

## FOOD, WEALTH, AND POWER

Wealth is hard to come by, but poverty is always at hand.

—MESOPOTAMIAN PROVERB, 2000 B.C.

### **TINKER, TAILOR, SOLDIER, SAILOR**

The Standard Professions List is a document from the dawn of civilization, inscribed in the characteristic wedge-shaped indentations of cuneiform script on small clay tablets. The earliest versions, dating from around 3200 B.C., were found in the city of Uruk (modern-day Erech) in Mesopotamia, the region where writing and cities first emerged. Many copies exist, since it was a standard text that was used to teach scribes. The list consists of 129 professions, always written in the same order, with the most important at the top. Entries include “supreme judge,” “mayor,” “sage,” “courtier,” and “overseer of the messengers,” though the meaning of many entries is unknown. The list illustrates that the population of Uruk, probably the biggest city on earth at the time, was stratified into different specialist professions, some more important than others. This was a big change from the villages of farmers that had emerged in the region around five thousand years earlier. Food lay at the root of this transformation.

The switch from small, egalitarian villages to big, socially stratified cities was made possible by an intensification of agriculture in which part of the population produced more food than was needed for its own subsistence. This surplus food could then be used to sustain others—so not everyone had to be a farmer anymore. In Uruk, only around 80 percent of the population were farmers. They tended fields that surrounded the city in a vast circle, ten miles in radius. Their surplus production was appropriated by a ruling elite at the top of society, which redistributed some of it and consumed the rest. This stratification of society,

made possible by agricultural food surpluses, happened not just in Mesopotamia but in every part of the world where farming was adopted. It was the second important way in which food helped to transform the nature of human existence. With agriculture, people settled down; with intensification, they divided into rich and poor, rulers and farmers.

The idea that people have different jobs or professions, and that some are richer than others, is taken for granted today. But for most of human existence this was not the case. Most hunter-gatherers, and then early farmers, were of comparable wealth and spent their days doing the same things as the other people in the same community. We are used to thinking of food as something that brings people together, either literally around the table at a social gathering, or metaphorically through a shared regional or cultural cuisine. But food can also divide and separate. In the ancient world, food was wealth, and control of food was power.

As with the adoption of farming, the changes in food production and the associated transformation of social structures took place simultaneously and were intertwined. A ruling elite did not suddenly appear and demand that everyone else work harder in the fields; nor did greater productivity produce a sudden surplus to be fought over, with the winner crowned king. Instead, the abandonment of the hunter-gatherer lifestyle meant that previous constraints on individuals' ability to amass goods and cultivate prestige, both of which are frowned upon by hunter-gatherers, no longer applied. Even so, the emergence of more complex societies took some time: In Mesopotamia, the shift from simple villages to complex cities took five millennia, and it also took thousands of years in China and the Americas.

Control of food was power because food literally kept everything going, by feeding humans and animals. Appropriating the food surplus from farmers gave ruling elites the means to sustain full-time scribes, soldiers, and specialist craft workers. It also meant that a certain proportion of the population could be pressed into service on construction projects, since the farmers who remained on the land would provide enough food for everyone. So a store of surplus food conferred upon its owner the power to do all kinds of new things: wage wars, build temples and pyramids, and support the production of elaborate craft items by specialist sculptors, weavers, and metalworkers. But to understand the origins of food power it is necessary to start by examining the structure of hunter-gatherer societies, and to ask why people had previously regarded the

accumulation of food and power to be so dangerous and destabilizing—and why this changed.

## ANCIENT EGALITARIANS

Hunter-gatherers may only have had to spend two days a week foraging for things to eat, but their lives were nonetheless ruled by food. Bands of hunter-gatherers have to be nomadic, moving every few weeks once the food resources within range of each temporary camp start to become depleted. Every time the group moves, it has to take all of its possessions with it. The need to carry everything limits individuals' ability to accumulate material goods. An inventory by modern anthropologists of a family of African hunter-gatherers, for example, found that they collectively owned a knife, a spear, bow and arrows, a wrist guard, a net, baskets, an adze, a whistle, a flute, castanets, a comb, a belt, a hammer, and a hat. Few families in the developed world could list all their possessions in a single short sentence. These items were, furthermore, collectively owned and freely shared. Rather than having everyone carry his or her own knife or spear, it makes more sense to share such items, since some people can then carry other things, such as nets or bows. Bands in which items were shared would have been more flexible and more likely to survive than bands in which items were jealously guarded by individuals. So bands in which there was social pressure to share things would have proliferated.

