

Subject: Anthropology

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 -Content for Post Graduate Courses

Paper No. : 02 Social-Cultural Anthropology

Module : 23 Changes in Simple Economy



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Description of Module	
Subject Name	Anthropology
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Learning Outcomes

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2. Historical background of stages of economy
3. Hunting and Gathering
4. Fishing
5. Herding
6. Foraging
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9. Changes in simple economy

Learning Outcomes

After studying this module:

- You shall be able to learn the definitions and characteristics of primitive economy.
- You would be able to know the stages of economy.
- You would be able to identify the different types of hunting and gathering i.e. hunting by weapons, traps, snares, engaging tamed animals, poisoning, etc.
- You would also be able to identify the different types of fishing like fishing by nets, poisoning, weapons, engaging tamed animals, etc.
- In addition to all these cited above, you would also understand the other stages like herding, foraging, agriculture, horticulture, Pastoralism, etc along with the changes noticed in simple economy.

1. Introduction

Economic anthropology envisages economic activities of primitive man in his social and cultural framework. In other words, we can say that economic anthropology is an analysis of economic life as a sub-system of societies. Firth (1951) is of the opinion that economic anthropology deals with social relations. Economy is an important constituent of the community life and plays a deciding role in the formation of the cultural and social structure of the societies. As a matter of fact, the economic life of the tribal people helps us to understand an important feature of their culture.

Economic anthropology is the major sub-field of social anthropology, which deals with the way groups of people play in the tribal societies and obtain a living from nature and with the factors affecting the organization of those engaged in such activities. It also deals with the distribution of goods and services in societies and attempts to explain who gets what and why?

Economic anthropology is different from general economics because it deals with primitive and peasant societies in which the economy is organized differently than what it is in an industrialized society. Thus, economic anthropologists have to re-examine the fundamental notions which economists take for granted. However, among the primitive economy the important subjects of study are the concepts of labor, production and consumption, barter and ceremonial exchange, and value in non-monetary economic system, etc., which are the sources of major theoretical arguments over which scholars like Herskovits, Raymond Firth, Salisbury, Polanyi, Malinowski, etc., have done significant works.

Another difference between economic anthropology and classical economics is that while the latter is normally concerned with problems of distribution because these dominate in industrialized economics, anthropologists studying primitive and peasant societies are forced to pay more attention to small-scale production. Because of a simpler division of labor, this is much more important than distribution. Production for consumption is typically organized on a domestic level. It is inextricably linked to familial concerns and is at the same time extremely complex. As a result, this type of production has registered theoretical analysis until the recent attempt by Sahlin.

Economic anthropology not only deals with the inner dynamics of primitive and peasant societies but also explores the involvement of these societies in national or world economics. Often it attempts to explain the success or failure of primitive societies in the wider economy. Studies of this type by anthropologists are often linked with evaluating or even guiding community development projects. Recently, however, the emphasis has turned from stressing the modernizing effect of contact with wider-economics to concern with impoverishment which seems to follow the involvement of marginal societies with the wider economy.

Finally, it may be concluded that the meaning and scope of primitive economy may be traced deeply in the material wants of the people. The activities associated with fulfillment of material wants, as Herskovits suggests, constitutes as important part of the economic life of the tribal societies. In a tribal society, where the price system is normally absent and social tradition regulates the economic activities, the general economic theories meant for the complex societies, would hardly be applicable in the primitive societies.

For an assessment of tribal economy, special analytical concepts and meanings are necessary because social organization and culture, kinship, political organization, etc., affect economic organization and performance so directly and sensitively in tribal societies that only a socioeconomic approach, which considers explicitly the relationship between economy and society is capable of yielding inside view and generalization of any importance. This purpose is served fully by economic anthropology. This kind of study for the first time was done by Good Fellow among the Bantus. Thereafter, Raymond Firth studied (1939) the Tikopean economies. The social and religious setting of the economy is also accorded full recognition as an effective force in shaping the economic life of the tribal people, yet the focus of the discussion remains continuously on the economic implication of the data and on the economic institutions prevalent in the primitive societies.

2. Historical Background of stages of economy

Definitions of Primitive Economy

On the basis of these meanings and scope of primitive economy specially in the field of social anthropology, scholars have defined precisely the primitive economy, and some of these definitions are given below for the benefit of students:

Ralph Piddington (1952) says "Economic system is designed to satisfy material wants of the people, to organize production, to control distribution and to determine the rights and claims of ownership within the community."

Raymond Firth (1952) is of the opinion that "Economic organization is a type of social action. It involves the combination of various kinds of human services with one another and with goods in such a way that they serve the given ends."

Majumdar and Madan (1956) believe that "It consists of the ordering of an organization of human relation and human efforts in order to procure as many of the necessities of day to day life as possible, with the expenditure of minimum efforts. It is attempted to secure the maximum satisfaction possible through adapting limited means to unlimited ends in an organized manner."

George Dalton (1971) argues that "All societies have structured arrangements to provide the material means of individual and community life. It is these structured rules that we call an economic system.

In brief, it can be said that the concept and meaning of economic system with special reference to the tribals may be defined as the economic system that may have two important things, viz., the mode and structure of production and its relations, and the process of distribution existing and operating in a given socio-political set up. The mode of production implies technique and organization of economic activities relating to production.

The structure of production means social-relations in the performance of production activities and in the process of distribution between different social groups of the tribal societies. Finally, it may be concluded that the mode of production in tribal economy is traditional and, indigenous and culturally predominant. The tribal people are culturally a social unit and at the same time enterprisers, workers as well as producers and consumers, the system of distribution is linked to the barter system or to the mutual exchange or the least monetary system.

The tribal people work hard to get their livelihood to meet the basic needs of life like food, shelter, etc., as well as the social needs like the materials for *rites-de-passage*, through their economic performances. Herskovits has rightly said that an individual operating as a member of his society in terms of the culture of his group is the economic unit.

Characteristics of the Primitive Economy

There are many characteristics of the primitive economic system which have been enumerated by some of the scholars which are given below for the benefit of the students.

According to Dalton (1971), there are three important characteristics of the primitive economy, such as:

- (a) **Small Economy:** It is this smallness of scale which is the fundamental characteristic of primitive life (Wilson, 1941; 10), that most (but not all) resources, goods and service transactions take place within a community of persons numbered in hundreds or thousands. There are two other factors which make tribal economy small in scale, (i) frequently one or two staple items comprise usually large proportion of total produce. It is common for these important staples to be produced within the small framework of a tribe (ii) a relatively small number of goods and services is produced and acquired.
- (b) **Simple technology compared to the industrialized economies:** The tools are either made by the user himself or are acquired free from a craftsman or from a manufacturing group.

(c) **Geographical or cultural Isolation (Comparatively)**: Majumdar and Madan (1956) have found nine important traits of a primitive economy as noticed in the tribal India and elsewhere.

There is an absence of technological aids in a tribal economy which results in inefficient, inadequate or even wasteful exploitation of nature. Consequently, the bare minimum necessary for sustenance is raised with great difficulty. An economic surplus is rare in their community.

The economic relations among the tribals themselves are mostly on barter and exchange, money as a store and measurement of value and medium of exchange is not used widely. Institutions like banking and credit are used only in dealing with non-tribal groups which depends upon the nature and frequency of contacts with them. The profit motive in economic dealings is generally absent. The role of an incentive is fulfilled by a sense of mutual obligation, sharing and solidarity.

Co-operative and collective endeavour is a strongly developed feature of their economy.

The rate of innovation, internal or included, is very low and consequently they are stable and make hardly any progress.

The regular market as an institution along with its conditions of market like perfect competition and monopoly is absent and what comes nearest to it is the weekly market or festival and seasonal meets.

The manufacturer of consumer rather than capital goods is common and the same are consumed, nothing being saved or exchanged in trade.

Specialization based on specially acquired specific technical abilities is absent. However, division of labor based on factors other than specialization, like sex, is widely present. The notion of property is closely related to display and expenditure of wealth rather than to its accumulation. Material goods, movable and immovable may be referred to as property and this entails the existence of some rules of inheritance. Both types of ownership, collective and individual, are known.

The characteristics of the tribal economy may broadly be viewed in three ways, viz., (i) the structure of the tribal economy, (ii) the tribal economy as a socio-economic and cultural system, and (iii) economic characteristics of the tribal economy.

The structure of the tribal economy is generally based on forest, sea and forest coastal and island tribals. The simple technology and absence of technological aids is the other structural feature of the tribal economy. At the socioeconomic and cultural level the family is a unit of both production and consumption. The community itself acts like a co-operative unit, and the tribal communities living in a village or locality are economically independent. The distribution is generally based on gift and ceremonial exchange.

