Chapter 5: Hunting, Gathering, Foraging, Farming, and Complexity

# Chapter Summary [Copied from Olszewski 2019, Chapter 5]

* Hunter–gatherer–foragers were present in nearly all regions of the world, including the New World, just after 20,000 cal BC. The domestication of the dog occurred before 12,000 cal BC and may have been a process that happened independently in several places.
* During the last part of the Pleistocene (“Ice Ages”), most hunter–gatherer–foragers were highly mobile groups. There is evidence at some archaeological sites, however, that suggests longer-term camps, such as at Ohalo II in Israel and Star Carr in England.
* In the last part of the Pleistocene, many groups relied extensively on plant foods such as wild cereal grasses or nuts. Evidence for this diet is based on plant remains, ground stone tools to process plant foods, and sometimes stable isotope studies of human bones and teeth.
* During the Epipaleolithic period of the Middle East, long-term trends include traditional knowledge about local plant foods and animals, special rituals in which humans are buried with animals such as foxes during the Middle Epipaleolithic, aggregation sites where small, mobile groups of hunter–gatherer–foragers came together occasionally to exchange information and perhaps mates during both the Early and the Middle Epipaleolithic, and eventually small village sites in the Mediterranean forest areas of the Levant during the Late Epipaleolithic (Early Natufian phase).
* The Pre-Pottery Neolithic period in the Middle East has many examples of complex social rituals including plaster statues of humans, human skulls that have been removed from bodies and then plastered to resemble human faces, and unusual architecture such as the wall, tower, and ditch at Jericho in the West Bank, the decorated T-shape pillared rooms at Göbekli Tepe in Turkey, and the mortuary complex at Kfar HaHoresh in Israel.
* One region of the world where food production developed is the Middle East. There is a long trajectory here showing various elements that were important in the process, such as increased ritual and social complexity in hunter–gatherer–forager societies of the Epipaleolithic and the villages of the Pre-Pottery Neolithic periods. Settled life was present for hundreds, if not thousands, of years before plants and animals attained their domesticated forms (during the late PPNB).
* In the Old World, important early domesticates include wheat, barley, peas, lentils, rice, sorghum, millet, yams, cattle, sheep, goats, and pigs. There are at least eight areas within several regions (Middle East, China, Africa, New Guinea, India) where food-production economies independently began.
* In the New World, local hunter–gatherer–forager groups exploited many wild plant foods. Some of these, such as teosinte (which developed into maize), beans, squash, sunflower, chili peppers, potatoes, and quinoa, eventually became domesticated. Food-production economies arose in South America, Mesoamerica/Mexico, and the North American East. Those in South America included animals such as llama, alpaca, and guinea pigs, whereas turkeys were domesticated in Mexico and possibly in the North American Southwest.
* Many different ideas have been proposed for the origins of food-production economies. These include the “oasis” theory, in which the proximity of people, plants, and animals at oases led to detailed knowledge about their life cycles; the “readiness” theory, in which it took a long time for technologies useful in exploiting plants and animals to come together within the natural distribution of these plants and animals; and population pressure, which meant that new ways of exploiting foods had to be developed to feed increased numbers of people.
* Other ideas about the origins of food-production economies include the effects of climate change during the late Pleistocene when colder and drier conditions prevailed (Younger Dryas), which meant that people innovated ways to increase plant foods in a sparse setting; human behavioral ecology that assesses the benefits of intensifying the use of foods that are available during different seasons of the year as opposed to their costs (small seed investment); the social mechanism of feasting that drove accumulation of surplus foods by some individuals or families so that they could gain prestige by giving away food; postprocessual ideas such as manipulating nature to control it; and worldwide explanations that stress that people were not able to consistently rely on plant foods during the Pleistocene because of climatic conditions that were more hostile to plants. Only during the Holocene did conditions improve so that hunter–gatherer–foragers could focus more exclusively on some plant foods (hostile Pleistocene). One of the most recent ideas is niche construction theory, which stresses the role of traditional knowledge about plants and animals and that people will only experiment with their food resources in areas where there is a natural abundance of foods.
* Egalitarian (equal), social complexity (ranked, kin based), and political complexity (social classes, not kin based) are three terms that can be used to describe societal organization. Egalitarian and social complexity can be used to described “stateless societies” that operate using cooperative behaviors. In this book, we use the term political complexity to describe states, kingdoms, and empires.
* One example of a ranked society (social complexity) is pre-Contact Hawai’i, which had a system of elites who were chiefs (*aliʻi*). A few decades before the arrival of Europeans, Hawaiʻi developed into a politically complex polity (state) with social classes.
* Many theoretical frameworks have been used to explain the origins and maintenance of politically complex polities. Among these are agency, ecodynamics, and networks and boundaries.
* Elite members of societies often used art to establish societal norms of the ideal. By identifying themselves with the ideal human body, for example, they helped create legitimacy for themselves.
* Access to considerable amounts of resources also characterized elites. This wealth was based on food-production surpluses and could include goods from trade and exchange networks. Accumulation of surpluses by elites was a result of the payment of tribute and/or taxes by commoners. Commoners must perceive benefits to themselves in the system to continue to support it.
* Ideological systems were one mechanism through which elites could claim the support of commoners. Elites defined themselves as directly connected to the supernatural realm, sometimes by claiming genealogical links to gods and goddesses. They also positioned themselves as integral to rituals that created benefits for commoners.