The obligation to share also extended to food. Modern hunter-gatherers often have a rule that anyone who brings food back to the camp has to share it with anyone else who asks. This rule provides insurance against food shortages, for not everyone can be sure to find enough food on a given day, and even the best hunters can only expect to kill an animal every few days. If everyone is selfish and insists on keeping their own food to themselves, most people will be hungry most of the time. Sharing ensures that the food supply is evened out and most people have enough to eat most of the time. Ethnographic evidence from modern hunter-gatherers shows that some groups have even more elaborate rules to enforce sharing. In some cases a hunter is not even allowed to help himself to

food from his own kill (though a family member will ensure that some food is passed to him indirectly). Similarly, trying to claim a patch of land, and its associated food resources, is not allowed. Such rules ensure that the risks and rewards of hunting and gathering are shared throughout the group. Historically, bands that practiced food sharing were more likely to survive than those that did not: Competition for resources tends to encourage overexploitation, and ownership disputes would have caused bands to fragment. Once again, food sharing predominated because it conferred clear advantages upon bands that adopted it.

All of this meant that hunter-gatherers did not try to accumulate status goods to enhance their personal prestige. Why bother, since such goods would have had to have been shared with others? It is not until the advent of agriculture that the first indications of wealth or private ownership appear. As one anthropologist noted, having observed hunter-gatherers in Africa:

A Bushman will go to any lengths to avoid making other Bushmen jealous of him, and for this reason the few possessions the Bushmen have are constantly circling among members of their groups. No one cares to keep a particularly good knife long, even though he may want it desperately, because he will become the object of envy; as he sits by himself polishing a fine edge on the blade he will hear the soft voices of the other men in his band saying: "Look at him there, admiring his knife while we have nothing." Soon somebody will ask him for his knife, for everybody would like to have it, and he will give it away. Their culture insists that they share with each other, and it has never happened that a Bushman failed to share objects, food or water with other members of his band, for without very rigid co-operation Bushmen could not survive the famines and droughts that the Kalahari offers them.

Hunter-gatherers are also suspicious of self-promotion and attempts to create obligation. The !Kung Bushmen, for example, believe that the ideal hunter should be modest and understated. After returning from the hunt he must downplay his achievements, even if he has killed a large animal. When the men go to fetch the kill, they then express their disappointment at its size: "What, you made us come all this way for this bag of bones?" The hunter is expected to play along, and not to be offended. All of this is intended to prevent the hunter from regarding

himself as superior. As one !Kung Bushman explained to a visiting ethnographer: “When a young man kills much meat, he comes to think of himself as a chief or a big man, and he thinks of the rest of us as his servants or inferiors. We can’t accept this. So we always speak of his meat as worthless. In this way we cool his heart and make him gentle.”

To further complicate matters, the !Kung have a tradition that the meat from a kill belongs to the owner of the arrow that killed it, rather than the hunter who fired it. (If two or more arrows bring down the kill, the meat belongs to the owner of the first arrow.) Since the men routinely exchange arrows, this makes grandstanding by individual hunters even less likely. Particularly skilled hunters are thus prevented from cultivating prestige for themselves by conferring large amounts of food on others and so creating an obligation.

Quite the opposite, in fact: When a hunter has had a run of good luck and produced a lot of food, he might stop hunting for a few weeks in order to give others the chance to do well, and so avoid any possibility of resentment. Taking a few weeks off also means the hunter can allow others to provide him with food, so that there is no question of an outstanding obligation to him.

Richard Borshay Lee, a Canadian anthropologist who lived with a group of !Kung on several research trips during the 1960s, ran afoul of these rules when he tried to thank his hosts by holding a feast for them. He bought a large, plump ox for the purpose and was surprised when the Bushmen began to ridicule him for having chosen an animal that was too old, too thin, or would be too tough to eat. In the event, however, the meat from the ox turned out to be tasty and tender after all. So why had the Bushmen been so critical? “The !Kung are a fiercely egalitarian people and have a low tolerance for arrogance, stinginess and aloofness among their own people,” Lee concluded. “When they see signs of such behaviour among their fellows, they have a range of humility-enforcing devices to bring people back into line.” The !Kung, like other hunter-gatherers, regard lavish gifts as an attempt to exert control over others, curry political support, or raise one’s own status, all of which run counter to their culture. Their strict egalitarianism can be regarded as a “social technology” developed to ensure social harmony and a reliable supply of food for everyone.

