

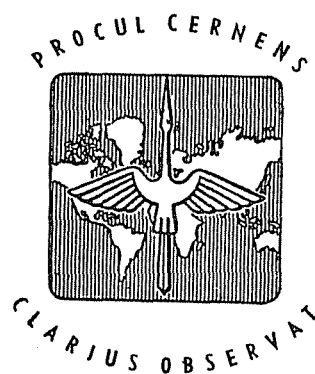
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STRUCTURAL FORCES OF PASTORAL NOMADISM: WITH
SPECIAL REFERENCE TO CAMEL PASTORAL NOMADISM

Dawn Chatty

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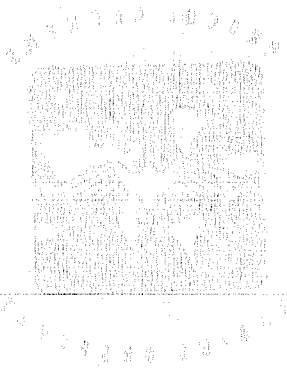
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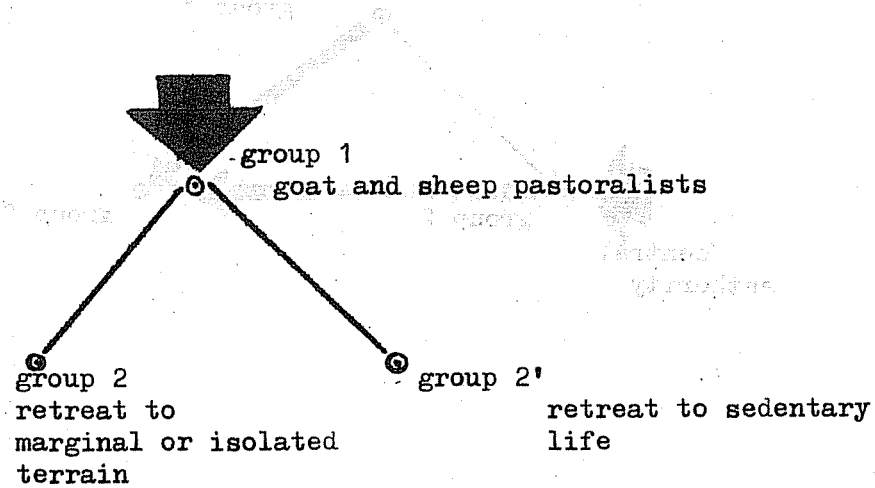
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Figure 1

