Subsistence Strategies
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Introduction

Humans survive by developing ways of utilizing the environmental resources that surround them. These ways are collectively known as subsistence strategies.

There are four known types of subsistence strategies: foraging, pastoralism, horticulture, and agriculture. The following article introduces each and discusses common patterns of settlement, economics, diet, and social organization. While reading this article, keep in mind that the types are broad generalizations that do not perfectly describe all human subsistence strategies. The types are, however, a useful starting place from which to launch more in depth studies.

Foraging

The oldest human subsistence strategy is foraging. People who practice foraging are called either foragers or hunter-gathers (for this article, I use foragers). Foragers gather wild plants and hunt wild animals within an area of land called their home range. Forgers neither plant crops nor raise animals other than, perhaps, dogs.

Before the rise of agriculture around 10 K.Y.A. (ten-thousand years ago) all humans used foraging strategies. As agriculture took hold, farmers and herders pushed foragers out of fertile areas, such as river valleys, plains, and hills, and into marginal areas, such as subarctic tundra, deserts, and tropical forests. Today, all foraging societies live in marginal areas.

Types of Foraging

There are three main types of foraging: pedestrian, equestrian, and aquatic.

Pedestrian foraging is the most common and oldest type of foraging strategies. Pedestrian foragers travel within a home range by foot. Because they travel by foot, pedestrian foragers have both small home ranges and few material possessions.
Examples of pedestrian foragers are the San of Southwest Africa, the Australian Aborigines, and the pygmies of Central Africa.

Equestrian foraging developed only in the Great Plains of North America and the grasslands of Argentina and only after Europeans introduced the horse. Equestrian foragers travel within their home range by horse. Because of their mobility, equestrian foragers have larger home ranges and greater access to resources than their pedestrian counterparts. This, in turn, enables equestrian forager groups to grow larger. Unlike pedestrian foragers, equestrian foragers are stratified with a centralized male leadership. Equestrian foragers are also more aggressive. Examples of equestrian foragers include the plains Indians of North America, such as the Sioux, Crow, and Cheyenne, and the Tehuelche of South America.

Aquatic foraging relies on water resources for food. Aquatic foragers usually live in permanent settlements near the oceans, seas, or lakes from which they secure their resources. Aquatic foragers may change their diet to include more terrestrial food resources during cold seasons. Aquatic foraging societies generally have more material goods and a higher level of stratification than any other foraging society. Examples of aquatic foragers are the Kwakiutl and Haida of the northwest coast of North America.
Subsistence Strategies

Settlement Patterns

Most foraging societies are *nomadic*; they live in temporary camps for anywhere from a few days to a few years and move their camps to different locations as they use up local resources. Foragers may also have seasonal camps to which they return at different times during the year. Regardless of where they settle, foragers must always have easy access to water.

The size of a forager group is limited by the *carry capacity* of its home range, the group’s social practices, and its cultural practices. As a result, forager groups are much smaller than groups using any other subsistence strategy—25 to 30 individuals on average. Population densities vary from 30 persons per square mile to one person per 50 square miles depending on the availability of resources. This density is usually far below the carry capacity of the group’s home range.

*carry capacity*
Number of people that can be supported by the available resources and technology in an area of land.
Populations within a forager group remain low due to three major factors.

First, mothers tend to breast feed their children for several years and the hormones in a woman's body during lactation suppress ovulation. Women can still get pregnant while they are nursing, it's just a little bit harder. This delays additional births and keeps populations from growing.

Second, if a group becomes too large, members of the group can move on to another group, perhaps to one whose numbers are dwindling. This effectively redistributes populations and keeps group size at a sustainable level.

Third, as group size increases, the frequency and intensity of social conflicts increases. This social friction usually causes a large group to split into smaller ones.

**Economics**

All foraging societies have a *division of labor* based on gender and age, though the boundaries are not as rigid as those found in societies using other subsistence strategies. Typically, men hunt and butcher wild animals while women gather and processes wild plants. However, a man can perform “women's work” and a woman can perform “men's work” as long as the individual proves he or she has the ability to do it.
Foragers have few material possessions, limiting themselves to what can be carried. Common tools might include digging implements, baskets, spears, and bows.

**Diet**

A forager's diet, generally well balanced even in harsh environments, consists of flora she can gather and fauna he can hunt. Flora, consisting mostly of nuts, roots, fruits, and vegetables, makes up 60-70% of total daily intake. Foragers may also eat protein-rich insects. These resources are stable and reliable, unlike large animals which are difficult to hunt.