Food determines the structure of hunter-gatherer society in other ways, too. The size of hunter-gatherer bands, for example, depends on the availability of food resources within walking distance of the camp. Too large a band depletes the surrounding area more quickly, which makes it necessary to move the camp

more often and means the band needs a larger territory. As a result, band sizes vary between six to twelve people in areas where food is scarce and twenty-five to fifty people in areas with more abundant resources. The bands consist of one or more extended families, and because of intermarriage most members of the band are related to each other. Bands generally do not have leaders, though some people may have particular roles in addition to the traditional male and female tasks of hunting and gathering, respectively, such as healing, making weapons, or negotiating with other bands. But there are no full-time specialists, and these particular skills do not confer a higher social status.

Hunter-gatherer bands maintain alliances with other bands, to provide both marriage partners and further insurance against food shortages. In the event of a shortage one band can then visit another to which it is related by marriage and share some of its food. Inter-group sharing in the form of large feasts also takes place at times of seasonal food overabundance. Such feasts appear to be universal among hunter-gatherers and provide an opportunity to arrange marriages, perform social rituals, sing, and dance. Food thus binds hunter-gatherer societies together, forging links both within bands and between bands.

That said, it is important not to over-romanticize the hunter-gatherer lifestyle. The “discovery” of surviving hunter-gatherer bands by Europeans in the eighteenth century led to the creation of the idealized portrait of the “noble savage” living in an unspoiled Eden. When Karl Marx and Friedrich Engels developed the doctrine of communism in the nineteenth century, they were inspired in part by the “primitive communism” of hunter-gatherer societies described by Lewis H. Morgan, an American anthropologist who studied Native American societies. But even though the hunter-gatherer life was more leisurely and egalitarian than most people’s lives are today, it was not always idyllic. Infanticide was used as a means of population control, and there was routine and widespread conflict between hunter-gatherer bands, with evidence of violent death and even cannibalism in some cases. The notion that hunter-gatherers lived in a perfect and peaceful world is beguiling but wrong. Even so it is clear that the structure of hunter-gatherer society, which was chiefly determined by the nature of the food supply, was strikingly different from that of modern societies. So when people took up farming, and the nature of the food supply was transformed, everything changed.

## THE EMERGENCE OF THE “BIG MAN”

As people began to settle down and hunting and gathering shaded into farming, the first villages were still broadly egalitarian communities. Archaeological evidence shows that the earliest such villages, typically inhabited by no more than one hundred people, were made up of huts or houses of similar shape and size. But settlement and agriculture changed the rules that had previously discouraged people from pursuing wealth and status. The social mechanisms that had been developed to suppress man's inherent tendencies toward hierarchical organization (clearly visible in apes and many other animal species) began to erode. Once you are no longer moving around, it starts to become possible to amass surplus food and other goods. The first signs of social differentiation begin to appear: villages in which some dwellings are larger than others and contain prestige items such as rare shells or ornate carved items, and burial grounds in which some graves contain valuable grave goods and others from the same period do not. All of this implies that the concept of private property quickly became accepted—there is no point in owning status goods if you have to share them—and a social hierarchy started to emerge in which some people were richer than others.

In some places, this process began even before the advent of agriculture, as hunter-gatherers in particularly food-rich areas settled down in permanent villages. But it became widespread with the adoption of farming. Early agricultural villages in China's Hupei basin on the Upper Yangtze River, in the region where rice was domesticated around 4000 B.C., provide a good example. Of 208 graves excavated, some contained elaborate grave goods, while others contained nothing more than the bodies of the dead. Similarly, 128 graves dating from around 5500 B.C. at Tell es-Sawwan, in what is now northern Iraq, show a clear variation in grave goods. Some graves contain carved alabaster, beads made from exotic stones, or pottery, but others contain no grave goods at all. In each case the pattern is the same: The adoption of agriculture leads to social stratification, subtle at first but then increasingly pronounced.

It is easy to see how variations in different families' agricultural productivity, and the ability to store certain foods (notably dried cereal grains), would make people more inclined to assert ownership over their produce. And since a storable food surplus can be traded for other items, it is equivalent to wealth. But a village in which some inhabitants manage to accumulate more food and trinkets than others is still a far cry from the elaborate social hierarchies of the first cities, in which the ruling elites appropriated the surplus by right and then distributed the portion of it they did not consume themselves. How did these powerful leaders emerge, and how did they end up in control of the agricultural surplus?