Lastly, in analyzing the pure economic characteristics as general economics prescribes the features as two, viz., absence of profit in economic dealings and presence of periodical markets.

i. Finally, keeping in view, the close association of indigenous tribals production and social organization, a nine point framework has been given to illustrate the fundamental characteristics of tribal economy, (i) Forest based economy, (ii) Unit of production, consumption and pattern of labor being the family, (iii) Simple technology, (iv) Absence of profit in economic dealings, (v) the community as a co-operative unit, (vi) Gift and ceremonial exchange, (vii) Periodical markets, (viii) Interdependence, and (ix) The minor institutions related to tribal economy.

Vidyarthi (1977) suggested that the first and foremost characteristics of the tribal economy are the close relationship between their economic life and the natural environment or habitat which is usually the forest. Besides the forest, the existing natural environment moulds their economy to a great extent. For example at Lakshadweep Islands, the existing ecology of sea and the coconuts forest exert significant influence on the economy of the islanders (Jha, 1992). The Birhors of Bihar, the Chenchus of Andhra Pradesh, the Juangs of Odisha, the Kadars of Kerala, the Paliyans and Panians of Tamil Nadu, etc., depend on the forest and in these areas, the flora and fauna predominates as the primary source of food. The Bhils of western India depend on forest of Mahua and Biri leaves to a great extent. The pastoralists Gaddis of Himachal Pradesh depend on forest for the pasture for *Dhar* for their goats and sheep. In this way, the tribal economy is usually forest-based. However, some changes have occurred among the agriculturalist tribes like the Mundas, the Oraon, the Santals, the Raj Gonds, etc., especially after independence of India and their economy is now no more forest based.

Some anthropologists believe that man has passed, through four major stages of livelihood: - hunting and food gathering, fishing, pastoralism and agriculture.

3. Hunting and Gathering

Hunting and food gathering is the oldest sources of subsistence. Societies that depend on hunting and gathering for their basic subsistence were fairly common as late as the early twentieth century. Australia was represented by little. The Western half of North America, a little earlier earned their livings by hunting and gathering. The Northwest Coast depended on fishing and berries, the California Indians on acorns, the Indians of the Great Basin country of Nevada and Idaho on grass seeds and game. The Indians who were in the plains depended almost solely on the buffalo as the basis of subsistence. In Africa the hunters and gatherers range from the pygmies of the Ituri Forest to the Bushmen of the Kalahari Desert. Most South American Indians depended on hunting, though in many areas also grew manioc.

Although the number of societies that get a living by hunting and gathering is large, the number of people involved in each of these societies is small. No environment can support many people on the basis of wildlife and wild plants. One of the major exceptions is the area from Puget Sound north along the northwest coast of North America. The fantastically plentiful wildlife of this area supported a relatively large Indian population by techniques of hunting, gathering, and fishing. The whole Arctic area of the New World, however, supports only a few thousand Eskimos. The Kalihari Desert supports only a few hundred Bushmen, and the great deserts of Australia and America supported at most a few thousand aborigines or Indians.

Probably the most important single feature about a hunting and gathering society is that the economy of the society and the economy of the domestic group are largely undifferentiated from each other. In every society there is a basic household or domestic unit in which food and other items of primary consumption are prepared. As we shall see, there is within each of these domestic units a basic division of tasks. In hunting and gathering societies and in a few others the basic consumption unit, which is the domestic group, is also the production unit.

Hunting and gathering as a technology will support comparatively few people on the land. In many areas where it is practiced it also provides minimal return for the effort expended, although as we have seen, the Northwest Coast with its fish, deer, and wild plants was an exception, and the coastal areas of California with its munificence of acorns provided another exception.

Whatever might be the evolutionary development of hunting techniques, we can classify the hunting methods of recent primitives under the following *four categories*:

- (a) Hunting by weapons (Technique of assault)
- (b) Hunting by traps and snares (Technique of *Trapping* and *Snaring*)
- (c) Hunting by engaging tamed animals (Technique of enlisting animal aid)
- (d) Hunting by poisoning (Technique of poisoning)

a) Hunting by Weapons

It includes shooting, spearing, clubbing, axing, stabbing, etc. The implements which are required by man for the purpose of assaulting may be classified into the following heads on the basis of their functions:

- (i) *Bruising and crushing weapons*: Club, mace, boomerang, etc.
- (ii) *Chopping and cutting weapons*: Axe, adze, sword, knife, etc.
- (iii) *Piercing weapons*: Spear, harpoon, arrow, etc.

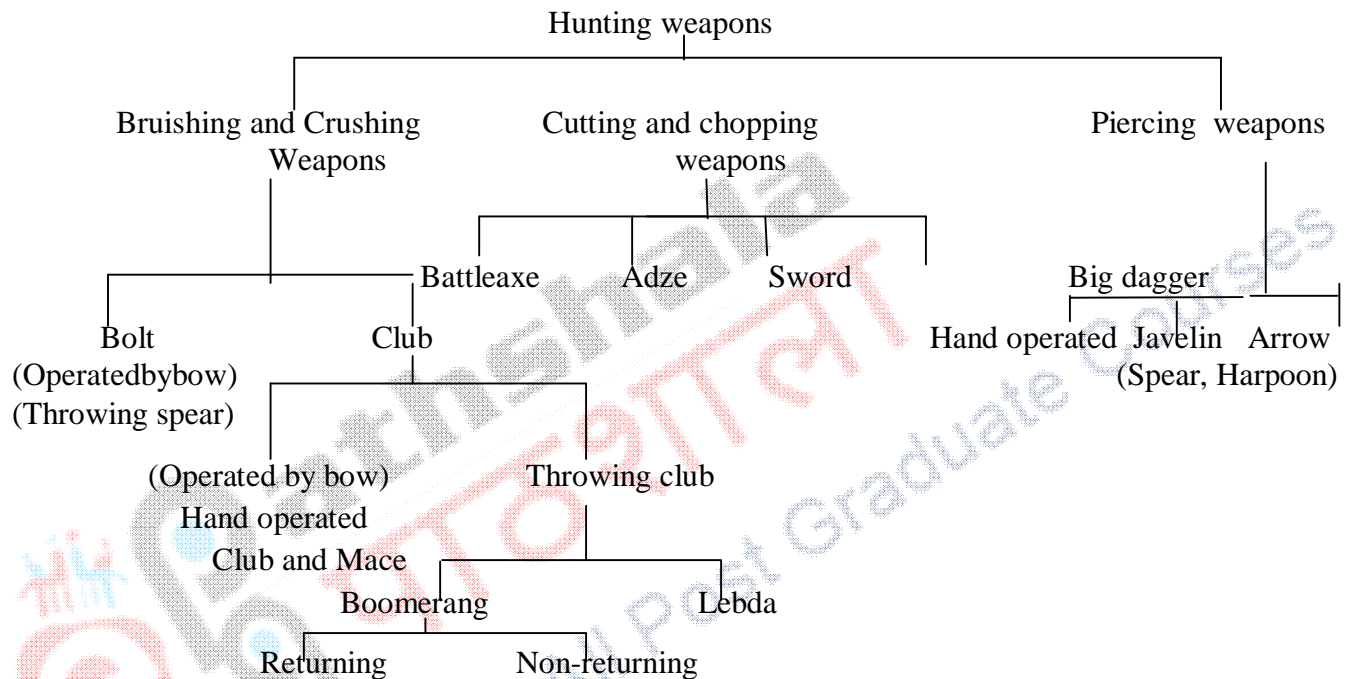
Bruising and crushing weapons are used to crush the body of the victim without breaking the surface. Bloodshed may or may not occur. A *Club* may be prepared from a simple branch of tree with its effective end slightly enlarged. The *Club* may be simple (made of entirely one piece of one material), *compound* (made of more than one piece of one material) and *composite* (made of more than one material). A *club* may be manipulated by holding it *by hand* or it may be thrown towards the victim (*throwing club*). In the latter category *boomerang*, *ledba* are to be included. A *club* with a spherical head is known as *mace*. This sort of weapons could only be used when the victim is lying at a close distance from the hunter. A *bolt* (a blunt arrow) which is to be operated by a bow and *sling* are also weapons of this category. They create injury without bloodshed. Again, boomerang may be of two types:

Returning boomerang in which the curvature is more pronounced (still in use among the Australian Aborigines) and *non-returning* in which the curvature is less marked (the Bhil tribe of Rajasthan use it to kill birds and small games).

