subsisted in Greek Macedonia. The Neolithic means of life had its beginnings in the foothills of the Zagros Mountains and on the Anatolian plateau, where water from natural sources was passable and crops could be grown without recourse to artificial irrigation.

By about 5500 B. C. , however, these original settlements gave way to much better communities in the nearby alluvial plains on the banks of the Tigris and Euphrates Rivers. Here, crops could be grown in adequate quantities only under irrigation, and the early stages of the Neolithic were replaced by the completely different urban way of life linked with ancient cities. By about

6000 B. C. , the first stage of the Neolithic Revolution was combined in southwestern Asia, where small villages had become the customary way to organize populations.

The crops and animals that had been domestic here in the fertile crescent spread to become the basis for the great river civilizations of the Nile in Egypt and the Indus in southern Asia. The rebellion also spread into Mediterranean Europe with little difficulty because of the similarities in climate and soil; between 6000 and 5000 B. C. , Greece and the southern Balkans shifted to an agrarian economy. By 4000 B. C. , agriculture was established in numerous areas around the Mediterranean. It took another millennium or two for Mediterranean crops and animals to widen successfully to northwestern Europe.

The Neolithic method of life arrived in Britain, for example, no earlier than about 4700 B. C (Rodney Castleden, 1993). By that time, a different kind of Neolithic transformation had already begun to progress on the shores of the new bays and estuaries formed by the flooding that accompanied the end of the last ice age. As temperatures quickly rose to something approximating their present levels, the mile-thick ice melted and sea levels rose radically. Over a p of 2, 000 years, almost half of Western Europe was immersed.

Britain and Ireland became islands, cut off from the mainland by the recently formed English Channel and Irish Sea. The rising waters created frequent bays and estuaries along the new coastline, and these new ecosystems established to be rich sources of marine life for human consumption. Lured by the easy accessibility of new protein sources, Stone Age Europeans began to settle down in semi sedentary communities. Instead of staying continually

on the move, they established base camps near the coast, from which they could endeavor forth to hunt large game when the fishing seasons were poor.

A fairly similar change took place in newly created coastal areas of North America, including, for instance, on the shores of Chesapeake Bay. About three thousand years after agriculture began in Mesopotamia, that is, about 6000 B. C. , the Neolithic Revolution began independently in two other distant sites: along the Yellow River in China and in the tropical highlands of Mesoamerica. In China, several kinds of millet were reclaimed by 6000 B. C. , the first villages arose in the Yellow River area by 5500 B. C. , and rice was domesticated in the Yangtze area by 5000 B. C (Peter Rowley-Conwy, 1993).

From China, the Neolithic culture spread to Korea, where it gradually became combined over four or five millennia from 6000 B. C. to about 2000 B. C. In Japan, a foraging culture known as Jomon, which had succeeded from about 10, 000 B. C. , gradually gave way to a wet rice culture in the southwest abruptly before the beginning of the Christian era and in the northeast a millennium later. As the Neolithic revolution took place in the so-called nuclear areas in western and Southeast Asia about ten thousand years ago or earlier, and later, independently, in central America.

Although the Neolithic rebellion refers to a complex of several significant innovations, the two key evolutionary events to change human history were the domestication of animals and the cultivation of plants. From the centers of these modernizations, knowledge diffused out over the face of earth to most people (Robley Matthews, Douglas Anderson, Robert Chen, and Thompson Webb, 1990). While the cultivation of plants became established

as the predominant way of life in the form of agriculture, an event typically accompanied by the domestication of animals, a diverse form of life emerged.

The village became the unit of life. This is what sociologists and anthropologists believe being a major way of life in human history, in sharp contrast to modern, industrialized, urban, and complex society. Many names have been coined in order to refer to the customary, agricultural societies that filled most of our written history. By and large, sociologists and anthropologists concur as to the characteristics of agricultural society, and they use different names to explain the same thing.

According to them, agricultural society is tradition-oriented; its people are controlled by informal sanctions such as rumor; social relationships are intimate and personal; there is modest division of labor, social structure is rigid with clear class differences; and people are ethnocentric and suspicious of outsiders (Richard MacNeish, 1992). The culture of such society might be described as relatively homogeneous, because the village is more or less self-reliant and excludes outsiders.

In exceptional cases, there might be a racial or ethnic minority within or near the village. But because of rigid social distinctions mostly in the form of class differences, contact with them is relatively limited and is more formal, essentially in connection with trade and business transactions. Certainly, compared with the circumstances before the Neolithic revolution, cultural variation within society was likely to be greater and physical deviation as well, once there was the possibility for contact with other racial or ethnic groups.

This meant, further, that the possibility for psychological difference became greater, compared with people before the Neolithic revolution. It is plausible that theobservationof cultural variation as seen in class and occupational differences in the village as well as that of physical disparity in the form of racial or ethnic differences might have created a greater range of psychological responses among members of a village. But there was also a built-in mechanism to offset this in agricultural society.

The strong pressure for conformity by means of informal sanctions based on confronting each other contact made psychological variation very difficult. Also, the firm structure of agricultural society kept the appearance of the feeling of relative deprivation, for example, to a minimum. while no possibility for achievement or change was visible, people were not likely to feel deprived, even when they saw the system as excessive. Thus, despite the probable for greater variations in physical, psychological, and cultural dimensions, life in agricultural society was comparatively homogeneous.

The economy of peasant life is not productive, because land is typically limited, and, furthermore, land becomes increasingly limited as the population expands and the soil deteriorates. In interpersonal relationships, a peasant presumes thatfriendship, love, and affection are limited. As a result, a peasant must avoid showing excessive favor or friendship. Sibling rivalry is caused as even maternal love is limited. A husband is jealous of his son and angry with his wife for the similar reason. Health, too, is limited in extent.

Blood is nonregenerative. Blood may be equated with semen, and the exercise of masculine vivacity are seen as a permanently debilitating act.

Sexual moderation and the evasion of bloodletting are important. Even a woman's long hair may become a source of trepidation because she may lose her vigor and strength by having long hair. Honor and manliness, too, exist in inadequate quantities. Real or imagined insults to personal honor should be vigorously counterattacked because honor is limited, and a peasant cannot afford to lose it.

While good things in theenvironmentare assumed to be limited, and when personal gain can only take place at the expense of others, the maintenance of the status quo is the most sensible way to live, because to make economic development or to acquire a disproportionate amount of good things is a threat to the stability of the community. Stability is sustained by an agreed-upon, socially acceptable, preferred norm of behavior, and sanctions and rewards are used to make certain that real behavior approximates the norm.

As a consequence, there is a strong desire to look and act like everyone else and to be subtle in position and behavior. For the same reason, a peasant is reluctant to acceptleadershiproles. The ideal peasant strives for restraint and equality in his or her behavior. If a peasant should behave excessively, then gossip, slander, viciousness, character assassination, witchcraft or the threat of it, and even actual physical hostility is used by the rest of society against such a person.

It is hard to say to what extent this generalization pertains to people after the Neolithic revolution and before the industrial revolution. In numerous agricultural societies, physical and cultural variations were likely to be significantly greater than in hunter-gatherer societies. Yet if people were infatuated with the belief of " limited good" and thought and behaved like

everyone else, their psychological deviations might not have been much greater than those amongst hunter-gatherers.

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