HISTORICAL DEVELOPMENT

pressure of stronger
civilization



- a) desert - camel adaption
- b) mountain - vertical migratory adaption

Figure 2

NORMAL CONDITION

fluid adjustment to
total environment

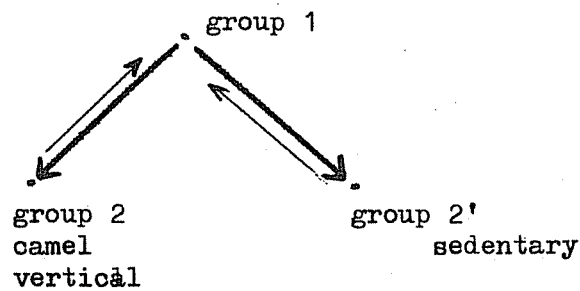


Figure 3

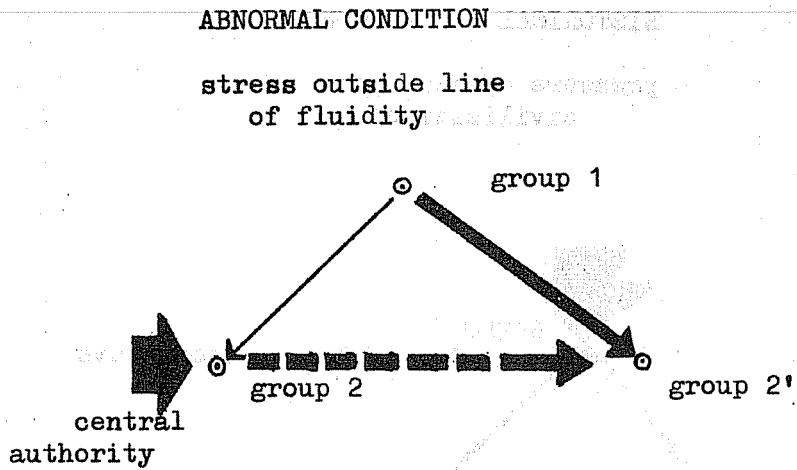
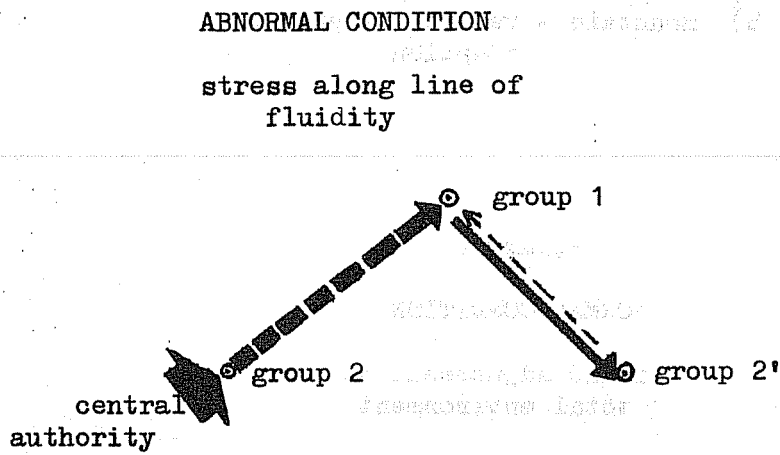
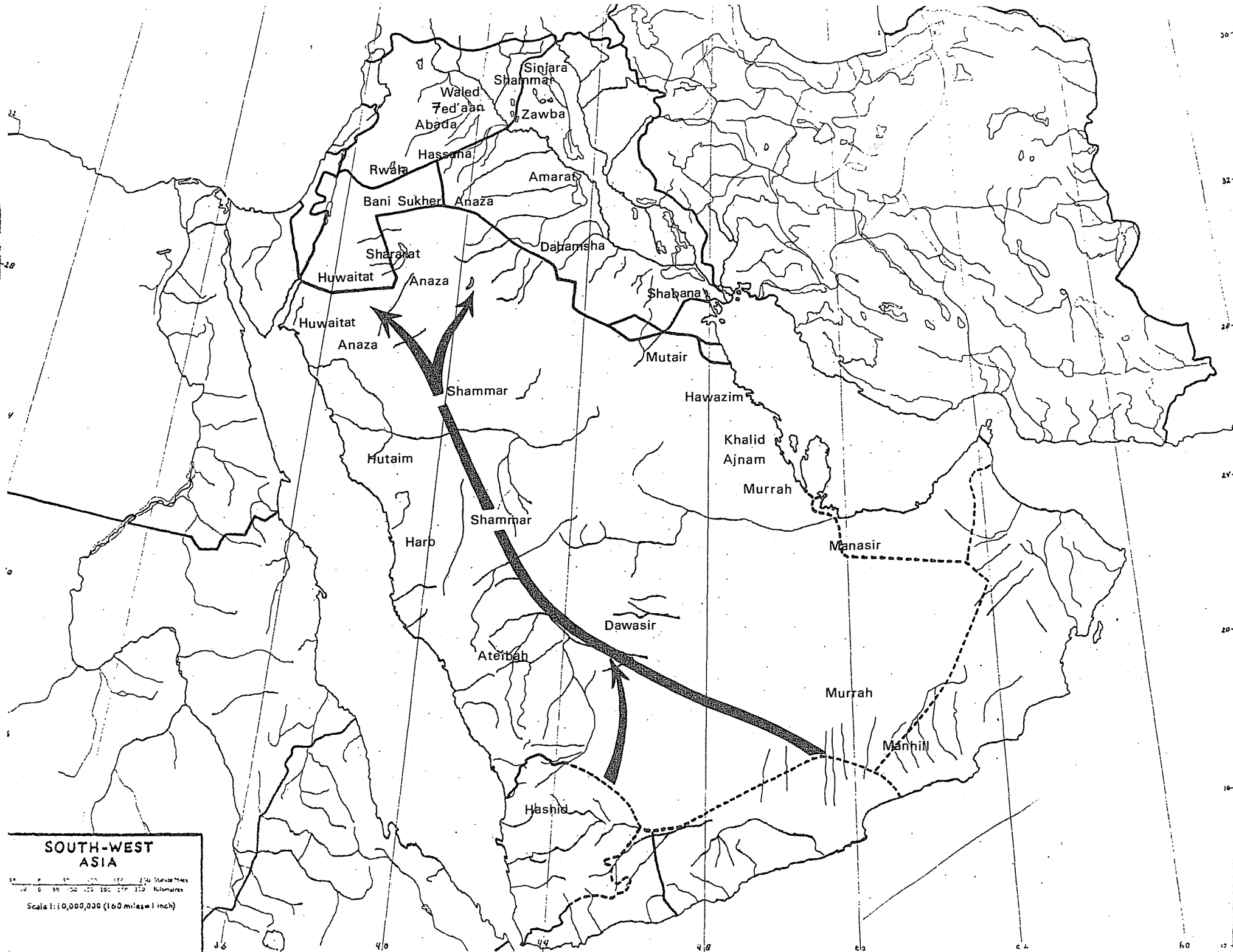