# Key Terms

**‘Ain Ghazal**: a large Pre-Pottery Neolithic B village site in Jordan with rectangular, stone-walled houses. It has two caches of plaster statues of humans and also plastered human skulls, figurines, beads, and enormous quantities of artifacts reflecting everyday life. There was a shift from the use of mainly wild plants and animals early in the occupation to a later reliance on domesticated plants and animals.

**‘Ain Mallaha**: a Late Epipaleolithic (Natufian period) site in Israel. It dates between about 13,000 to 9600 cal BC and is an example of a small village in the Mediterranean forest region of the Levant.

**Ahupuaʻa**: Divisions of land in Hawai`i running from the inland mountains to the sea, each with a diverse set of resources allowing self-sufficiency.

**Control of nature through its manipulation**: a postprocessual explanation for the origins of food-production. It postulates that people attempted to control wild resources through rituals, food storage, and food processing technologies. This led to domestication as the wild resources were transformed into controlled resources.

**Dhra’**: a Pre-Pottery Neolithic A site in Jordan. It was a small village with circular stone-walled dwellings that used mudbrick in the construction of the upper portions of each structure.

**Domestication**: changes over time in the features of wild plants and animals that made these species more attractive to humans for a variety of reasons. These were genetic changes that were “selected” due to human manipulation. Wild barley and wheat, for example, easily disperse their ripe seeds due to a brittle rachis (the plant part holding the seeds) when the plants are disturbed by the wind. Plants with a tough rachis that does not allow natural dispersal of seeds are the domesticated form. The genetic changes from brittle to tough rachis barley and wheat mean that ripe seeds stay on the plant until harvested by humans. This is advantageous for humans but not the plants.

**Epipaleolithic**: an archaeological term most often used to refer to hunter-gatherer-forager groups living in the Middle East in the interval between 23,000 to 9600 cal BC.

**Feasting Model**: feasting is a strategy that allows the sharing of food resources and brings prestige to those who host the feasts. It is one possible explanation for the origins of food-production because it hypothesizes that increasing the abundance of certain foods (to be used in feasting rituals) through their manipulation resulted in domestication.

**Fertile Crescent**: the arc of Mediterranean forest running from Jordan/Israel/Lebanon north toward Turkey and northern Syria and then south and east through the Zagros Mountains.

**G**ö**bekli Tepe**: an unusual Pre-Pottery Neolithic A and B site in Turkey. It has structures that incorporate large T-shaped pillars; early structures are circular, while later ones are rectangular. Many of the T-shaped pillars are decorated with motifs such as snakes, aurochs, gazelle, felines, and other images. The excavators interpret the site as a ritual center with each structure being a temple. Other archaeologists suggest that each structure is a household with both ritual and daily activities and that the motifs on the pillars may reflect family images, similar to clan designs.

**Hillazon Tachtit**: a Late Natufian phase site of the Late Epipaleolithic period in the Levantine Middle East where evidence for an elaborate burial ritual associated with an elderly woman from a hunter-gatherer-forager group has been found.

**Hostile Pleistocene Theory**: an explanation for the world-wide origins of food-production in the Holocene. It attributes this transition to the fact that climatic conditions during the Pleistocene were not conducive to dependable reliance on plant foods. With less extreme climatic fluctuations in the Holocene, hunter-gatherer/forager groups could manipulate plant foods more successfully, resulting in their abundance and domestication.