Studies have shown that a hunter spends only 20 hours a week on average working (depending on the environment) while the rest of the time can be spent on leisure activities, social interactions, family, and spiritual and mental growth. Gatherers, who are usually women, spend a little more time working each week because of domestic duties such as child rearing.

**Social Organization**

The highest level of social organization in a foraging society is the *band*. Bands are composed of several families and possess no central leadership. Foraging societies are more egalitarian than societies using other subsistence strategies because foragers have few possessions—possessions being a major determining factor of status and class—and because resources are freely accessible from the environment.

Small group sizes also enable foragers to have a greater number face-to-face interactions than people using other subsistence strategies. The people in a foraging group will know each other whereas it would be impossible for the people in a city like Rome to know each other.

*Camps* are the center of activity in a foraging society. Individuals form and maintain social bonds at the camp, they consume food there, and carry out important ceremonies there. Food sharing is a common practice that sets up a social network based on sharing and *reciprocity*. Food sharing also
forms close social bonds within a group, ensuring that individuals work together in order to survive.

**Pastoralism**

Pastoralists rely on *animal husbandry*, the raising and breeding of animals, to provide their subsistence needs. These domesticated animals are usually herbivorous herd animals, such as horses (as in Mongolia and Central Asia), cattle (as in East Africa), sheep and goats (as in Southwest Asia) or camels (as in Southwest Asia and North and East Africa). Their animals are the dominant figure in pastoralist societies and are often the focus of important events, rituals, and ceremonies.

**Types of Pastoralism**

There are two major types of pastoralism: nomadism and transhumance.

Pastoral nomads follow the irregular migratory patterns of their herd and do not migrate between fixed locations throughout the year. Pastoral nomads live in portable shelters, such as tents. Examples of pastoral nomads are the Yukagir in northeastern Siberia, Scythians of southern Russia, the Mongols, and the Huns.
Transhumant pastoralists follow the regular migratory patterns of their herd, usually between cool-summer and warm-winter grazing areas. They often have permanent settlements in each area. Examples of transhumant pastoralists are the Navajo in the North American Midwest and the Hottentots of southern Africa.

Modern day sheep and cattle ranchers in western North America, Australia, New Zealand, Argentina, and other locations are also pastoralists—of a sort. While other pastoralists raise their animals for subsistence, ranchers are producing a commodity to sell on the world market. Cowboys of yesteryears can also be considered a type of pastoralist culture.

**Settlement Patterns**

Pastoralists live in areas such as semiarid plains that are not well suited for agriculture but are ideal for grazing. Their settlements range from temporary encampments to permanent houses depending on the type of pastoralism the society practices. During droughts, pastoralists simply pack up and move to new areas.
Gender and age determine the division of labor in pastoralist societies. Men own and care for the animals, are responsible for agricultural production, and make all the decisions related to the family. Women are responsible for domestic duties, such as child rearing and producing items used in the home.

While the level of self-sufficiency for pastoralist societies varies considerably, most pastoral groups depend upon the specialized abilities of non-pastoralist peoples, such as farmers, merchants, and city dwellers, for goods and services. In some
cases, this relationship turns violent, resulting in open hostility, raids, and warfare. Throughout history, pastoralists such as the Mongols, Zulus, and the Huns have raided settled societies for the goods they needed or desired.

**Diet**

Pastoralists rarely eat their animals. In most cases they produce food from the animal’s milk, such as butter and cheese. Some societies in East Africa bleed their cattle and then mix the blood with milk to create a high protein drink.

When pastoralists do kill their animals, however, the slaughter is accompanied by ritualistic celebration and food sharing. Sharing the meat from their animals solidifies social bonds between pastoralists and sets up a pattern of reciprocity that ties the community together through mutual obligations. This is similar to the way that food sharing creates social bonds in foraging societies.

**Social Organization**

The family is the primary group in a pastoralist society. Families are patriarchies and trace ancestry through patrilineal descent. Polygyny, a marriage practice in which men have many wives, is a common practice.

Multiple families form a camp. The membership of a camp is always in flux and depends on such factors as age and gender differences and herd size.

Camps form social alliances called tribes. Tribal membership is generally based on unilineal descent—tracing common ancestry to a single ancestor. Because pastoralist societies are patrilineal, this ancestor is male. These social alliances, however, are usually unstable and require strong central leadership to sustain.

Pastoralists have a high degree of gender and age stratification with central leadership.
Women enjoy little prestige within this structure; their roles are confined mostly to the home.

Boys and young men enjoy a little prestige based on their own exploits. Males are not allowed to own a herd until they become elders at which point they can acquire prestige in two ways: bravery and herd size.