Figure 4



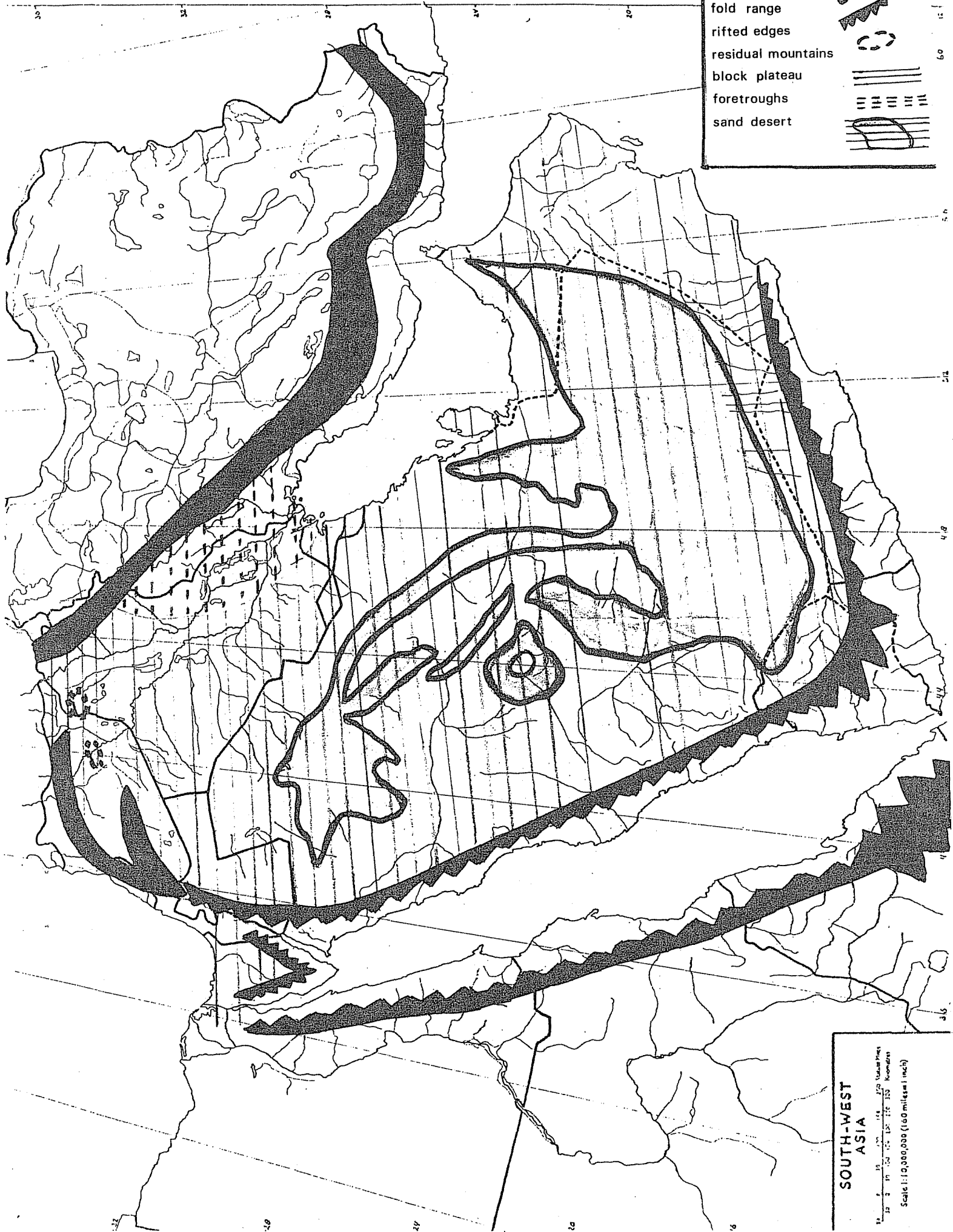
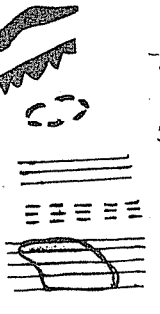


SOUTH-WEST ASIA

0 50 100 150 200 250 Statute Miles
 0 50 100 150 200 250 Kilometers

Scale 1:10,000,000 (160 miles = 1 inch)

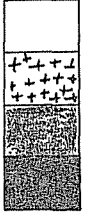
- fold range
- rifted edges
- residual mountains
- block plateau
- foretroughs
- sand desert



SOUTH-WEST ASIA

Scale 1:10,000,000 (1:60 miles) (inch)

under 4 inches
(100 mm)
4 — 8 inches
(100 — 200 mm)
8 — 20 inches
(200 — 500 mm)
over 20 inches
(over 500 mm)