The *cutting and chopping weapons* are having heavy metallic blades with, sharp edges. They are generally used to create fatal injury to the victim by detaching the affected part from its body. *Battleaxe*, *sword*, *adze*, *big-knife (kukri)* and, *dao* are some of the cutting weapons used by the primitives as well as by the advanced people. When the animal or victim is in close proximity, then only these weapons can be effectively used. While an axe is used as a domestic tool as well as an offensive weapon universally but *adze* (cutting edge lies at right angle with the axis of the shaft) is commonly used as a domestic tool in shaping the canoes and other wooden objects. Rarely, this tool is used as an offensive weapon. *Knives* and *daggers* are probably the precursors of a *sword*. These two tools were known to our Paleolithic forerunners but their blades were prepared on stone. The *sword*, single sharp edged or double-sharp edged, the former being Asian origin while the latter was supposedly the characteristic of medieval Europe. In Africa, both the *straight* and *curved edged swords* are commonly used.

The piercing weapons can either be held in hands to thrust upon the victim lying at close proximity or be thrown as missile-weapons from a distance. *Lance* is the kind of *spear* with long handle and more or less heavy. The *javelins* are much shorter and lighter and as such they are operated as missile piercing weapons. The *forked-based* and *split-based lance-points* of *Upper Paleolithic stage* were made on *bones* and antlers. Bloodshed is invariably caused by this kind of weapons. A *hunting harpoon* possesses a detachable barbed head and a long shaft (mainly of bamboo). Both parts are tied together by means of a rope. After hitting the victim, the metallic head gets detached and handle hanging on the tied rope obstructs the free-movement of the game. An *arrow* is also a missile weapon, resembling a miniature spear and is to be operated by a *bow*. It involves a *mechanical device* to operate with least amount of manual labor. *Bow* and *arrow* was invented as early as upper Paleolithic stage when *arrow*

heads were of stone. Bolts and pellets (sun-dried hard clay balls) can also be thrown by simple and pellet bows respectively. The Chinese cross-bow is considered, as an improved variant of simple bow by which continuous shooting of arrow may be possible. The chart furnished below will demonstrate the different categories of weapons under the three broad heads as mentioned above.



b) Hunting by Traps And Snares:

The traps and snares are used to create some obstructions in the spread of chased game. Their movement may be delayed and as result they could be easily arrested. Hunting traps may be of two types *manipulated* and *automatic*. The former type requires the hunter to be present at the spot throughout the period of manipulation. In the latter type, the hunter may leave the spot after setting the trap. The *automatic traps* are of seven types such as,

- (i) **Pit trap:** A concealed pit is dug on the way of the game. It is to be covered with sharp, pointed spikes and leaves. The Nagas trap elephant, the Gond catch monkeys and other animals with the help of such a trap.

- (ii) **Dead-fall trap:** It consists of stockade on either side of the entrance of a fenced area. This stockade is to support a heavy cross-piece at the top. A bait is attached to the cross-piece in such a way that the slight pull in the bait string, may result the sudden collapse of the crossbeam upon the prey. The injured animals will thus be captured inside the fenced arena. The Santal, Gond, Baiga capture small animals including tiger, and leopards.
- (iii) **Noose trap:** A small oval ground is generally selected which is guarded by wooden stick-fencing. A noose is set at the entrance of the fenced area. Hares and some such small animals are allured by coloured vegetables placed inside, and as they push their way inside, they are automatically trapped/captured.
- (iv) **Wheel trap:** Deer and other fast moving animals are captured in this type of trap. A big spoked wheel is set on the way of those animals in such a way, that the wheel starts rotating with the slightest touch. The legs of these fast-moving animals entangled in this wheel. In Africa, such a trap is commonly used in hunting antelopes.
- (v) **Torsion Trap:** In this type of trap, a spring is furnished by torsion. The Korku use "ōphotka" to capture birds. By the sudden spring action, the game is captured.
- (vi) **Transfixing trap:** In this type of trap, an arrow or a bolt is usually released when the string of the operating bow gets slightly disturbed. It injures or stuns the game. The Gond and the Baiga catch monkeys and birds with the help of this trap.
- (vii) **Cage trap:** It is used to imprison the animals which pushed their way inside in order to get the bait. It has three types
- (a) **Drop trap:** The Lotha Nagas keep a goat inside the large box-shaped trap as a bait. The animal tries to pull the bait, the trigger is released automatically. The door of the trap suddenly drops down. The Santal, Ao Naga, and the Lotha Nagas use it to imprison tigers and leopards.
- (b) **Valved trap:** The Korku use a type of valve cage trap which is a semi-spherical basket, made of bamboo splits. The valve is directed inside, Food grains are scattered inside to allure birds and other small games. Once they push their way, they will not be able to come out.
- (c) **Valveless trap:** It is quite similar to previous one, excepting the valve arrangement of the earlier variety, it has thorn-lined door. These thorns are directed inward so that animals can go in easily but cannot come out.

c) Hunting by Poisoning

It is quite difficult to operate a spear or a harpoon or an arrow in the dense forest where natural bushes and heavy undergrowth inhibit any long distance shooting. The tribes of India, Africa, and America use

poison-tipped shooting weapons for the success in hunting. Slight scratches on the body of the victim may cause its ultimate death.

d) Hunting by Engaging Tamed Animals

The use of tamed animals in hunting is common in Asia and Europe so far as the primitive tribes are concerned. The leopard being the common tamed and trained animal was generally used in hunting. It was set after the deer. The report of the use of hooded falcon in central Asia was highest during the 6th and 7th century A.D. The Santal, Oraon, Munda, and the Gond hunters rely upon their domesticated dogs that sincerely help them in hunting.

They are found to catch small burrowed animals like jackals, rabbits, mice, to please their masters who are otherwise busy in hunting big games.

4. Fishing

In the remote past of prehistoric days men carried on his search for food on land by hunting. Gradually as hunting was very difficult for them owing to various reasons, man took up his search on aquatic creatures like fish. This was first evidenced during *Upper palaeolithic period* when people extensively used harpoon heads with barbs (*Magdalenian times*). In *kitchen midden culture of Mesolithic period* man also used to consume aquatic creatures like mollusca extensively.

Fishing was first started with bare hands. A number of tribals practice it even today specially in paddy fields during rainy season. But as fishes slip away from then hand, man devised various fishing methods to catch fish more easily. Thus, fishing methods, as such, can be broadly divided into five major divisions:-

- (a) Fishing by weapons,
- (b) Fishing by traps,
- (c) Fishing by nets,
- (d) Fishing by poisoning,
- (e) Fishing by engaging tamed animals.

a) Fishing By Weapons

Fishing may be done with the help of *simple bow* and *fishing arrow*. This is generally done in those streams where water is very clear, especially in hilly tract. The Santal of Mayurbhanj, Oraons of Ranchi practice this kind of fishing. The Bushmen of South Africa and the Andamanese of Andaman Islands also practice it.

The fishermen of Bengal also use fishing spear for the purpose of fishing. A *spear* does not have any barb which *harpoons* do possess. Sometimes, the *spear heads* may be poison tipped.

Harpoons are extensively used all over rural Bengal as well as in tribal areas. These harpoons are of four categories Monodent (*Ekнала*), Trident (*Teta*), multipledents (*konch*) or leister and Telescopic fishing harpoon (*kole*). The harpoon head may be fixed or detachable. These harpoons are attached to bamboo shafts which float on the water after hitting the fish.

Fishing is also done by *rod and line*. By this weapon, fishes are actually hooked. Fishes are allured to swallow a curved sharp needle on which bait is attached. It is done by both professional and amateur fishermen.

The fish gorges are also used for hooking fishes. It is used in spring-gorges in China, Mexico, Africa (Congo area) where they use earthworm and grasshopper as bait. Stone gorges have been found from upper Palaeolithic site of Europe.

b) Fishing by Traps

As fishes slip away very easily and as it was very difficult for the primitive man to get sufficient food only by this means, he probably devised a trap. The simplest type of trap is the *polo of Bengal*. It is a *plunge basket trap*. It is used to limit the area of the movement of the fish. Fishes are collected from the top by putting hands into it. The other varieties of it are the *Ghuni* of Bengal and *Toradang* of the Oraons.

Let, us come to *automatic traps*. *Doar* or the barrel shaped fishing trap, and *Vombuchanhai* or the *double-valved fishing trap* are provided with *inwardly directed valves*. They are used in current water and fishes are forced to get inside along the current of the water. Water comes out through the spaces in between two splits and fishes which are caught may be brought out through the door. There is an intermediary stage between the *valve-less plunge basket traps* and *valved-traps*-it is the stage of *thorn-lined traps* like *Paron* of Facca. The thorns are inwardly directed and they allow the fishes to enter the trap along with water with least difficulty. But they cannot come out due to these projecting thorns.

c) Fishing by Nets

When man learnt the use of fabrics, he no longer confined himself to small scale fishing by traps and weapons. Nets actually prompted him to large scale fishing in wide rivers, lakes and seas. These nets are of various types as described below:-

- (i) **Hand operated net:** It may be with or without bamboo frame. *Chhaknjai*, *Chant*, *Chatuni*, *Ghatgati* of Bengal and *pilni* of the Oraons, belong to this category.
- (ii) **Cast net:** It is known as *khepla jal*, used by the professional fishermen in ponds and lakes. Both these two varieties, mentioned above, are operated in *stagnant water*.