Aggression plays a large part in the life of a pastoralist man who must make important economic decisions, protect his herd, expand his territory, and conduct raids to acquire goods from settled peoples. In fact, pastoralist societies such as the Mongols and the Zulus are well known for their military exploits.

**Horticulture**

Horticulture subsistence strategies involve small-scale farming. Horticulturists use simple tools to raise domesticated plants in a garden and to tend to small domesticated animals, such as pigs or chickens. Animals are often a source of both food and prestige.

Horticulture emerged around 10 K.Y.A. Today, horticulture is practiced in Central and South America, Southeast Asia, and Africa. Examples of horticulturists are the Yanomamo of South America and the Tsembaga of highland New Guinea.

**Settlement Patterns**

Horticulturist population densities range from 1-10 people per square mile and are generally found in tropical areas. They live
in semi-permanent settlements of between thirty to several hundred persons. Because of the farming techniques used by horticulturists (see the Diet section), soil nutrients are rapidly depleted. As the fields in one area are no longer able to support crop production, the group moves to another area within a home range. Horticulturist groups often have several sites to which they travel over a period of years.

**Economics**

Age and gender determine the activities for which a person is responsible, with men afforded higher prestige than women. Men are generally responsible for hunting, heavy labor tasks related to agriculture, and village business, such as negotiations with outside communities. Woman are generally responsible for most agricultural work, domestic chores, and food preparation and distribution.

Families work to support both their own subsistence needs and the needs of their village. Communal activities include clearing fields, building homes, and hunting.

**Diet**

Horticulturists draw their diets from their gardens, domesticated animals, and limited foraging. Food sharing is a common practice and the consumption of domesticated animals is often a special event.

Horticulturists plant their crops on small fields (gardens) using simple tools, such as sticks and hoes. They prepare a field using *slash-and-burn* techniques. First, they cut down the natural vegetation in a field. They then burn the vegetation, leaving the potash as a fertilizer, and plant their crops in this burned area. A field remains in use until its soil nutrients are depleted, at which time a new field is cleared and planted. The old field is left *fallow*. The fallow period gives the natural growth a chance to return to the field, which in turn builds up soil nutrients. Once natural growth has returned, it is cleared and burned again. This technique of shifting from one field to
another is known as *shifting cultivation* (or shifting agriculture).

Horticulturists plant a variety of crops in a single field. This is known as *intercropping*. The variety of vegetation protects the soil from erosion. Once a field is planted, little else is done with it; the crops are more or less left to grow on their own. Aside from the potash, horticulturists use no fertilizers, pesticides, herbicides, or irrigation of any kind.

**Social Organization**

Horticulturists arrange their social organization around kinship ties in much the same way pastoralists and foragers do. Kinship ties determine where a person lives and the lands to which they have access.

Horticulturists carry out periodic raids on their neighbors in order to attain valuable resources, women and children, and avenge a wrong—or a perceived wrong.

Horticulturists possess a few more material goods than foragers or pastoralists. Exchanges of services and food goods, such as livestock, determines status. For example, the Tsembaga hold a celebration in which pigs are eaten. This “party” affords status to the person who threw it.
Agriculture

Agriculture involves a small number of full time farming specialists producing high yields of crops for the rest of society. Agriculturists use irrigation, fertilizer, pesticides, and herbicides. This is different from horticultrists who plant their crops and leave them be until harvest. Agriculturists also use either large beasts of burden or mechanized equipment to improve crop production. Unlike any other subsistence strategy, agriculture supports a large, sedentary population far beyond the normal carry capacity of land.

The earliest agriculturist societies appeared in Mesoamerica, South America, Egypt, Mesopotamia, the Indus River region and Northern China. Each of these regions domesticated a variety of plants and animals. Today, almost all societies either use agriculture, or are affected by agricultural practices.
Types of Agriculture

There are two types of agriculture: non-industrialized and industrialized.

Non-industrialized agriculturists use irrigation, fertilizers, and other additives to improve crop yields. They also use beasts of burden, such as horses or oxen, to clear and plow fields and perform other tasks.

Industrialized agriculture is similar to non-industrialized. However, instead of animals, industrialized agriculturists use machinery, such as tractors and combines. Industrialized agriculture also takes place on a larger scale, supplies more food to larger populations, and uses more resources than non-industrialized agriculture.
Settlement Patterns

The emergence of agriculture permanently changed the settlement patterns of those societies that used it.

First and foremost, settlements become permanent because the food source was permanent.

