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Agriculture and Sedentism Versus Hunter-Gathering

Agriculture is considered, by some, the last great stage in human evolution. This is because it led to several changes in terms of food procurement, settlement patterns, social complexity, and warfare.

The first and most noticeable change concerned food procurement. While agriculture required more time than hunting and gathering (hunter-gatherers would work fewer days of the week and have more time to rest) and had higher risks were the crop to fail, it also had larger payoffs. When it came time for harvest, humans suddenly had a much greater supply of food than they had ever had before when they were hunting and gathering. This meant a few things- they had to set up permanent camp around their fields, both so they could remain to tend to them and so that they could store their harvest. This led to living in villages, often in buildings that shared walls. When human hunted and gathered, they didn't build camps so much as dwell in existing spaces like caves and groves. And while hunter-gatherers had community, agriculture and sedentism took community-building to a whole new level because people were spending much more time together. However, this also led to social inequality, something hunter-gatherers almost never had to contend with. Inequality in this period was based on two things primarily: how much food you were able to harvest and store and how many children your partner was able to bear. Childbearing was also affected by agriculture and sedentation. The birth period, or time between when a woman was ready to have children again was shorter than when humans hunted and gathered. This was because humans were moving around less, and it was much easier to have children if one doesn't have to pack and unpack camp every day and follow prey. This led to a growth in the population, which led to even more communities forming and therefore more social inequality. Social inequality then led to warfare, as some groups had more resources than others. Warfare was also new to humans because of agriculture and sedentism. While hunter-gatherers may have had the occasional conflict, they were never organized. New human farmers, however, were capable of banding together, forming a simple government, and engaging in battles for resources with other groups.

While there were many social changes because of agriculture, there were also material changes. Just because humans were farming, didn't mean that *all* humans had to farm. Some humans instead opted to work on trades like developing tools or art instead of farming, and then trading their work for food. This meant that humans could concentrate more energy on material culture than they had been able to while hunting and gathering. For this reason, real changes in how farming was conducted and the crops it was conducted on changed much in this period as well.

Agricultural Technologies of Intensification

The continued engagement in agriculture led to developments in how it was practiced. There are three particular technologies of intensification that helped humans produce even more food. The first is the invention of the plow, the second is the discovery of superfoods, and the third is terracing.

The development of the plow in the fifth century greatly increased the caloric production per unit of land. Where before humans had to dig the ground by hand and place seeds, with the plow, cows, donkeys, horses, or oxen could till the land. This was also a major development because it meant that fields could be larger, which lead to growing even more food. On a related note: in some places, cows and similar animals were not native, which meant that plows could not be used. In these areas, however, humans learned to make paddy-like structures which would hold the water near the seeds. This is a slightly different utility than plowing, but interesting and helpful for agriculture nonetheless.

Another development was that of superfoods. Today, 80% of human calories come from the following crops: rice, wheat, barley, and corn. At the time, these foods were also incredibly useful to humans. The humans of the time began naturally selecting for the most productive versions of these crops, which cultivated them into the biological necessities they are today. Also related to the development of crops was the rise in domestication. There are a few qualities that make some animals more suited for human life than others, and humans chose these species for their abilities to produce milk, meat, safety, cleanliness, and companionship. Many of these species are also related to agricultural intensification. Cows could not only provide meat, but they could also provide dairy, leather, and labor. All of this increased the caloric ability of the land, whether it was literally because of the animal's ability to plow a field, or if it was because humans were more comfortable and stronger and could therefore better tend to their crops.

An interesting technology of intensification that developed in mountainous areas was terracing. Terracing is essentially the leveling of land to a) maximize the growing space and b) to control the flow of water to crops. By terracing, many humans could use the same tactics for growing that humans on flatter land were taking advantage of. This also led to more calories per square unit of land and was used much in the east and southeast around modern day China and the Philippines.

These are a few of the technological innovations that were first discovered when humans began settling and creating urban societies instead of hunting and gathering.