These nets are provided with *wooden floats* and *metallic sinkers* to keep them stretch.

- (iii) **Seine net:** It is known as *Berajal* and is used by the professional fishermen of Bengal and Orissa. These are generally used in sea in which the assistance of a boat is required. It has also *floats* at the top margin and *metallic sinkers* at the bottom.
- (iv) **Trawl net: or Sangla jal:-** It is used specially for catching *hilsa fish*. These nets are generally fitted to the rear end of a boat and fishes are caught by this net when the boats moves forward. The boat man realizes the existence of fish inside the net by the movement of the feeler and he pulls the rope to close the mouth of the net.
- (v) **Automatic net or kojil:-** It is a long narrow net which is fixed in the paddy fields just above the surface of the water. During continuous rains the Koi fish tries to get away from it. Its operculum gets entangled in the net. *Koi fishes* are caught in this way.
- (vi) **Dip net:-** A variety of hand operated net. The only difference is that the frame is triangular and the dimension of the net is very much large.

d) Fishing by Poisoning

The hill tribes of Assam and Chotonagpur plateau practice this type of fishing by the application of poison in the water. They construct temporary embankments in the hilly brooks to arrest its water and apply poison in it. The stupefied fishes come up on the surface to be collected easily by these tribals. Then they release this poisoned water by cutting away the embankments

5. Herding

Throughout the world there are people whose basic technique for exploiting the environment is to keep animals. These animals may be reindeer among the Lapps or northern Siberians; they may be goats in Morocco and along the northern edges of the Sahara; they may be the cattle of the Near East or of parts Africa; they may be the camels that are found in Arabia and the Sahara; they may be horses as is the case in the Great Plain area of North America; they may be pigs in Melanesia; and in South America there are herds of llama.

The number of people who live solely of their herds is, of course, very much smaller than the number of people who carry on some herding activities while depending on farming. Nevertheless, it is not a negligible one. Herding is generally considered to be a somewhat more secure way of exploiting the environment than is hunting, and most herding people, even though they may live in an area replete with wild game, do not make much use of it. Whereas the insecurities of hunting people focus around scarcity of game, the insecurities of herders are bound up with the welfare of their beasts. The damage an epizootic such as rinderpest can create may leave a whole society in a tenuous condition for some years.

Herding usually allows greater density of population than does an economy based on hunting and gathering. However, it also gives rise to the necessity for movement. The people must see to it that their animals move from one area of pasturage and water to another, from one season to the next. Therefore, most herding peoples are either nomadic or transhumant.

Nomads, following the demands of their animals for pasture and water, move in careful response to those needs. Nomads, however, do not wander. Even if they wanted to wander at random, other people who live around them would not allow them to do so. Rather, they have definite routes along which they proceed, and they go over the same routes in a sort of circle again and again. They may take shortcuts in the route, and they may take some areas in a different order on one occasion than on another. However, the nomad route is a known one, requiring from three or four to as many as fifty years to complete.

Nomadism enforces certain limitations on the material possessions and demands of the people who practice it: nomads must live either in movable houses such as the skin tipis of the American Indians or the camel-hair tents of the Bedouin Arabs, else rude and hastily constructible shelters that are made anew for each camp site and abandoned when camp is moved. Transhumance differs from nomadism in that the cycle of movement is an annual one and follows the seasons, rather than a longer one requiring several years. Some Lapps are transhumant, moving their reindeer herds between coastal areas where they can provide food in the winter time and the mountain recesses where the pasturage is best in summer. Many Pakistani and Indian people move their herds to the mountains in the summer and back in the winter. The cattle-herding people of the upper Nile are almost all transhumant. During the wet season they live in villages with fixed huts and herd their cattle in nearby areas on the higher hummocks, which are not flooded by the great Nile Plain. Then, as the dry season proceeds and the water recedes, they are forced to take their cattle ever further away, sometimes to live in cattle camps at some distance from their permanent villages in smaller (or sometimes larger) groups than the villages themselves provide. This annual movement between village and cattle camp is the most striking characteristic of the technology of societies that practice transhumance, just as temporary, movable shelters are characteristic of nomads.

Herding people throughout the world are said to be of a noble and independent frame of mind. Without exception, they are said to scorn settled life and agriculture pursuits even when they, or at least when their women, are engaged in agriculture to a limited degree. It is probably safe to say that herding people have had a more difficult time than any others adjusting to life in a modern world on the fringes of an industrial economy.

6. Foraging

Until 10,000 years ago, people everywhere were foragers also known as hunter-gatherers. However, environmental differences did create substantial contrasts among the world's foragers. Some, such as the people who lived in Europe during the ice ages, were big-game hunters. Today, hunters in the

Arctic still focus on large animals and herd animals; they have much less vegetables and variety in their diets than do tropical foragers. In general, as one moves from colder to warmer areas, there is an increase in the number of species. The tropics contain tremendous biodiversity, a great variety of plant and animal species, many of which have been used by human foragers. Tropical foragers typically hunt and gather a wide range of plant and animal life. The same may be true in temperate areas, such as North Pacific Coast of North America, where Native American foragers could draw on a rich variety of land and sea resources, including salmon, other fish species, berries, mountain goats, seals and sea mammals. Nevertheless, despite differences due to environmental variation, all foraging economies have shared one essential feature. People rely on available natural resources for their subsistence, rather than controlling the reproduction of plants and animals.

Such control came with the advent of animal domestication (initially of sheep and goats) and plant cultivation (of wheat and barley), which began 10,000 to 12,000 years ago in the Middle East. Cultivation based on different crops, such as maize, manioc (cassava), and potatoes, arose independently some 3,000 to 4,000 years later in the Americas. In both hemispheres the new economy spread rapidly. Most foragers eventually turned to food production. Today, almost all foragers have at least some dependence on food production or on food producers (Kent 1992).

The foraging way of life survived into modern times in certain environments, including a few islands and forests, along with deserts and very cold areas-places where food production was not practicable with simple technology (see Lee and Daly 1999). In many areas, foragers had been exposed to the idea of food production but never adopted it because their own economies provided a perfectly adequate and nutritious diet-with less work. In some areas, people reverted to foraging after trying food production and abandoning it. In most areas where hunter-gatherers did survive, foraging should be described as recent rather than contemporary. All modern foragers live in nation-states, depend to some extent on government assistance, and have contacts with food-producing neighbors, as well as missionaries and other outsiders. We should not view contemporary foragers as isolated or pristine survivors of the Stone Age. Modern foragers are influenced by regional forces (e.g., trade and war), national and international policies, and political and economic events in the world system.

Although foraging is disappearing as a way of life, the outlines of Africa's two broad belts of recent foraging remain evident. One is the Kalahari Desert of Southern Africa. This is the home of the San (Bushmen), who include the *Ju/'hoansi* (see Kent 1996; Lee 2003). The other main African foraging area is the equatorial forest of central and eastern Africa, home of the Mbuti, Efe, and other pygmies (Bailey et al. 1989; Turnbull 1965).

People still practice subsistence foraging in certain remote forests in Madagascar; in Southeast Asia, including Malaysia and the Philippines; and on certain islands of the Indian coast (Lee and Daly 1999). Some of the best-known recent foragers are the aborigines of Australia. Those Native Australians lived on their island continent for more than 50,000 years without developing food production.

The Western Hemisphere also had recent foragers. The Eskimos, or Inuit, of Alaska and Canada are well-known hunters. Like the Sami herders described in the *ōNews Briefō*, these (and other) northern foragers now use modern technology, including rifles and snow mobiles, in their subsistence activities (Pelto 1973). The native populations of California, Oregon, Washington, British Columbia, and Alaska were all foragers, as were those of inland subarctic Canada and the Great Lakes. For many Native Americans, fishing, hunting, and gathering remain important subsistence (and sometimes commercial) activities. Coastal foragers also lived near the Southern tip of South America, in Patagonia. On the grassy plains of Argentina, southern Brazil, Uruguay, and Paraguay, there were other hunter-gatherers. The contemporary Ache of Paraguay is usually called *ōhunter-gatherersō* even though they get just a third of their livelihood from foraging. The Ache also grows crops, have domesticated animals, and live in or near mission posts, where they receive food from missionaries (Hawkes, O'Connell, and Hill 1982; Hill et al. 1987).