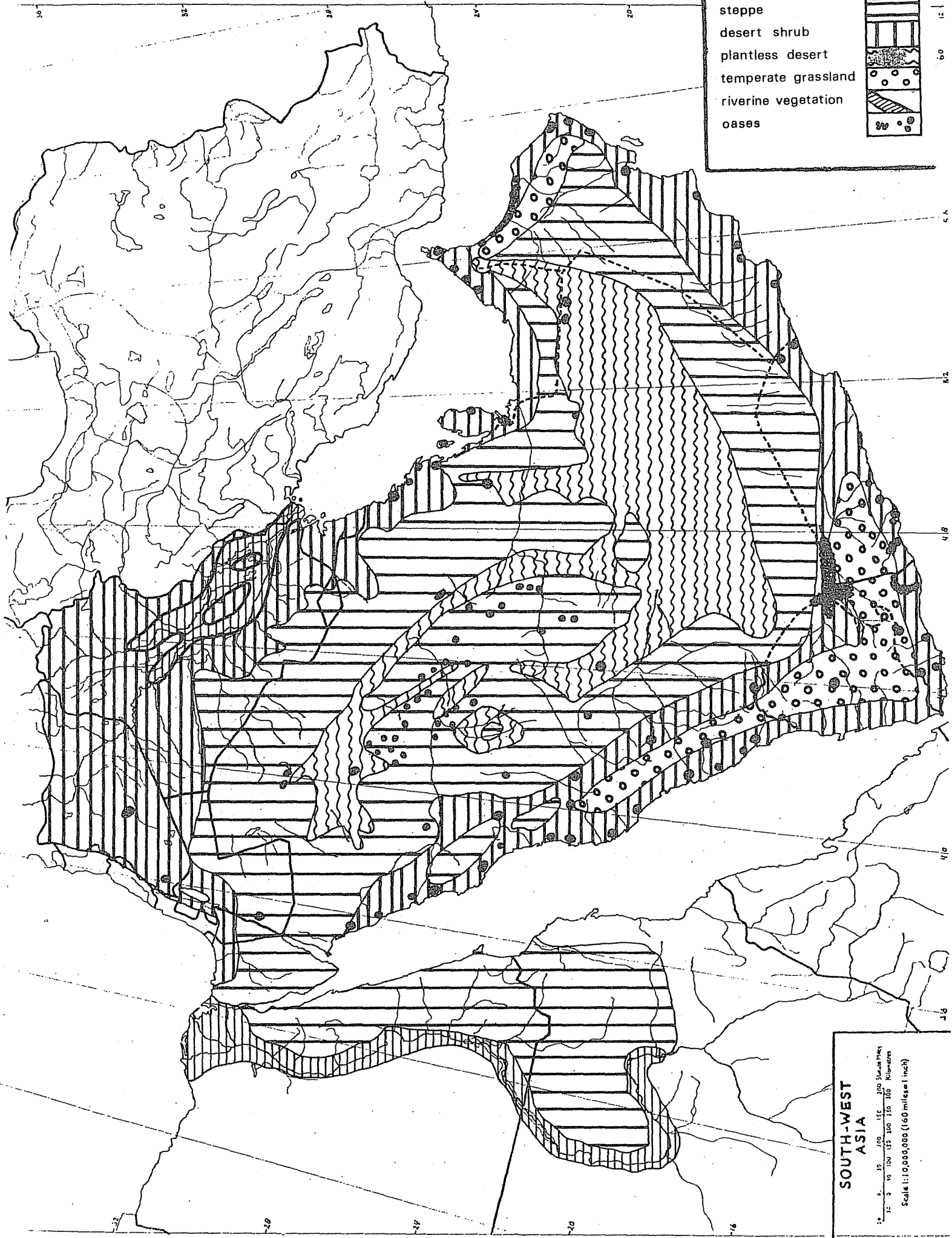
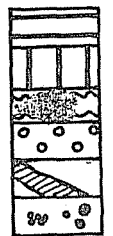


**SOUTH-WEST
ASIA**

12 10 15 100 150 200 Statute Miles
20 15 100 125 150 200 Kilometers
Scale 1:10,000,000 (1 inch = 160 miles)

-V-

- steppe
- desert shrub
- plantless desert
- temperate grassland
- riverine vegetation
- oases



SOUTH-WEST ASIA

0 50 100 150 200 Miles
 0 50 100 150 200 Kilometers

Scale 1:10,000,000 (1/60 million inch)

INTRODUCTION

1.1 Problem of Nomadic Pastoralism

For at least three millenia, nomadism has been in existence in the Middle East. Its particular way of life, crystallized over centuries of adjustment to a peculiar environment, is an integral and dynamic part of the general culture prevailing in this region. It can be described as a delicately balanced complicated cultural adaption to the land often called the ecological trilogy.¹⁾ This is a system divided into three mutually dependent types of communities - the city - the tribe - and the village - each with a distinctive life mode, operating in a different setting and contributing to the support of the other two sectors, and thereby the maintenance of the total society. Recent changes that have occurred in each sector, some as the result of "modernization" have placed the nomadic and tribal sector of the population in particular national attention and consciousness. Most of the Arab countries in preparing long range development and reconstruction plans are giving the tribal communities due consideration, for it is generally a consensus among government circles that nationhood in the Arab world cannot be achieved on a stable and permanent basis unless the tribal segment becomes fully integrated with the rest of the nation and proceeds with it along the road to development. In this respect, the government's concern with its tribal or nomadic population is positively based on a desire to achieve an integrated, united and balanced nation.

However administrative considerations make central governments acutely conscious of the nomad as a source of trouble and difficulty. In the imposition and collection of taxes, in the taking of censuses, in the carrying out of agricultural projects, in the application of education and health programs, and in the conscription of men for military training, the authorities find themselves frustrated by the tribal organization. Plans, policies, programs, and projects formulated are sometimes completely abandoned as far as the tribal segment is concerned. The scarcity of census material on nomads is not only due to government oversight. For a variety of reasons, the nomads refuse to submit to enumeration either of themselves or of their animals; their numbers decrease or increase according to whether enumeration implies taxation, military conscription, or various rations. Charles Issawi summarizes this condition well when he states that "the population of Arabia cannot be estimated with any approach to accuracy. It is usually guessed ..."²⁾

In addition, authorities have to deal with two sets of legal codes, the national and the tribal. Conflicts between the two often arise, especially when marginal cases are involved.