An important step along the road from an egalitarian village to a stratified city seems to be the emergence of "big men" who win control of the flow of surplus food and other goods and so amass a group of dependents or followers. Perhaps surprisingly, the big man's means of persuasion is not the threat of violence, but his abundant generosity. By bestowing gifts on others he places them in his debt, and they must reciprocate with more generous gifts in the future. Such gifts most often take the form of food. To get the ball rolling, a big man might persuade his family to produce surplus food, which he then gives to others; he subsequently receives more food in return, which he can then distribute among his family and give to others, thus conferring further obligations. This process can still be observed today, since big-man cultures still exist in some parts of the world.

In Melanesia, a big man might take several wives in order to increase the resources at his disposal to give away: one wife to garden and produce food, one to collect wood, another to catch fish. He then deploys these resources carefully, putting other people in his debt, so that they must repay him with even more, which he passes on to others, thus securing an even greater obligation. This process encourages intensification of food production, and eventually it culminates in big feasts as the big man tries to "build his name." He invites people from outside his existing circle, and even from other villages, thus placing them in his debt as well and bringing them into his sphere of influence. In this way, the big man establishes himself as an influential and powerful member of the community. Rivalry between big men accelerates the process, as they vie to hold the biggest feasts and amass the most credit.

Does this mean big men are rich and lazy? Far from it. For a big man, wealth is not something to sit on, but something that is only useful if it is given away. In some cases big men may even end up being poorer than their followers. In North



Alaskan Eskimo groups, for example, the most respected whaling captains are responsible for trading with inland caribou hunters, and therefore end up controlling the distribution and circulation of valuables within their group. But since they must give away everything they receive, and cannot refuse a request for help, they are often materially worse off than their followers. Big men must work hard, too. According to one observer in Melanesia, the big man “has to work harder than anyone else to keep up his stocks of food. The aspirant for honours cannot rest on his laurels but must go on holding large feasts and piling up credits. It is acknowledged that he has to toil early and late.”

All of this actually serves a useful purpose within the group or village: The big man acts as a clearing house for surplus food and other goods and can determine how best to distribute them. If a family produces extra food, it can give the surplus to a big man with the expectation of being able to call in the favor at a later date—when a tool needs replacing, perhaps, or food runs short. A successful big man thus integrates and coordinates the economy of the community, and he emerges as its leader. But he has no power to coerce his followers. Maintaining his position depends on being able to provide for the group and govern redistribution. Among the Nambik-wara of Brazil, for example, if the leader of the group is not generous enough and fails to provide for his followers, they will leave and join a different group. Within Melanesian groups, leaders who fail to deliver or who try to keep too much of the surplus for themselves may be deposed or even murdered. In such a situation the big man is still far more of a manager than a king.

## FROM CHIEFDOMS TO CIVILIZATIONS

So how does the big man, whose position depends on generosity and sharing, develop into the powerful chief of a group of villages, or chiefdom, and then the king at the top of a ruling elite? Not surprisingly, as with the origins of agriculture and the spread of farming, the mechanism is unclear and there are many competing theories. And once again it is likely that no single theory provides the answer, and some explanations are more valid in some parts of the world than

others. Yet by looking at several such theories it is possible to get an idea of how chiefdoms, and then civilizations, might have emerged. In each case, the emergence of social stratification is tightly bound up with the production of food. More elaborate forms of social organization make possible greater agricultural productivity, and a larger food surplus can support more elaborate forms of social organization. But how does the process start?

One theory contends that a big man or leader can become more powerful by coordinating agricultural activity, particularly irrigation. Farming yields can vary widely, but by leveling land and building irrigation canals and levee systems—all of which is only possible with a certain amount of social organization—it is possible to reduce these variations. This would increase the village's agricultural productivity, and would have other effects too. Members of the community would be less inclined to leave once they had invested in irrigation systems and had come to rely on them; control of the irrigation system would confer power on the leader, since anyone who fell out of favor might have his water supply reduced; the irrigation system might also need to be defended, using full-time soldiers funded by the food surplus and placed under the leader's control.