Throughout the world, foraging survived mainly in environments that posed major obstacles to food production. Some foragers took refuge in such areas after the rise of food production, the state, colonialism, or the modern world system. The difficulties of cultivating at the North Pole are obvious. In Southern Africa, the Dobe Ju/hoansi San area San studied by Richard Lee is surrounded by a waterless belt 45 to 125 miles (70 to 200 kilometers) in breadth. The Dobe area is hard to reach even today, and there is no archaeological evidence of occupation of this area as food producer before the 20th century (Solway and Lee 1990). However, environmental limits to other adaptive strategies aren't the only reason how foragers survived. Their niches have one thing in common: their marginality. Their environments haven't been of immediate interest to groups with other adaptive strategies.

The hunter-gatherer's way of life did persist in a few areas that could be cultivated, even after contact with cultivators. Those tenacious foragers, such as indigenous foragers in what is now California, Oregon, Washington, and British Columbia, did not turn to food production because they were supporting themselves very adequately by hunting and gathering (see the section on the potlatch at the end of this chapter. As the modern world system spreads, the numbers of foragers continue to decline.

Correlates of Foraging

Typologies, such as Cohen's adaptive strategies, are useful because they suggest correlations that is, association or co variation between two or more variables. Correlated variables are factors that are linked and interrelated, such as food intake and body weight, such that when one increases or decreases, the other tends to change too. Ethnographic studies in hundreds of societies have revealed many correlations between the economy and social life. Associated (correlated) with each adaptive strategy is a bundle of particular cultural features. Correlations, however, are rarely perfect. Some foragers lack cultural features usually associated with foraging, and some of those features are found in groups with other adaptive strategies. What, then, are some correlates of foraging? People who subsist

by hunting, gathering, and fishing often live in band-organized societies. Their basic social unit, the band, is a small group of fewer than a hundred people, all related by kinship or marriage. Band size varies between cultures and often from one season to the next in a given culture. In some foraging societies, band size stays about the same the year round. In others, the band splits up for part of the year. Families leave to gather resources that are better exploited by just a few people. Later, they regroup for cooperative work and ceremonies.

Several examples of seasonal splits and re-unions are known from ethnography and archaeology. In Southern Africa, some San aggregate around waterholes in the dry season and split up in the wet season, whereas other bands disperse in the dry season (Barnard 1979; Kent 1992). This reflects environmental variation. San who lack permanent water must disperse and forage widely for moisture-filled plants. In ancient Oaxaca, Mexico, before the advent of plant cultivation about 4,000 years ago, foragers assembled in large bands in summer. They collectively harvested tree pods and cactus fruits. Then, during fall, they split into much smaller family groups to hunt deer and gather grasses and plants that were effectively foraged by small teams.

One typical characteristic of the foraging life is mobility. In many San groups, as among the Mbuti of Congo, people shift band membership several times in a lifetime. One may be born, for example, in a band where one's mother has kin. Later, one's family may move to a band where the father has relatives. Because bands are exogamous (people marry outside their own band), one's parents come from two different bands, and one's grandparents may come from four. People may join any band to which they have kinship or marriage links. A couple may live in, or shift between, the husband's band and the wife's band.

One also may affiliate with a band through *fictive kinship*-personal relationships modeled on kinship, such as that between godparents and godchildren. San, for example, have a limited number of personal names, people with the same name have a special relationship; they treat each other like siblings. San expect the same hospitality in bands where they have *namesakes* as they do in a band in which a real sibling lives. Namesakes share a strong identity and they call everyone in a namesake's band by the kin terms the namesake uses. Those people reply as if they were addressing a real relative. Kinship, marriage, and fictive kinship permit San to join several bands, and nomadic (regularly on-the-move) foragers do change bands often. Band membership therefore can change tremendously from year to year.

All human societies have some kind of division of labor based on gender (see the chapter on gender for much more on this). Among foragers, men typically hunt and fish while women gather and collect, but the specific nature of the work varies among cultures. Sometimes women's work contributes most to the diet. Sometimes male hunting and fishing predominate. Among foragers in tropical and semitropical areas, gathering tends to contribute more to the diet than hunting and fishing do even though the labor costs of gathering tend to be much higher than those of hunting and fishing.

All foragers make social distinctions based on age. Often old people receive great respect as guardians of myths, legends, stories, and traditions. Younger people value the elders' special knowledge of ritual and practical matters. Most foraging societies are *egalitarian*. When considering issues of human nature, we should remember that the egalitarian band was a basic form of human social life for most of our history. We may now consider the main economic features of food-producing strategies.

Cultivation

In Cohen's typology, the three adaptive strategies based on food production in nonindustrial societies are horticulture, agriculture, and pastoralism. In non-Western cultures, as in modern nations, people carry out a variety of economic activities. Each adaptive strategy refers to the main economic activity. Pastoralists (herders), for example, consume milk, butter, blood, and meat from their animals as mainstays of their diet. However, they also add grain to their diet by doing some cultivation or by trading with neighbors. Food producers also may hunt or gather to supplement a diet based on domesticated species.

Horticulture

Horticulture and agriculture are two types of cultivation found in nonindustrial societies. Both differ from the farming systems of industrial nations like the United States and Canada, which use large land areas, machinery, and petrochemicals. According to Cohen, horticulture is cultivation that makes intensive use of *none* of the factors of production: land, labor, capital, and machinery. Horticulturalists use simple tools such as hoes and digging sticks to grow their crops. Their fields are not permanently cultivated and lie fallow for varying length of time.

Horticulture often involves *slash-and-burn techniques*. Here, horticulturalists clear land by cutting down (slashing) and burning forest or bush or by setting fire to the grass covering a plot. The vegetation is cut down, pests are killed, and the ashes remain to fertilize the soil. Crops are then shown, tended, and harvested. Use of the plot is not continuous. Often it is cultivated for only a year. This depends, however, on soil fertility and weeds, which compete with cultivated plants for nutrients.

When horticulturalists abandon a plot because of soil exhaustion or a thick weed cover, they clear another piece of land, and the original plot reverts to forest. After several years of fallowing (the duration varies in different societies), the cultivator returns to farm the original plot again. Horticulture is also called *shifting cultivation*. Such shifts from plot to plot do not mean that whole villages must move when plots are abandoned. Horticulture can support large permanent villages. Among the Kuikuru of the South American tropical forest, for example, one village of 150 people remained in the same place for 90 years (Carneiro 1956). Kuikuru would rather walk farther to their fields than construct a new village. They shift their plots rather than their settlements. On the other hand, horticulturalists in the Montana (Andean foothills) of Peru live in small villages of about 30 people (Carneiro 1961/1968). Their houses are small and simple. After a few years in one place, these people

build new villages near virgin land. Because their houses are so simple, they prefer rebuilding to walking even a half-mile to their fields.

7. Agriculture

Agriculture is cultivation that requires more labor than horticulture does, because it uses land intensively and continuously. The greater labor demands associated with agriculture reflect its common use of domesticated animals, irrigation, or terracing.

Implements for Loosening the Soil

We find a series of operations like ploughing or tilling the soil, leveling, manuring, preparation of seed, transplanting, weeding, harvesting, are involved in the cultivation of crop, of which the first one is of utmost importance. The tilling of the soil to loosen the earth is done by different people in different ways. The Naga and the Chakma pursue it during their cultivation by a *hoe* or *dao*, the Mal Paharia by *simple digging stick*, the Kharia and the African Bushmen by *composite digging stick* and so on.

Digging stick, hoe, pick, and spade are the implements for loosening the soil used by the primitive men. A change took place with the introduction of *plough* which makes continuous furrowing. There is no record of its origin except a few engraved pictures in the prehistoric walls of Egypt and Babylonia. For this reason, we still do not have any true concept about the evolution of *plough*.

The most primitive forms of implements used by men for digging up roots and tubers and loosening the soil for their food, was the *digging stick*, which first prepared from a more or less straight, branch of tree generally pointed at one end. These were mainly used in order to make holes in the soil. This *digging stick* later on might have been developed into a *spade* by widening the pointed end of the *digging stick* into a blade. Again, a *digging stick* which forms a straight angle was probably modified into an implement known as *'pick'*, which is an acute-angled one. This implement has many advantages over the former in breaking up the soil.

Therefore, the *digging stick* might have been developed into *spade* and *pick*. The *'pick'* later on might have developed into a *hoe* by the widening of the point into a cutting blade. Again, the *spade* might have developed into a *hoe* by turning its working end into an acute angle poised with the body.

The most advanced type of implements for tilling the soil is the *plough*. It is more complex and advanced tool for turning up the soil. *Plough* is now-a-days mainly drawn by animals but in the past it was drawn by the women folk. Still, among some of the African tribes women play the same role. The plough might have been developed from its earlier counter parts.