These few observations illustrate the widespread predominantly negative consciousness of and concern about the nomadic or tribal community in the Arab Middle East: The belief that the nomadic tribe constitutes a national problem, a source of trouble, a backward entity that stands in the way of national progress and the only overall solution is "settling the tribe", meaning transforming the nomad who lives upon the products of his flock and herds, into a settled cultivator of the soil. However if the nomad case is such a "national problem", a much more comprehensive approach to this problem will be required, for an adequate and long lasting solution. A "settled" nomad pastoralist does not of necessity imply a more integrated state, no more than it implies increased availability of social services. The real need is for a continuous program of tribal development in terms of national economic and social realities rather than for a short term solution of a problem.

The basic essential of a national plan for the development of a certain segment of society is a clearly defined and well thought out philosophy, with specific principles that serve as guideposts for such development. Lacking this fundamental prerequisite for development, any plan or project, no matter how technically sound it may be, risks being shortsighted and haphazard and ending by defeating its own purpose.

One principle of major importance has been frequently overlooked. Thorough research in tribal organization and comprehensive understanding of the tribal organization and way of life should precede any attempt at drawing up plans or the application of projects for settlement.³⁾ This is fundamentally only the scientific approach, the building up of an authentic body of knowledge relative to a certain problem, in the light of which an adequate solution can be devised. The tribal problem in the Arab world has not yet been thought out carefully and defined clearly by those concerned. While very little in the way of ethnographic study or descriptive analysis of the tribal system has been made, solutions have been suggested and in some cases applied without the benefit of an authentic

scientific body of knowledge. This is not to minimize the insight and wisdom some Arab leaders or officials possess with respect to tribal conditions and problems. However their experience would gain wider perspective and would be more fruitful if it were sharpened through a comprehensive and continuous program of rigorous scientific research.

More often than not, government concern with the nomad problem results in "settlement planning". One example can be seen by studying the work of UNESOB (United Nations Economic and Social Office of Beirut). Its primary aim is to help in development planning in the region and with specific development planning issues as they arise in any Middle Eastern country. At the present time the "nomadic problem" is one of the issues concerning UNESOB.⁴⁾ In this regard, it is currently investigating the measures which contribute directly or indirectly to the settlement of the nomads in the various countries of the region.

With so little research of any fundamental understanding on nomadic or tribal organization and life style yet conducted, it is hazardous to jump to the association of settlement schemes whenever nomad problems are discussed. Rather than examine measures which contribute directly or indirectly to the settlement of nomads, this paper will therefore attempt to examine the structuring forces of the forms of pastoral nomadism. (Pastoral nomadism will be defined so as to include camel, sheep and goat nomadism). Pastoral nomadism takes several forms in the Middle East, these forms being determined by the presence or absence of certain factors. In determining the influence of specific factors, the Principle of Stabilization as expressed by Sahlins and Service must be taken into account. As a statement on the nature of culture, it means that cultures tend to persist unchanged, and under the influence of external factors act to maintain their basic structure through adaptive modifications.⁵⁾ This paper will then attempt to identify the factors which make one form of pastoral nomadism (i.e. camel nomadism) possible in a certain region and time, while only another form (i.e. sheep and goat) of nomadism practicable in another region and time. This paper will attempt to show that it is the adaptive modifications to internal, ecological and external factors which have produced the present day diversity in pastoral nomadism, and that these forms of nomadism are and

have been continuously in the process of adaptive modification (a phenomena which leads some planners to believe that nomadism is a dying form, an archaic, primitive form which must soon disappear). A closer evaluation of the structuring forces of pastoral nomadism may lead to the conclusion that pastoral nomadism is not a dying primitive life mode, but a system currently trying to make adaptive modifications (i.e. change to sheep and goat pastoralism) involving shifts in populations so as to survive and remain balanced within the trilogy peculiar to the Middle East.

A clear understanding of the structuring factors behind pastoral nomadism in the Middle East will prove useful for further studies and planning designed to deal with the problems of the nomadic populations in this region.

1.2 Pastoral Nomadism and the Process of Adaption

"Nomad", in modern terminology refers to all wandering peoples. Originally, however, it referred to pastoral nomads, the term being derived from the Greek nomas - nomados meaning to roam for pasture. Pastoral nomadism can also be defined as non-sedentary animal husbandry.⁶⁾ In the Middle East and Central Asia, it depends on domesticated livestock for a livelihood. The technology of pastoralism requires that the life practices of the people be adjusted to the requisites of the animals. That is, movement to pasture, water and protection from predators. Stock breeding is the basis of the pastoral economy and nomadism is the preferred way of life, with the migratory patterns dependent upon topography and climate to a considerable extent. Pastoral nomadism appears to have been declining for several centuries. The number of immigrants to the village and city seem to have risen steadily. Various factors such as economic and political pressures have forced the pastoral nomads to make many modifications in their culture. From one respect it appears as though a gradual transition from the full, extreme form, camel nomadism⁷⁾ to less exaggerated sheep and goat pastoralism and even sedentary life is taking place.

