is referred to as a shell midden. Cattle Point is a shell midden deposited on a sandy gravel ridge above a beach. It has little forest cover and is exposed to high winds and erosion. In contrast, English Camp is a shell midden deposited on a quiet muddy shoreline. English Camp has suffered some erosion and infilling of the bay, and there is abundant forest cover.

These sites show evidence of thousands of years of occupation, continuing up through the historic period. English Camp may have been in use as a winter village when the British soldiers arrived in 1859. On the other hand, Cattle Point has not been identified specifically as the location of either a winter village or summer fishing spot by Native American tribal elders. Evidently the spot is no longer remembered. The artifacts, however, testify to the use of the location, remembered or not. This is a good example of why archaeological, historical, and ethnographic information are all crucial. The Cattle Point site contains material suggesting that summer fishing and gathering activities took place there.

**How Archaeologists Reconstruct the Past**

Archaeologists in the Northwest have created what we call a culture history of the area. They have done this over the last 100 years and follow a method influenced strongly by an anthropologist who worked from the 1850s to 1900, Franz Boas. Boas proposed that cultures be described by condensing them into “generalized patterns of behavior.” He believed that all human behavior could be seen as modal patterns enforced by a set of rules defined in the culture. This theory is referred to as the normative concept of culture. The rules are passed from one generation to the next, some within the family, others within schools or occupations. Some behavior is idiosyncratic, but most is regulated by norms.

Norms in this context are really ranges of behaviors. Each range represents only a portion of the potential behaviors. Anything outside that range is considered deviance, which in turn is regulated in a variety of ways. For example, in the United States, what clothing is considered appropriate to wear to a traditional wedding ceremony? Would you wear blue jeans, khaki shorts, or a bathing suit? If you did, how would other people react? Would you be arrested, thrown in jail, or just the object of stares and whispers? Within our society there are ranges of acceptable behaviors that are enforced through subtle (and not so subtle) social pressures. Boas used these norms as the basis of his culture concept.
Boas and other anthropologists divided the world into cultural areas. These areas were defined by historical observations and ethnographies. Cultural groups were classified on the basis of language, physical and cultural characteristics, and material culture (the objects made and used).

Archaeologists make use of the normative view of culture to reconstruct or describe the nature and sequence of past behavior. The remains of past cultures recovered by archaeologists, such as tools and other material goods, are assumed to represent past behavioral norms. This method reduces artifacts into slices of time: each slice of time is a period when people followed a particular set of standard rules.

The archaeological method of finding norms requires that archaeologists group all artifacts that are alike into categories called types. A type (the perfect behavior or modal behavior) is a class of object defined by a consistent clustering of attributes. Archaeologists build sequences of time by stacking younger types on top of older types. For example, leaf-shaped points are older than triangular-shaped points.

After a type is defined, the next step is to group all the different types into components. A component is an association of all the artifacts from one level at a site. So all the artifact types from one portion of the site are placed together and called one component. For example, leaf-shaped points are often found with cobble tools and together would be referred to as component #1 in a site.

The next step is to move beyond the single site and build a comparative chronology by grouping all the types and components of groups of sites into a phase. A phase represents similar components from more than one site. A phase is thought of as a culture or occupation and represents time and occupation over space. A phase in reality is a group of types—a component found over a large area. Archaeologists use the normative culture concept to interpret these similar artifacts as people walking over the landscape at a specific time, doing specific (normal) things. One problem with phases, however, is that the archaeologist never knows what the normal behavior or region really was. So types are often found in different sites in different combinations. Recently, archaeologists have turned to radiocarbon dating instead of types and components alone.

Once the phase is identified, the archaeologist uses radiocarbon dating to define the range of dates over which a phase existed, and then constructs a culture history. A culture history is a sequence of time and types constructed for each culture area. The sequence is manageable in terms of time and space and convenient units in which archaeologists can study the past. Although radiocarbon dates are replacing the phases as a system for sorting types, phase names continue to be used as a short cut to tell time.

Archaeologists would like to know more than just a culture history for a culture area. Artifacts and types should be brought to life and should offer explanations for changes that we detect. That leap of logic, from the artifacts we find to reconstructing and interpreting what they mean, requires bridging arguments. The most common ones are based on analogy, culture ecology, and evolution.