The evolution of plough of usual variety may be traced from the *pick*; the haft is turned into a beam, the blade into a plough-share fitted to shoe and a handle is added. In other words, we can say *plough* is nothing but a *pick* with an added handle. (2) The *plough* might have also been developed directly from the *digging stick*. A beam is attached at almost the middle portion and a handle is added on the upper part of the body of the *digging stick* and thus the earlier *plough* was formed. (3) *Plough* can also be

developed indirectly from a *digging stick*. At first, the *digging stick* is developed into a *pick*, and then the *pick* into a *plough*. Thus, possibly the evolution of plough took place from the earlier implements.

Shifting Hill Cultivation

By 'shifting cultivation' we mean a type of primitive cultivation which is generally done in hilly forested tract for two to three consecutive years and is then left abandoned as the soil may lose fertility. This cultivation is also known as 'slash and burn' method of agriculture. For the Indian tribals, it seems to be an age-old practice. A particular tract is selected for this purpose. Trees and bushes are felled, sparing some tall trees. This clearing business starts in January. Felled trees and bushes are left for several days to be dried in the sun and the tribals set fire to these dried wooden branches. Then, they try to till the soil with a *digging stick* or *hoe*, but not as rigorously as done by the *plough* cultivators on the plains. On the onset of monsoon, they sprinkle the seeds of different crops like *gondli*, *marua*, *kurthi*, and other *millet*s as well as *pulses*. *Oilseeds*, *tobacco* and *maize seeds* may also be sown by broadcasting method. With the advent of winter, they harvest their crops. No artificial irrigation, no manuring, is done for this type of cultivation. The ashes of the burnt bushes serve as manure to the soil. After doing this sort of cultivation in a particular tract for two or three consecutive years, the *shifting hill cultivators* have to shift to some such places in the vicinity to operate the same type of cultivation. It is estimated that about 11% of the total tribal population of India practice such type of cultivation by 'slash and burn' method.

This sort of primitive cultivation is known by different names in different places. The Juang of Orissa and also the Andhra Pradesh tribals call it *podu*. In Assam and Tripura, the tribals call it *jhum*; in Madhya Pradesh, it is known as *bewear*, *dahiya* or *penda*. In North Odisha, it is known as *rama*, *dahi orbringa*. The Garo, Khasi, Naga, Abor, Mismi, Riang and the Bodo of North Eastern region practice such type of cultivation. It is known that the Gond of Bastar and the Korwa of Bihar claim it to be their traditional cultivation. The Reddis of South India still practice such type of primitive cultivation.

The merit of this sort of cultivation is practically nothing. Some of the backward, technologically underdeveloped, landless tribals may get some sort of sources of their subsistence though this kind of cultivation which requires not much of skill and effort. They are so ill-adapted to advanced type of cultivation, they could not adjust even when our national government tries to provide all kinds of amenities to them to change over to other sorts of occupation.

The demerits, on the contrary, are huge in number. It adversely affects our forest wealth. Soil-erosion is inevitable and the regular flood is of common occurrence as the eroded soil being deposited in the beds of the rivers. Due to rapid deforestation, the climate is found to change. Natural vegetation, as we know, holds moisture. Arid climate is sure to prevail in these areas due to the constant cutting and felling of trees as being done for the purpose of shifting cultivation. It affects rainfall too. Sharp decrease in rainfall is experienced in this area.

Domesticated Animals

Many agriculturalists use animals as means of production-for transport, as cultivating machines, and for manure. Asian farmers typically incorporate cattle and/or water buffalo into agricultural economies based on rice production. Rice farmers may use cattle to trample pretilled flooded fields, thus mixing soil and water, prior to transplanting. Many agriculturalists attach animals to ploughs and harrows for field preparation before planting or transplanting. Also, agriculturalists typically collect manure from their animals, using it to fertilize their fields, thus increasing yields. Animals are attached to carts for transport, as well as implements of cultivation.

Irrigation

While horticulturists must wait the rainy season, agriculturalists can schedule their planting in advance, because they control water. Like other irrigation experts in the Philippines, the Ifugao irrigate their fields with water from canals of rivers, streams, springs, and ponds. Irrigation makes it possible to cultivate the field year after year. Irrigation enriches the soil because the irrigated field is a unique ecosystem with several species of plants and animals, many of them minute organisms, whose wastes fertilize the land.

An irrigated field is a capital investment that usually increases in value. It takes time for a field to start yielding; it reaches full productivity only after several years of cultivation. The Ifugao, like other irrigators have farmed the same fields for generations. In some agricultural areas, including the Middle East, however, salts present in the irrigation water can make fields unusable after 50 or 60 years.

Terracing

Terracing is another agricultural technique the Ifugao have mastered. Their homeland has small valleys separated by steep hillsides. Because the population is dense, people need to farm the hills. However, if they simply plant on the steep hillsides, fertile soil and crops would be washed away during the rainy season. To prevent this, the Ifugao cut into the hillside and build stage after stage of terraced fields rising above the valley floor. Springs located above the terraces supply their irrigation water. The labor necessary to build and maintain a system of terraces is great. Terrace walls crumble each year and must be partially rebuilt.

Costs and Benefits of Agriculture

Agriculture requires human labor to build and maintain irrigation systems, terraces, and other works. People must feed, water, and care for their animals. Given sufficient labor input and management, agricultural land can yield one or two crops annually for years or even generations. An agricultural field does not necessarily produce a higher single-year yield than does a horticultural plot. The first crop grown by horticulturalists on long-idle land may be larger than that from an agricultural plot of

the same size. Furthermore, because agriculturalists work harder than horticulturalists do, agriculture's yield relative to the labor invested is also lower. Agriculture's main advantage is that the long-term yield per area is far greater and more dependable. Because a single field sustains its owners year after year, there is no need to maintain a reserve of uncultivated land as horticulturalists do. This is why agricultural societies tend to be more densely populated than are horticultural ones.

The Cultivation Continuum

Because nonindustrial economies can have features of both horticulture and agriculture, it is useful to discuss cultivators as being arranged along a cultivation continuum. Horticultural systems stand at one end—the low-labor, shifting-plot end. Agriculturalists are at the other—the labor intensive, permanent plot end.

We speak of a continuum because there are today intermediate economies, combining horticultural and agricultural features—more intensive than annually shifting horticulture but less intensive than agriculture. These recall the intermediate economies revealed by archaeological sequences leading from horticulture to agriculture in the Middle East, Mexico, and other areas of early food production. Unlike non-intensive horticulturalists, who farm a plot just once before fallowing it, the South American Kuikuru grow two or three crops of *manioc* or cassava— an edible tuber—before abandoning their plots. Cultivation is even more intense in certain densely populated areas of Papua New Guinea, where plots are used for two or three years, allowed to rest for three to five, and then recultivated. After several of these cycles, the plots are abandoned for a longer fallow period. Such a pattern is called *sectorial fallowing* (Wolf 1966). Besides Papua New Guinea, such system occurs in places as distant as West Africa and highland Mexico. Sectorial fallowing is associated with denser populations than is simple horticulture.

The key difference between horticulture and agriculture is that horticulture always uses a fallow period whereas agriculture does not. The earliest cultivators in the Middle East and in Mexico were rainfall-dependent horticulturalists. Until recently, horticulture was the main form of cultivation in several areas, including parts of Africa, Southeast Asia, the Pacific islands, Mexico, Central America, and the South American tropical forest.

8. Pastoralism

Pastoralists live in North Africa, the Middle East, Europe, and Sub-Saharan Africa. These herders are people whose activities focus on such domesticated animals as cattle, sheep, goats, camels, and yak. East African pastoralists, like many others, live in symbiosis with their herds. Herders attempt to protect their animals and to ensure their reproduction in return for food and other products, such as

leather. Herds provide dairy products, meat, and blood. Animals are killed at ceremonies, which occur throughout the year, and so beef is available regularly.

People use livestock in a variety of ways. Natives of North America's Great Plains, for example, didn't eat, but only rode, their horses (Europeans reintroduced horses to the Western Hemisphere; the native American horse had become extinct thousands of years earlier). For Plain Indians, horses served as tools of trade, means of production used to hunt buffalo, a main target of their economies. So the Plain Indians were not true pastoralists but *hunters* who used horses-as many agriculturalists use animals-as means of production.

Pastoralists, including the Samis consume the meat, blood and milk, from which they make yogurt, butter, and cheese. Although some pastoralists rely on their herds more completely than others do as, it is impossible to subsist solely on animals. Most pastoralists therefore supplement their diet by hunting, gathering, fishing, cultivating, or trading. To get crops, pastoralists either trade with cultivators or do some cultivating or gathering themselves.