This transition can be seen as simply the overt manifestation of the Principle of Stabilization. The pastoral nomad, when acted upon by external pressures, changes of necessity. Yet the society undergoes specific changes only to the extent of preserving unchanged, its fundamental structure and character. Should certain pressures be removed, then the society will return to a previous pattern. For example, when the internal Persian administration collapsed in 1941, the sanctions behind forced sedentarization were removed. All the Basseri expressed their reaction as one of resuming migrations - not as "becoming pastoralists again". As a matter of fact, most of them had very few animals, and some appear to have resumed migrations entirely without stock - the supreme value to them lay in the freedom to migrate, not in the circumstances that make it economically advantageous.⁸⁾ In the process of adaption, different aspects of the society will become specialized for the exploitation of particular facets of the environment. (This was and still is the case among many "sedentary tribes", where the authority of the sheikh increased tremendously in order to cope with the increased external pressures. This increased authority of the sheikh has at times become just as bothersome to central authorities as the previous migrations of the tribe in general).

An example of the Principle of Stabilization is seen in the Yakut of Northeastern Siberia. Here one can see the role of the social system in resisting or actively inhibiting changes that would disrupt or modify the existing culture or ideological system. The Yakut of Northeastern Siberia originated in Central Asia. They were cut off from the Turkic tribes, and pushed north. They changed just "enough so they would not have to change".⁹⁾ For example they replaced their tents with huts, they replaced their camels with reindeer and dogs, and instead of riding horses, they ride cows. But their social system in essence remains much the same as those of the Turkic tribes.

To speak of Pastoral Nomadism as being of various levels can be misleading (high, pure, or camel nomadism, semi-settled, semi-nomadic or sheep and goat nomadism, semi-settled or partial crop cultivators, transhumance or vertical nomadism). Pastoral nomadism can be better treated as taking several forms. The social structure, basic to all the pastoral

nomadic groups in the Middle East (under discussion in Chapter II 2.3), or the internal organization of the pastoral nomadic society undergoes various modifications and undertakes various adaptive measures in order to cope with external and internal pressures. Yet the basic social structure and culture remains very much the same. Thus for the purposes of this paper, Pastoral nomadism will be referred to by its most outstanding feature (i.e. camel pastoral nomadism, goat and sheep pastoral nomadism, vertical pastoral nomadism).

CHAPTER II

GENERAL BACKGROUND

2.1 Physical Description of Southwest Asia

a. The Physical Structure

The region under consideration (the Arabian peninsula and the Fertile Crescent) consists in its northern part of a section of the great belt of recently folded mountains which cross the old world from Portugal to the East Indies.¹⁰⁾ In contrast with the zone of folded mountains, the Arabian peninsula itself is a fragment of the ancient stable block, a massive which is called by some, part of the original continental block of Gondwanaland.¹¹⁾ This continent has split into four main divisions - Africa, Arabia, the Deccan and Western Australia. These fragments have split, tilted, and drifted apart like a series of paving stones which have been thrown both out of junction and out of level, so that water has flowed in between them.¹²⁾ The general slope of the block is toward the great lowlands of Iraq. Earlier volcanic activity in the form of wide-spread flows of basalt have since weathered into the harras or stony deserts of Western Arabia. Such rocks disintegrate under arid conditions into sharp angular fragments very difficult to traverse, so that these areas are usually shunned by traffic.¹³⁾

Sandy deserts accumulated by wind erosion and deposition are found in two main parts of Arabia, the Nefud to the North and the Rub' al-Kali or Empty Quarter to the south, the two being linked by a narrow belt of dunes, about 15 miles wide which sweep round to the east of the central oasis of Arabia.¹⁴⁾

The main water shed of Arabia can be traced from the Anti-Lebanon down to the mountains of Yeman. From this divide, the main lines of drainage flow east-north-east. For the most part the drainage flows proceed underground, so that their exact courses are not always known. The greatest is the Wadi Rumma, which for much of its length is a broad shallow depression in the sand - further south the Wadi Dawasir and Najran are the principal watercourses. To the north in the Syrian Hamad, or stony desert, the numerous gullies of the district of Widian which lead into the right bank of the Euphrates are the principal watercourses. The short streams which drain the sharp slopes of the Arabian massive to the Red Sea and the Arabian Sea are less sporadic in flow and occasionally perennial.¹⁵⁾

In respect to its climate conditions, Southwest Asia has been called an exaggerated eastward extension of the Mediterranean region in view of its generally wet winter and dry summer (by Brice and Fisher). But lacking the tempering influences of the sea, it experiences greater extremes of heat and cold.

In general the amount of precipitation is closely related to the altitude of the land. In the generally uniform level of the steppes of Syria and of the interior of north and central Arabia, even a slight elevation of the surface may result in an appreciable increase in the winter rainfall.¹⁶⁾

b. Precipitation

The problem of water in the deserts of the Middle East is a crucial one, for most of the area suffers badly in the dry season and rain falls only during a limited period of the year. But this Mediterranean climate merges gradually to the south in ^{the} Syrian and Iraqi Jaziras into a desert climate in which rainfall becomes scarce and unreliable. There are certain variations in physical conditions which arise from differences in topography and from the influences of sea and mountain, but nevertheless, rainfall in the whole area has a number of common characteristics.