Ethnographic and historic analogy uses the observations made by anthropologists, historians, and explorers, and the oral histories of native peoples to interpret the functions of objects found in an archaeological context. This method works well for artifacts found in sites that have been occupied recently. The chances of the object being used in the same way in both the archaeological context and the ethnographic or historic one are high. Problems arise when comparisons are made between people living today and people living thousands of years ago. The chances are not as high that the function of objects will be the same in both periods. In fact, the objects found in the older sites usually have no modern analog in any description or recollection.

Another method is to use common sense or experimentation to interpret function. If the object has a sharp edge, then it stands to reason that it was probably used to chop or cut something. One tries cutting various materials and sees which is cut most efficiently. The problem with this method is that the true function is not verified just because the experimenter has found an efficient use for an item. The original maker may have made the object for a task that the experimenter had not even thought to test.

Neither of these methods for interpreting the past explains why the object's shape or function changed. Culture ecology emphasizes the interdependence of people's behavior and their environment. If the environment changes, then people change behaviors in order to survive. Archaeologists sometimes look to geologists or climatologists for evidence of an environmental change coincident with an artifact change. Often, however, no correlations are found.

The second method for explaining changes in the past is evolution. People have a great deal of variability in why and how they do things. Within that variability some things will allow the individual or group to reproduce more often and have a greater number of offspring that adapt quickly to outside pressures. Those behaviors that promote
success will be naturally selected. Darwin noted this variability in species and used it to explain change in biological evolution. The suggestion here is that the same principles operate in cultural systems. Disagreement exists on the nature of the transmission—culturally learned as opposed to biologically transmitted through genes—but overall similarities seem to exist between the two methods. One problem for people trying to use evolution in archaeology is that the Boasian approach, which emphasizes tallying objects in terms of central tendencies or norms, cannot be adapted to tallying the variability in the assemblage. For example, if scrapers were made in a variety of sizes, grouping them into two categories of larger than 5 cm and smaller than 5 cm would emphasize the normal sizes of scrapers and de-emphasize the variability in scraper sizes. Evolution requires that variability be examined in each artifact type of each site, and archaeologists have (for at least 100 years) been reducing that variability into normative types. Evolution is a new and powerful tool that many researchers are using to explain why changes occurred.

On the Northwest Coast, archaeologists have been using primarily two approaches, culture ecology and culture history. In fact, so few sites have been excavated and so little radiocarbon dating has been done that we still have disagreements about the components and phases, the environmental events that may have influenced people living in the region, and the variability across the region and within the site. The problem for archaeologists in the Northwest is that the shell middens here are extremely difficult to excavate. They are too big and complex to excavate quickly. They contain abundant fish, shellfish, plant remains, and sediment that must be sampled and saved. They contain few objects that offer information about style, function, technology, or change, so large areas of the site have to be excavated to get sufficient samples. We know less about the prehistoric past of the Northwest than about that of other regions, but we are catching up rapidly, as you are about to see.

CATTLE POINT SITE

The Cattle Point site (45SJ) is located two miles west of the prominent landform labeled on maps as Cattle Point. The archaeological site stretches for several hundred meters along the top of the bluff above the beach, as well as along the lower beach. Three natural springs emerge at the base of the bluff in the vicinity of the site. The springs and the presence of an offshore bank over which migrating salmon must swim made this location an attractive spot for fishing, shellfishing, and gathering roots, and therefore for prehistoric occupation. Most evidence suggests that this site was seasonally occupied, especially during the summer salmon runs.

THE AGE OF THE
CATTLE POINT SHELL MIDDEN

When Arden King excavated the Cattle Point site, he believed that people had been there for thousands of years and that over time the traditions of these people changed. He thought that the history of these people could be roughly divided into four phases based on the kind of animal remains he found in the site and on the tools the people left behind. Interestingly, King defined phases rather than components, yet his excavation was the first in the region and was not a comparison of artifact types across a region. (Components are defined at one site, and phases are similar components at more than one site.) King proposed the phases as a starting point, to be refined after archaeologists excavated other sites.