**Jericho**: a large site in the West Bank in the Middle East, it has many different periods of occupation. During the Pre-Pottery Neolithic A, it was a moderate-sized village of circular dwellings that were associated with a monumental stone wall, stone tower, and external ditch. These monumental features are unique for this time period.

**Kfar HaHoresh**: a Pre-Pottery Neolithic B site in Israel in the Middle East. It appears to have been a mortuary complex with evidence for burials, plastered skulls, skull removal, feasting, and lime production to make plaster for the burial areas.

**Kharaneh IV**: a very large aggregation site in the Azraq Basin area of eastern Jordan. It was occupied during both the Early and Middle Epipaleolithic, and yielded evidence for long-distance exchange for marine shells, dwelling structures, hearths, burials, and the hunting of gazelle and aurochs.

**Mesolithic**: an archaeological term used in some parts of the Old World, such as Europe and Asia, to describe late hunter-gatherer-forager groups. The chronology associated with this term varies from region to region. For example, in Europe, the Mesolithic is found between 10,000 to 5000 cal BC.

**Natufian**: an alternative name for the Late Epipaleolithic period in the Middle East, dating between 13,000 to 9,600 cal BC. During the Early Natufian, which coincided with the climatic optimum, several small village sites were established in the Mediterranean forest area, indicating more permanent settlement. A return to colder and drier conditions during the Late Natufian corresponds to a return to much higher mobility by hunter-gatherer-foragers.

**Niche Construction Theory**: the idea that humans actively change or manipulate features of the landscape around them and resources in those landscapes in ways that build a niche or habitat in which they can be successful over long periods of time. It incorporates evolutionary ideas from biology and applies them to humans.

**“Oasis” theory**: a model for the rise of agriculture, suggesting that environmental changes led to clustering of people, plants, and animals at oases—with close association leading to revolutionary change—the “Neolithic Revolution.”

**Ohalo II**: an Early Epipaleolithic site on the shore of the Sea of Galilee in Israel. It contains thousands of well-preserved organic remains such as wild cereal grasses. This demonstrates very early and intensive use of a plant food that became one of the major domesticates some 10,000 or so years later. There is also evidence that hunter-gatherer-foragers may have lived at this site year-round.

**Political Complexity**: a term used to describe societies for which social classes have replaced kin groups in societal organization. Politically complex societies can be kingdom, state, or empire polities. They usually have one or a very few ruling elite, although one exception may have been the Indus Valley.

**Population Pressure**: Increasing population size and density. Some archaeologists argue that population pressure was a major pressure leading to agriculture innovation.

**Pre-Pottery Neolithic (PPN)**: the earliest part of the Neolithic period in the Levantine region of the Middle East, dating between 9600 to 6250 cal BC. Numerous small and large villages with evidence for complex ritual activities are present. People of the PPN relied heavily on the cultivation of wild plants and the hunting of wild animals, and their economic strategies eventually led to genetic changes characteristic of domestication.

**Readiness Theory**: a mosaic development theory to the rise of agriculture, suggesting that it took time for diverse knowledge and appropriate technologies to come together successfully in the right ways for agricultural exploitation of species to occur.

**Shubayqa 1**: a Natufian settlement site in Jordan (12,650 cal BC) including evidence of the world’s oldest bread.

**Small Seed Investment**: an origins of food-production idea based on ecological habitats in eastern North America. It notes that heavy use of edible small seeds is a seasonal activity that does not conflict with the gathering of other food resources. Manipulation of these small seed producing plants leads to the domestication of some of them.

**Social Complexity**: a term often used to describe societies which are no longer egalitarian in social structure. There are status and rank differences between people, although relationships usually are still based on kin groups.

**Uyun al-Hammam**: a Middle Epipaleolithic site in the western highlands of Jordan (Levantine Middle East). It contains a cemetery in which several humans are buried with parts of animals such as tortoise shells, goat horns and deer antler, and foxes. This indicates that human-animal symbolic associations were part of hunter-gatherer-forager societies long before the appearance of settled communities.

**Wadi Madamagh**: a small rockshelter site in the Petra region of Jordan. It has cultural materials of the Early Epipaleolithic period and an emphasis on the hunting of wild goats, which were common in the rugged terrain in which the site is situated.

**Younger Dryas Theory**: the rapid cooling and aridity of this late glacial period was used as an

explanation for the origins of food production. It assumes that as climate worsened, hunter/gatherer-forager groups began to manipulate plants and animals to assure their availability and abundance.