Second, a complex division of labor arose. Non-food-producing members of society became specialists, such as craftsmen, religious leaders, soldiers, traders, and political elites, and bartered goods and services to meet their own subsistence needs. These specialists didn't settle in farms but rather into urban centers, where markets sold the food they needed. Eventually, urban centers became the heart of cultural innovations, the arts, and learning. Improvements in agriculture have allowed urban centers to attain a size and complexity never imagined just a few hundred years ago.

Economics

Agricultural societies are more stratified than societies using any other subsistence strategy. Adult men occupy the highest level of status while women rank the lowest—though this is changing in some agriculturist societies. Agricultural societies maintain a sharp distinction between men's work—politics,
public life, food production, and warfare—and women’s work—childrearing and other domestic chores.

Agricultrist societies use a range food-production patterns to meet the needs of the group. These patterns include: foraging, ranching, peasant farming, plantation agriculture, and large-scale mechanized grain farming.

Foraging exists in many agriculturist societies, including the United States, in the form of fishing. Even though the methods, intensity, and motivation (to make money) changes in agriculturist societies, these aquatic foragers follow many of the same basic practices that their foraging counterparts follow; people hunt and butcher wild animals.

Ranching is another food production practice used in agriculturist societies. Modern day ranching, confined mostly to regions where Europeans migrated, has its origins in medieval pastoralism. Ranching involves raising a single type of animal, such as cattle or sheep, on land that is unsuitable for agriculture. These animals are bred for sale on domestic and international markets.

Peasant farming is the most common form of farming in the world. Peasants are farmers who work on a family owned farm. The farm furnishes most of the family's food needs while leaving a surplus that can be sold in either local or foreign markets. Peasants typically have the lowest level of social status in the societies in which they live despite the fact that they serve as the primary food producers for the urban centers and the elite.
Plantation agriculture, another of the food producing patterns found in agriculturist societies, is a labor intensive method of farming requiring a large labor force. Plantations produce *cash crops*—crops, such as sugar cane and coffee, that are raised for the explicit purpose of export. Plantations use the income generated from these exports is used to pay their huge operation costs. Plantations are mostly found in the tropics and subtropics and are mostly owned by large multinational corporations. These plantations displace local peoples and provide low wages to people who no longer have a way to make a living.

Large-scale mechanized grain farming is a capital-intensive form of farming requiring a large amount of investment money to pay for fertilizers and machinery. Large-scale mechanized grain farming focuses on raising one or two crops, such as wheat, rice or corn, for the explicit purpose of export. Because this food production pattern uses heavy machinery to perform most of the labor, few workers are needed. Large-scale mechanized grain farming did not emerge until after the Industrial Revolution. Today, countries like the United States and Russia use mechanized grain farming to meet most of their own food needs as well as to produce export goods.
Diet

Agriculturist societies subsist primarily on domesticated grain foods, such as wheat, rice, barley, buckwheat, or corn. They augment this diet with other domesticated plants, such as fruits and vegetables, and domesticated animals, such as cattle, pigs, and chickens. Because of advances in food preservation techniques, today people are able to eat not only local foods but also out-of-season and imported foods from around the globe. This is a luxury that people using other subsistence strategies don’t have.

Social Organization

Before agriculture, societies were small and more or less isolated. Agriculture made large-scale societies possible. Large-scale societies are characterized by the presence of specialists who do not produce food, internal and external trade for goods needed for subsistence, increased inequalities in status and wealth, and an intensification of resource use.

Agricultural societies are complex. Inequalities in status and wealth increase with this complexity. At the top levels of power in an agricultural society are the ruling elite who maintain law and order within a territory. Their power is sanctioned in a variety of ways, such as divine rule, accumulated wealth, or popular election. At the bottom levels of power are the food-producing people. Everyone else is positioned somewhere between these two extremes. In some societies, foreigners and people who perform jobs that are considered especially dirty or sacrilegious, are essentially outside of this power structure and are generally considered non-humans.

Order is maintained by a code of laws and judicial system that enforces laws and punishes those who break them. Third-party mediation, by specialists who practice law, replaces the one-on-one interactions found in foraging societies.
Warfare conducted by agriculturists is different from warfare conducted by societies practicing other subsistence strategies. Wars of conquest are common among agriculturist societies—as they are among pastoralists. These wars are typically fought over territory or resources that one society or another claims. Wars are also fought on an increasingly larger scale as societies become larger, more complex, and more technologically advanced. Agriculturists have full-time warfare specialists, soldiers, whose job it is to fight. With the exception of some aggressive pastoralists, no other societies have these sorts of specialists. The amount of resources needed to wage war also increases. Today, warfare is a complex matter involving the mobilization of machines and men on a scale never before seen.