1. rain is confined to a certain limited period of time, usually winter. This means that vegetation and pasture which depend on rain are only seasonal and that the people have to move from place to place looking for new pasture.
2. rain is generally scarce and rather unstable varying widely from year to year and even from place to place in the same country during the same season, making migratory routes highly unpredictable and flexible.
3. rain is not a reliable source of water (a condition further aggravated by low technical efforts to make use of the available rainwater). There are certain attempts made in each country to store as much of the rain water as possible. The commonest way is to collect the water by digging cisterns in the ground. Sometimes dams are erected by the governments to keep the rain water but in most cases these dams are only temporary. In most parts of the area, ancient Roman wells, pools and cisterns are reclaimed by the government. Jordan in particular has made much effort to

reclaim the numerous ancient wells and pools existing there. All this however is not enough to provide the pastoral nomad with a permanent supply of water because of the limited capacity of the cisterns and pools and the scarcity of rain and its erratic nature.

Underground water has proved to be a more reliable source of water than rain. In some cases tribal sections reclaim the ancient Roman artesian wells found in their tribal lands, but drilling new wells has become the responsibility of the central authorities.¹⁷⁾ However abundant might be the yield of artesian wells, their water is used only for satisfying the needs of the herd and domestic purposes. Sometimes underground water is used in irrigating fruit gardens and small patches of cultivated land, but it cannot be used for irrigating extensive grain fields or grazing lands. Since rain falls only during a certain limited season, the cultivation of land has to be seasonal and pastures indeed are seasonal as well. This is an important factor in regulating the life and movements of the nomadic populations of the area.

As perennial rivers are rare in Southwest Asia, the most reliable and efficient source of water storage is in natural reservoirs as high snow fields, artesian beds and subterranean flows. These are replenished automatically each winter and are tapped by piedmont springs and channels by artificial adits or qanats or waterholes and wells which generally only satisfy the minimal needs of the herds and the household. Without these devices, little permanent habitation would be possible in large areas of Southwest Asia.

The effect of low rates of rainfall and drought is acute. In periods of locally low rainfall or drought a pastoral nomadic tribal section can leave the country for neighboring countries. For example, the tribes of Jordan can go to Iraq, Syria or Saudi Arabia in search for better opportunities of pasture and fodder. But if the drought is general to the whole area, long migrations will prove useless, and great numbers of stock will die. This results in a great reduction of the price of the animals as the stock owners try to get rid of them at any cost.

c. Vegetation

The composition and distribution of the flora and fauna of the Middle East are due to ephemeral conditions which are the outcome of a long series of changes brought about by migration, evolution, and adaption. In particular, human intervention has been responsible for many profound changes in the density and extent of particular plant and animal populations. Pastoral activity has been held responsible for affecting the vegetation cover of extensive regions or indirectly by inhibiting the regrowth of woodland once this has been destroyed. The goat in particular, through its habit of close cropping continuously breaks back the young shoots before they reach maturity.

The role of vegetation as part of the total environment has an interdependent relationship with climate, geomorphology and pedology and all animal and most human activity. There is probably no part of the total environment which can be so easily and quickly modified by changes in climate, nor is there any other element of the landscape which can be so easily changed by man and his animals.

The plants are mainly xerophytes, having the ability to arrange their life cycles to suit drought conditions of varying degrees of length in areas of low relative humidity and high rates of evapotranspiration. Other plants have developed mechanisms to resist heat and drought and to evade high salt concentrations of some dry land soils. These xerophytes, drought and salinity evaders still have one major enemy - the animals which graze on them and the people who burn them for fuel and clear them for cultivation. The xerophytes proper are either drought tolerant or have developed drought resistance mechanisms. This adaption of the vegetation of the arid zone is generally a complicated combination of physiology and anatomy.¹⁸⁾ A general description of the vegetation would state that the plant life is poor in species and consists of widely separated plants which grow closer together as moisture increases on a seasonal or annual basis. To counter conditions, the leaf is small in surface area, while the roots are large and penetrate deeply. In the most extreme desert, the vegetation consists of isolated turfs many feet apart. Toward the transitional margins of greater humidity the grass begins to appear regularly with the seasonal rains. The vertical zone of vegetation is particularly marked in this region - giving sharp contrasts of vegetation over comparatively short distances uphill. This relief from the pervasive summer drought is found above certain heights in the snow fields. Nomadic pastoralists in the northern part of the region therefore arrange their migrations to take advantage of these vertical spheres,¹⁹⁾ and are called vertical pastoral nomads.