Unlike foraging and cultivation, which existed throughout the world before the Industrial Revolution, pastoralism was confined almost totally to the Old World. Before European conquest, the only pastoralists in the Americas lived in the Andean region of South America. They used their llamas and alpacas for food and wool and in agriculture and transport. Much more recently, Navajo of the southwestern United States developed a pastoral economy based on sheep, which were brought to North America by Europeans. The populous Navajo are now the major pastoral population in the Western Hemisphere.

TABLE No. 1 Yehudi Adaptive Strategies (Economic Typology) summarized

Adaptive Strategy	Also Known As	Key Features/Varieties
Foraging	Hunting-gathering	Mobility, use of nature's resources
Horticulture	Slash-and-burn, Shifting cultivation, swiddening, dry farming	Fallow period
Agriculture	Intensive farming	Continuous use of land, intensive use of labor
Pastoralism	Herding	Nomadism and transhumance
Industrialism	Industrial production	Factory production, capitalism, socialist production.

Two patterns of movement occur with pastoralism: nomadism and transhumance. Both are based on the fact that herds must move to use pasture available in particular places in different seasons. In pastoral nomadism, the entire group women, men, and children-move with the animals throughout the year. The Middle East and North Africa provide numerous examples of pastoral nomads. In Iran, for example, the Basseri and the Quashqai ethnic groups traditionally followed a nomadic route more than 300 miles (480 kilometers) long. Starting each year near the coast, they took their animals to grazing land 17,000 feet (5,400 meters) above sea level (Salzman 2004).

With transhumance, part of the group moves with the herds, but most people stay in the home village. There are examples from Europe and Africa. In Europe's Alps, it is just the shepherds and goatherds-not the whole village-who accompany the flocks to highland meadows in summer. Among the Turkana of Uganda, men and boys accompany the herds to distant pastures, while the rest of the village stays back and does some horticultural farming. Villages tend to be located in the best-watered areas, which have the longest pasture season. This permits the village population to stay together for a longer time of the year.

During their annual trade, pastoral nomads trade for crops and other products with more sedentary people. Transhumants don't have to trade for crops. Because only part of the population accompanies the herds, transhumant can maintain year-round villages and grow their own crops.

9.Changes in Economy

Intensive Agriculture and Nonindustrial Cities

With the intensification of agriculture, some farming villages grew into towns and even cities. In these larger population centers, individuals who had previously been engaged in farming were freed to specialize in other activities. Thus, craft specialists such as carpenters, blacksmiths, sculptors, basket makers, and stone cutters contribute to the vibrant, diversified life of the city.

Unlike horticulturists and pastoralists, city dwellers are only indirectly concerned with adapting to their natural environment. Far more important is the need to adapt to living and getting along with their fellow urbanites. Urbanization brings with it a new social order. Marked inequality develops as society becomes more complex, and people are ranked according to how much control they hold over resources, the kind of work they do, their gender, or the family they are born into. As social institutions cease to operate in simple, face-to-face groups of relatives, friends, and acquaintances, they become more formal and bureaucratic, with specialized political institutions.

With urbanization came a sharp increase in the tempo of human cultural change. Writing was invented, trade intensified and expanded, the wheel and the sail were invented, and metallurgy and other crafts were developed. In many early cities, monumental buildings, such as royal palaces and temples, were

built by thousands of men, often slaves taken in war. These feats of engineering still amaze modern architects and engineers. The inhabitants of these buildings ó the ruling class composed of nobles and priests ó formed a central government that dictated the social and religious rules to be followed and carried out by the merchants, craft specialists, warriors, servants, and other city dwellers.

Notably, these urbanized populations mostly depend for much of their daily food (such as bread, tortillas, vegetables, meat, fish, fruit, milk, butter, and cheese) and fuel (especially firewood for cooking and heating their dwellings) on what is produced or foraged in surrounding areas. For this reason, the urban ruling class has sought to widen its territorial power and political control over rural populations. This is how farmers who raised their own crops and livestock as they saw fit, and who determined themselves if and how much surplus they would produce, and in the process lost that traditional self-determination.

Once a dominant group manage to impose its rules on the farmers, it also took control over their capacity to produce more food than the farmers actually needed to survive. In other words, these farmers turned into peasants. One of the first anthropologists to study peasant communities was Eric Wolf, who defined them as "Rural cultivators whose surpluses are transferred to a dominant group of rulers that uses the surpluses both to raise their standard of living and to distribute the remainder to groups in society that do not farm but must be fed for their specific goods and services in turn."

The Aztec State

The Aztec state, which developed in the Mexican highlands in the 15th century, is a good example of a highly developed urban society among America's indigenous peoples and where an urban political elite also gained control over food production in the surrounding countryside. Its capital city Tenochtitlan (modern-day Mexico City) was located in a fertile valley 7,000 feet above sea level. Its population, along with that of its sister city Tlatelolco, reached about 200,000 in the early 16th century. This makes it five times more populous than the city of London during that time.

The Aztec social order was stratified into three main classes: nobles, commoners, and serfs. The serfs were bound to the land and the lowest of this class were the slaves. Some had sold themselves into bondage; others were captives taken in war. The state was governed by an absolute monarch, assisted by a large number of government officials who oversaw various functions, such as maintenance of the tax system and the courts of justice, management of government storehouses, and control of military training.

As in early states elsewhere in the world, the foundation of Aztec society was intensive agriculture. Corn was the principal crop. Each family, allotted a plot of land by its kin group and cultivated any of crops, including beans, squash, gourds, peppers, tomatoes, cotton, and tobacco. Only a few animals were domesticated, these included dogs and turkeys (both for meat).

As specialization increased in Aztec society, the market became an extremely important economic and social institution. In addition to the daily markets in each city, larger markets were held in the various cities at different times of the year. Buyers and sellers traveled for these from the far reaches of the state. Trade networks between the Aztec capital and other cities brought goods such as chocolate, vanilla beans, and pineapples into Tenochtitlan. The market at Tlatelolco, Tenochtitlan's sister city, was so huge that the Spanish compared it to that of Rome. At the Aztec markets, barter was the primary means of exchange. At times, however, cacao beans and cotton cloaks were used as a form of money. The market also served as social functions. People went there not only to buy or to sell but also to meet other people and to hear the latest news.

At Tenochtitlan, with a total area of about 20 square miles, a huge temple and two lavish palaces stood in the central plaza, also called the Sacred Precinct. Surrounding this area were other ceremonial buildings belonging to each kin group. In the city proper stood the houses of the more affluent—graceful, multi roomed, one and two storey stone and mortar buildings, each surrounding a flower-filled patio and built on a stone platform for protection against floods. It is estimated that there were about 60,000 houses in Tenochtitlan. The focal points of the city were the large pyramidal temples, where religious ceremonies, including human sacrifice, were held.

The Aztec capital sat on an island in the middle of a lake, which has since been drained and filled with two aqueducts brought in fresh water from springs from the mainland. A 10-mile dike rimmed the eastern end of the city to prevent nearby salty waters from entering the lake around Tenochtitlan. Since the city was surrounded by water, it was unfortified and connected to the mainland by three causeways. Communication among different parts of the city was easy, and people could travel either by land or by water. A series of canals, with footpaths beside them, ran throughout the city. Thousands of canoes plied the canals, carrying passengers and cargo around the city. As in a modern city, housing in Tenochtitlan ranged from squalid to magnificent. Farmers' huts made of wooden posts, thatched, straw, and wattle plastered with mud were clustered on the outskirts of the city atop raised fields (chinampas) made of piles of mud and plant matter in the shallow lake and marshlands.

While the Spanish invaders were very impressed by Tenochtitlan's magnificence as one of the largest cities in the world, that did not prevent them from completely destroying it soon after their arrival in Mexico in 1519.

Industrial Societies

Until about 200 years ago, human societies all across the world had developed a cultural infrastructure based on foraging, horticulture, agriculture, pastoralism, crafts, trade, or some combination of these. This changed with the invention of the steam engine in England, which brought about an industrial revolution that quickly spread to other parts of the globe. Machines and tools powered by water, wind,

and steam (followed by oil, gas, and diesel fuel) replaced human labor and hand tools, increasing factory production and facilitating mass transportation.

Throughout the 1800s and 1900s, this resulted in large-scale industrialization of many societies. Technological inventions utilizing oil, electricity, and (since the 1940s) nuclear energy brought about more dramatic changes in social and economic organization on a worldwide scale. In the late 20th century, the electronic-digital revolution made the production and distribution of information the center of economic activity in some wealthy societies.