**Wrap Up**

This article has introduced you to subsistence strategies. You have learned that subsistence strategies can be divided into four categories: foraging, pastoralism, horticultural, and agricultural.

Each strategy is a response to environmental and social pressures and not the result of a linear development from primitive to modern; simple to complex. If for some reason an industrialized society finds a pastoralist way of life to be more advantageous, than it will move in that direction.

No subsistence strategy is intrinsically better than another. Foragers are not primitives and agriculture is not always the best way to produce food. As with any cultural practice, a society uses a subsistence strategy because it is the best way for that society to survive.
animal husbandry
Raising and breeding of an animal. Pastoralist cultures focus on the husbandry of a single animal, usually a large, herbivorous herd animal such as horses or cattle.

band
Egalitarian method of social and political organization made up of several families with no central leadership. It’s commonly found within foraging societies.

camp
1) Temporary settlement used primarily by foragers and pastoralists.
2) Level of political organization in pastoralist societies composed of several families. The composition of the camp is always changing.

carry capacity
Number of people that can be supported by the available resources and technology in an area of land.

cash crop
Crop, such as sugar cane and coffee, that is raised for the explicit purpose of export. Plantations sell cash crops on the international market and use the revenue to pay for their huge operation costs.

culture
Set of learned rules, standards, or manners shared within a human group that describes a range of behaviors and beliefs that are proper, acceptable, and valid, and that are in place to promote the survival of the group. These rules govern all aspects of behavior within a group and provide for repercussions when the rules are violated. These rules also govern relationships with other groups of people and with the environment.

division of labor
Way in which work is divided in a society. In most cases, a division of labor exists along gender and age differences.
fallow
Period of time during which a field is not planted and natural growth is allowed to return to the area. This period restores soil nutrients that have been depleted because of farming.

food sharing
Practice of sharing food with members of a group in order to promote solidarity and create social obligations that can be called upon at a later time.

intercropping
Planting a variety of crops in a single field.

K.Y.A.
Ten-thousand years ago. Archaeologists use this shorthand particularly when talking about spans of time.

large-scale society
Society that has cities, a complex economy, specialists, and industry. Large-scale societies emerged as a result of agriculture and technical advancements in food production, storage, and transportation.

nomadism
Way of life in which people do not live in permanent settlements but rather travel from one area to another in a home range. Foragers and pastoralist are typically nomadic.

patrilineal descent
Tracing one's ancestry through the male line.

plantation agriculture
Food producing pattern found in agriculturist socities. It is a labor-intensive method of farming that produces crops for the sole purpose of export.

polygyny
Marriage practice in which a man has multiple wives.

reciprocity
Exchange or goods and services of approximately equal value between two or more parties. The exchange does not have to be immediate. For example, Tom might buy Jack lunch and later Jack might buy Tom a small present. Reciprocity is one way a group of people form close relationships to promote the well being of the entire group.
sedentary
Settlement pattern in which people live in semi-permanent or permanent dwellings. Most horticulturist and nearly all agriculturst societies are sedentary.

shifting cultivation
Method of crop production in which the farmer uses slash-and-burn techniques to clear a field and plant their crops. Once the field's nutrients have been depleted, another field is cleared and the old field is left fallow.

slash and burn
Farming technique used by horticulturalists in which the natural vegetation is cut away and burned. The resulting potash acts as a fertilizer for new crops. No other forms of fertilizer are used. Slash-and-burn agriculture rapidly depletes soil nutrients and after a few years a new field must be opened.

specialist
Person who creates a product or provides a service in order to meet his or her subsistence needs. Specialists appeared with the rise of agriculture and the emergence of urban centers.

status
Social standing based on birth, wealth or individual effort.

transhumance
Form of pastoralism in which migratory herding takes place between a limited number of locations at which semi-permanent settlements exist. These locations are typically between cooler lands during the summer and warmer lands during the winter. Diet may also be augmented by limited crop production.

tribe
Group of nominally independent people who share common language, cultural characteristics, and territory, and are unified by a common factor. Pastorlist camps often form into tribes.

unilineal descent
Tracking kinship through a single line of ancestors.
urban center
Settlement pattern with concentrated numbers of permanent dwellings. Urban centers appeared as a result of agriculture and the emergence of specialists who bartered goods or services to meet their own subsistence needs.

warfare
Formalized armed combat between groups representing rival communities.

wealth
Objects or resources that are useful or have exchange value in a society, such as currency, specialized knowledge, herd animals, or material objects.
Sources and Further Reading

- Anthropology, Seventh Edition
- Contemporary Cultural Anthropology, Third Edition
- Anthropology Tutorials: Patterns of Subsistence