What starts off as a community farming project, in short, could have the effect of greatly increasing the leader's power. With his followers more dependent on him and a private guard to protect him, he would then be able to start retaining more of the surplus for his own use, to feed his household, provision soldiers, and so on. Irrigation systems are certainly a common denominator of many early civilizations, from Mesopotamia to Peru. They are found in chiefdoms, too, in places such as Hawaii and southwestern North America. But some chiefdoms that relied on irrigation did not go on to become any more complex or sharply stratified; and some elaborate irrigation schemes seem to be the consequences of greater organization rather than its cause. So evidently there is more to the emergence of complex civilizations than irrigation, though it seems to have played a role in some cases.

Another theory suggests that the communal storage of agricultural surpluses might provide the leader with an opportunity to establish greater control over his followers. Villagers hand over surplus grain to the big man in anticipation of reciprocal gifts at a later date, prompting him to organize the construction of a granary. Once built and provisioned, it provides the big man with the "working capital" to do other things. He can fund full-time craft specialists and organize agricultural works using the surplus, on the basis that such investments produce a

positive return that can be put back into the granary. Increasingly elaborate public-works projects then legitimize the leader's position and require a growing number of administrators, who emerge as the ruling elite. According to this view, there is a natural progression from reciprocal sharing organized by a big man to redistribution overseen by a powerful chief.

In the Near East, large central buildings started to appear within villages after around 6000 B.C., but it is unclear whether they were shared granaries, feasting halls, religious buildings, or chiefs' houses. They may well have served several of these functions: A feasting hall built to impress the neighboring village might have been the logical place to store food, and a granary would have been an obvious place to perform fertility rituals to ensure a good harvest. There is evidence from Hawaii that what were originally public areas built for feasting were later walled off, with access restricted to a select group of high rank. So temples and palaces could have started out as communal store houses or feasting halls.

A third suggestion is that competition for agricultural land led to warfare between communities in areas where such land was environmentally circumscribed. In Peru, for example, seventy-eight rivers run from the Andes mountains to the coast through fifty miles of extremely dry desert. Agriculture is possible near the rivers, but all the suitable farming areas are hemmed in by desert, mountains, and oceans. In Egypt, farming is possible on a narrow ribbon of fertile land along the Nile, but not in the desert beyond. And on the alluvial plains of Mesopotamia, only areas near the Tigris and Euphrates rivers are suitable for farming. To start with, such areas would have been lightly populated by a few farmers. As the population of farmers expanded (since sedentism and farming enable population growth beyond hunter-gatherer levels) new villages would have been established. Once all the available farming land was being used, farmers intensified production, extracting more food from a given area using elaborate terraces and irrigation systems.

But eventually they reached the limit of agricultural productivity, at which point the villages began to attack each other. When one village defeated another it then appropriated the defeated village's land or forced its people to hand over a proportion of their harvest every year. In this way, the strongest village within an area emerged as the ruling class, and the weaker villages had to hand over their surplus production, thereby establishing a system in which the poor farmed for the rich. This all sounds plausible, but there is no evidence that people reached the limit of agricultural productivity in any of the places where stratified societies

first emerged. In the event of a drought or a bad harvest, however, it is possible to imagine villages with food reserves coming under attack from neighboring villages where the food had run out.

A more general view that encompasses all of these theories is the idea that more complex societies (that is, those with strong leadership and a clear social hierarchy) will be more productive, more resilient, better able to survive hardship, and better at defending themselves. Villages in which strong leaders emerge would then outcompete other, less well organized villages nearby, and would be more attractive places to live, at least for those who do not mind submitting to the leader's authority. The emergence of strong leaders is often assumed to be dependent on coercion, but people might initially have regarded the need to hand over some or all of their surplus production to the leader as a price worth paying if the benefits they received in return—working irrigation systems, greater security, performance of religious rites to maintain soil fertility, mediation in disputes—were deemed to be of sufficient value. But the leader would then have been in a position to keep more and more of the surplus for his own use. Once you have settled down and invested labor in a house, fields, and irrigation systems, you have a reason to stay put even if the leader starts to put on airs and graces, claims he is descended from a god, and so on.

How can we tell what happened? The archaeological evidence shows the process of social stratification happening around the world in much the same way, culminating in the emergence of broadly comparable Bronze Age civilizations in different parts of the world, but at different times: starting in Egypt and Mesopotamia around 3500 B.C.; during the Shang dynasty in northern China around 1400 B.C.; with the rise of Maya civilization in southern Mexico from around 300 A.D.; and in South America around the same time, leading to the establishment of the Inca Empire in the 15th century A.D.