Summary

- Economic anthropology is the major sub-field of social anthropology, which deals with the way groups of people live in the tribal societies and earned their living, from nature and with the factors affecting the organization of those engaged in such activities. It also deals with the distribution of goods and services in societies and attempts to explain who gets what and why?
- Economic anthropology is different from general economics because it deals with primitive and peasant societies in which the economy is organized significantly and different than what it is in an industrialized society. Thus, economic anthropologists have to re-examine the fundamental notions which economists take for granted. However, among the primitive economy the important subjects of study are the concepts of labor, production and consumption, barter and ceremonial exchange, value in non-monetary economic system, etc., which are the sources of major theoretical arguments over which scholars like Herskovits, Raymond Firth, Salisbury, Polanyi, Malinowski, etc., have done significant works.
- On the basis of these meanings and scope of primitive economy specially in the field of social anthropology, scholars have defined precisely the primitive economy, and some of these definitions are given by Ralph Piddington (1952), Raymond Firth (1952), Majumdar and Madan (1956), George Dalton (1971) for the benefit of students.
- In brief, it can be said that the concept and meaning of economic system with special reference to the tribals may be defined as that economic system may have two important things, viz., the mode and structure of production and its relations, and the process of distribution existing and operating in a given socio-political set up. The mode of production implies technique and organization of economic activities relating to production.

- There are many characteristics of the primitive economic system which have been enumerated by some of the scholars which are given for the benefit of the students such as primitive economy is small economy, simple technology compared to the industrialized economies, geographical or cultural Isolation, etc.
- The characteristics of the tribal economy may broadly be viewed in three ways, viz., (i) the structure of the tribal economy, (ii) the tribal economy as a socio-economic and cultural system, and (iii) economic characteristics of the tribal economy.
- Some anthropologists believe that man has passed through four major stages of livelihood: - hunting and food gathering, fishing, pastoralism and agriculture.
- Hunting and food gathering is the oldest sources of subsistence. Societies that depend on hunting and gathering for their basic subsistence were fairly common as late as the early twentieth century. Australia was represented by little else. The Western half of North America was, a little earlier than that, of the presence of people who earned their living by hunting and gathering. The Northwest Coast depended on fishing and berries, the California Indians on acorns, the Indians of the Great Basin country of Nevada and Idaho on grass seeds and game. Plain Indian culture depended almost solely on buffalo as the basis of subsistence. In Africa the hunters and gatherers range from the pygmies of the Ituri Forest to the Bushmen of the Kalahari Desert. Most South American Indians depended on hunting, though in many areas also grew manioc.
- Whatever might be the evolutionary development of hunting techniques, we can classify the hunting methods of recent primitives under the following *four categories*:
 - Hunting by weapons (Technique of assault)
 - Hunting by traps and snares (Technique of *Trapping* and *Snaring*)
 - Hunting by engaging tamed animals (Technique of enlisting animal aid)
 - Hunting by poisoning (Technique of poisoning)
- The implements which are required by man for the purpose of assaulting may be classified into the following heads on the basis of their functions:
 - *Bruising and crushing weapons*: Club, mace, boomerang, etc.
 - *Chopping and cutting weapons*: Axe, adze, sword, knife, etc.
 - *Piercing weapons*: Spear, harpoon, arrow, etc.
- The traps and snares are used to create some obstructions in the spread of chased game. Their movement may be delayed and as a result they could be easily arrested. Hunting traps may be of

two types *manipulated* and *automatic*. The former type requires the hunter to be present at the spot throughout the period of manipulation. In the latter type, the hunter may leave the spot after setting the trap. The *automatic traps* are of seven types.

- It is quite difficult to operate a spear or a harpoon or an arrow in the dense forest where natural bushes and heavy undergrowth inhibit any long distance shooting. The tribes of India, Africa, and America use poison-tipped shooting weapons for the success in hunting. Slight scratches on the body of the victim may cause its ultimate death.
- The use of tamed animals in hunting is common in Asia and Europe so far as the primitive people are concerned. The leopard being the common tamed and trained animal was used in hunting. It was set after the deer. The report of the use of hooded falcon in central Asia was maximum during 6th and 7th century A.D. The Santal, Oraon, Munda, and the Gond hunters rely upon their domesticated dogs that sincerely help them in hunting.
- They are found to catch small burrowed animals like jackals, rabbits, mice, to please their masters who are otherwise busy in hunting big games.
- In the remote past of prehistoric days men carried on his search for food on land by hunting. Gradually as hunting was very difficult for them owing to various reasons, man took up his search for aquatic creatures like fish. This was first evidenced during the *Upper palaeolithic period* when people extensively used harpoon heads with barbs (*Magdalenian times*). In *kitchen midden culture of Mesolithic period*, man also used to consume aquatic creatures like mollusca, extensively. Thus, fishing methods, as such, can be broadly divided into five major divisions:-
 - Fishing by weapons,
 - Fishing by traps,
 - Fishing by nets,
 - Fishing by poisoning,
 - Fishing by engaging tamed animals.
- Throughout the world there were people whose basic technique for exploiting the environment is to keep animals. These animals may be reindeer among the Lapps or northern Siberians; they may be goats in Morocco and along the northern edges of the Sahara; they may be the cattle of the Near East or much of Africa; they may be the camels that are found in Arabia and the Sahara; they may be

horses as was the case in the Great Plains area of North America; they may be pigs in Melanesia; and in South America there are herds of llama.

- Until 10,000 years ago, people everywhere were foragers also known as hunter-gatherers. However, environmental changes did create substantial contrasts among the world's foragers. Some, if they are the people who lived in Europe during the ice ages and were big-game hunters. Today, hunters in the Arctic still focus on large animals and herd animals; they have much less vegetation and variety in their diets than do tropical foragers. In general, as one moves from colder to warmer areas, there is an increase in the number of species. The tropics contain tremendous biodiversity, a great variety of plant and animal species, many of which have been used by human foragers. Tropical foragers typically hunt and gather a wide range of plant and animal life. The same may be true in temperate areas, such as North Pacific Coast of North America, where Native American foragers could draw on a rich variety of land and sea resources, including salmon, other fish species, berries, mountain goats, seals and sea mammals. Nevertheless, despite differences due to environmental variation, all foraging economies have shared one essential feature. People rely on available natural resources for their subsistence, rather than controlling the reproduction of plants and animals.
- In Cohen's typology, the three adaptive strategies based on food production in nonindustrial societies are horticulture, agriculture, and pastoralism. In non-Western cultures, as is also true in modern nations, people carry out a variety of economic activities. Each adaptive strategy refers to the main economic activity. Pastoralists (herders), for example, consume milk, butter, blood, and meat from their animals as mainstays of their diet. However, they also add grain to the diet by doing some cultivating or by trading with neighbors. Food producers also may hunt or gather to supplement a diet based on domesticated species.
- Horticulture and agriculture are two types of cultivation found in nonindustrial societies. Both differ from the farming systems of industrial nations like the United States and Canada, which use large land areas, machinery, and petrochemicals. According to Cohen, horticulture is cultivation that makes intensive use of *none* of the factors of production: land, labor, capital, and machinery. Horticulturalists use simple tools such as hoes and digging sticks to grow their crops. Their fields are not permanently cultivated and lie fallow for varying lengths of time.
- Agriculture is cultivation that requires more labor than horticulture does, because it uses land intensively and continuously. The greater labor demands associated with agriculture reflect its common use of domesticated animals, irrigation, or terracing.

- By shifting cultivation we mean a type of primitive cultivation which is generally done in hilly forested tract for two to three consecutive years and is then left abandoned as the soil may lose fertility. This cultivation is also known as slash and burn method of agriculture. For the Indian tribals, it seems to be an age-old practice.
- With the intensification of agriculture, some farming villages grew into towns and even cities. In these larger population centers, individuals who had previously been engaged in farming were freed to specialize in other activities. Thus, craft specialists such as carpenters, blacksmiths, sculptors, basket makers, and stone cutters contribute to the vibrant, diversified life of the city.
- With urbanization came a sharp increase in the tempo of human cultural change. Writing was invented, trade intensified and expanded, the wheel and the sail were invented, and metallurgy and other crafts were developed. In many early cities, monumental buildings, such as royal palaces and temples, were built by thousands of men, often slaves taken in war. These feats of engineering still amaze modern architects and engineers. The inhabitants of these buildings – the ruling class composed of nobles and priests – formed a central government that dictated the social and religious rules to be followed and carried out by the merchants, craft specialists, warriors, servants, and other city dwellers.
- The Aztec state, which developed in the Mexican highlands in the 15th century, is a good example of a highly developed urban society among America's indigenous peoples and where an urban political elite also gained control over food production in the surrounding countryside. Its capital city Tenochtitlan (modern-day Mexico City) was located in a fertile valley 7,000 feet above sea level. Its population, along with that of its sister city Tlatelolco, reached about 200,000 in the early 16th century.
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