The trouble is that the archaeological evidence does not reveal much about the mechanism of stratification. The first signs of change are usually greater variations in grave goods and the emergence of more elaborate regional pottery styles, which appear around 5500 B.C. in Mesopotamia, 2300 B.C. in northern China, and 900 B.C. in the Americas. Such pottery suggests some degree of specialization, and possibly the emergence of elites capable of supporting full-time craft workers. Huge numbers of pottery bowls made in standard sizes appear in Mesopotamia around 3500 B.C., which suggests that their manufacture had been placed under centralized control and that standard

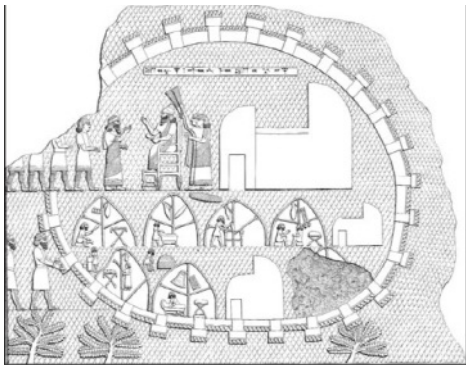
measures of grain and other commodities were used when paying taxes and distributing rations.

In northern China, settlements from the Longshan period (3000–2000 B.C.) start to have large walls, and weapons such as spears and clubs become more widespread. In Mesopotamia, L-shaped entrances to buildings, caches of stones for use in slingshots, and defensive earthworks appear. All are suggestive of organization for the purpose of defense. Just as telling are the first steps toward writing, in the form of tokens and seals used for administration in Western Asia and symbols written on bones by specialist fortune-tellers in northern China. Ever-larger settlements, as villages grow into towns, indicate greater political organization for the simple reason that without some accepted authority to adjudicate when disputes arise, villages seem unable to grow beyond a certain size.

By the start of the Shang dynasty in China around 1850 B.C. there are dedicated craft workshops, and some settlements have some kinds of workshop but not others, suggesting deliberate local specialization. The ability to work bronze in the Near East and China and gold in South America is another sign of craft specialization, and the presence of fine metalwork in grave goods signals stratification, in some cases to an extraordinary degree. In the “royal” tombs of the Mesopotamian city of Ur, dating from around 2500 B.C., the dead were entombed with gold, silver, and jewel-encrusted items. They were also accompanied by dozens of sacrificed servants, musicians, and bodyguards, and even by oxen to draw their chariots. These tombs, and similar examples in China, provide striking and gruesome evidence of social stratification.

By the time the first cities appear, with their specialist craftsmen organized into districts, and monumental buildings such as temples and pyramids, there is no question that social stratification has occurred. Indeed, there is direct written evidence of it. In China, documents detail a complex hierarchy of nobles, each with his own territory, under a king. In Mesopotamia’s city-states, clay tablets record taxes paid, commodities produced, and rations issued; there are also membership lists for specialist guilds, from brewers to snake charmers. In Egypt, the Overseer of All the Works of the King in the Fourth Dynasty (the period in which the pyramids were built) had a large staff of officials and scribes who scheduled, fed, and organized large numbers of full-time masons and even more numerous rotating teams of construction workers. This involved a mountain of ration lists and timetables.

The appearance of monumental architecture, many examples of which are still standing today around the world, undoubtedly provides the most direct and enduring evidence of the social stratification of the first civilizations. Such large-scale building works can only be carried out under an efficient system of administration, with a system to store surplus food and issue it as rations to building workers and an ideology to convince people that the construction project is worthwhile—in short, by a hierarchical society ruled by an all-powerful king. The defining characteristic of such tombs, temples, and palaces is that they are far bigger and more elaborate than they need to be. Such buildings are statements of power, and as societies become more stratified, these buildings become more prominent.



*A Mesopotamian depiction of a city, with different kinds of workers overseen by a king.*

The pyramids of Egypt, the ziggurats of Mesopotamia, and the stepped temples of central and southern Mexico were made possible by agricultural food surpluses and the associated increase in social complexity. Hunter-gatherers

would not have dreamed of building them, and even if they had, they lacked the means—the wealth in the form of surplus food, and the necessary organizational structures—to do so. These great edifices stand as monuments to the rise of the first civilizations, but also to the emergence of a new and unprecedented degree of inequality and social stratification that has persisted ever since.