Grazing camels, antelopes, gazelles, goats and sheep are used by the vegetation to assist in the dispersal of seed over the widest possible area to provide the best chance of finding good environmental conditions for germination. There is a tendency for desert plants to possess mechanisms for long distance dispersal (barbs, burrs, bristles, etc.).

d. Animal Life

The seed dispersal mechanisms of some arid land plants demonstrates the tremendous need for mobility in order to ensure survival of the species. For the animal kingdom, this mobility demonstrated by running or jumping is expressed in its most extreme form by the gazelle, and by the antelope. They survive because they have the speed to reach the water-holes and to take advantage of the pastures which become available after the rains. There are also slower moving mammals which possess mechanisms for survival under drought conditions although they must take in moisture from springs or from vegetation at regular intervals (camels, sheep, goat and cattle). Without such herbivorous animals dependent on the vegetation, there could have been no development of nomadic pastoralism. It is significant that the desert and semi-arid lands lack major predators in quantity, as there is insufficient food available for large carnivores. Nomadic stock raising would have been less possible if there had been many lions, leopards, pumas to prey on the herds.

The runners and jumpers with ability to seek water over long distances are less representative of animal adaptations to drought. A more representative type of adjustment to the land environment is shown by burrowing animals that create their own "micro-climate" and escape the extremes of temperature, such as the moles, rabbits, hares, jerboa. Another representative type of adaptation is one by which some animals acquire a "shell" or comparable mechanism to counter drought conditions as the desert snail or Merino sheep. A third representative type of adjustment is seen in the short life cycles of some animals to take advantage of temporary favorable conditions such as bees, wasps, hornets, spiders and locusts. The locusts are physiologically not well adapted to drought conditions. It is a drought evader which requires moisture for its short life cycle. It is perhaps paradoxical that attempts to provide soil moisture by irrigation have increased the potential breeding grounds of the locust swarms and reduced the crop yields which irrigation was designed to increase.²⁰⁾

2.2 Middle East Culture Area: characteristic culture complexes

Raphael Patai speaks of the Middle East as an area extending from and including North Africa to the Turkestan and Indian plains. He maintains that the cultural characteristics found in all parts of this vast stretch of land stamps it with the quality of a culture area. Structurally the Middle East culture is not strictly comparable to any single culture area of America or Africa. It is rather paralleled by a concept like European culture which, though indicating homogeneity in certain basic overall features, covers several distinct subcultures. Geographical factors themselves subdivide the Middle East into four major regions, each with a desert and steppe area in its center and a more fertile cultivated perimeter encircling it.²¹⁾ This paper will deal almost exclusively with the Arabian peninsula (these four regions are North Africa, the Arabian peninsula, the Iranian plateau, and Asia Minor).

If in a general overview of the Middle East, the relative extent of the desert and the sown is taken as a basic consideration, the impression gained is one of an arid area which is more than overwhelmingly desert and only a very small percentage of which is utilized for agricultural pursuits.²²⁾ With regard to the surface area, therefore, the Middle East as a whole is definitely desert steppe area, and the ways of human adaption to life in the desert steppe - that is, animal husbandry - seem to be the most significant characteristic of the Middle East Culture Area.

A different picture is obtained if the percentage of the population supporting itself by animal husbandry and agricultural pursuits respectively is considered. Then, the Middle East as a whole is an overwhelmingly agricultural area. Between 60-65% of the total working population is engaged directly in agriculture. 18% of the total population lives in towns and cities, leaving roughly 17% for the nomadic peoples on the steppes and the desert areas.²³⁾

a. Threefold Structure

In addition, each country in the area shows a three fold structure. The desert is the habitation of the camel nomad, the steppe belt the domain of the sheep and goat nomad and the sown the home of the agriculturalist and urban dwellers. Transitional stages and localized variations of these populations make for additional diversification.²⁴⁾

b. Family

In a later part, the fundamental structure and character of the pastoral nomadic segment of the Middle East will be dealt with in detail. Presently, characteristic culture complexes peculiar to the whole of the Middle East will be dealt with. In the field of social culture, the more important complex which is basically similar all over the area is the family. The family occupies a focal position in Middle Eastern culture, and its structure and functioning are practically identical not only among nomadic and settled peoples, but also among the majority of urban populations in which "Westernization" has not made appreciable inroads. In traditional Middle Eastern society, the family is patrilocal, patrilineal, patriarchal and extended. The entire family, which may consist of several dozen members, resides together in a cluster of neighboring tents in the nomadic camp; in a single house or several buildings clustering around a common courtyard in the villages and towns. When the grandfather dies, the extended family breaks up into as many new units as there are sons. Economically the extended family is the basic unit. In the nomadic tribe the extended family holds all property in common (camel and other livestock). In the village, the extended family owns jointly the land, the cultivation from which it derives its livelihood, while in the towns it owns and manages jointly the enterprises from which its members make a living.²⁵⁾

These three main sectors of Middle Eastern Society, urban, agricultural, and pastoral nomadic have a number of basic correspondences. The towns and cities however have been centers of foreign cultural influences for several decades and as a consequence much of the original Middle East tradition of social organization has been obliterated and can be found only in the village and nomadic camps.

Nomadic camp and agricultural village, however, should not be viewed as two opposite forms of local aggregates. The existence of a continuous scale of transitional forms between the two clearly show that camps and village are merely the two extreme forms of a range of possibilities - a mixture of elements taken from both. The presence of these mixed forms of local aggregates is due not only to the continuing process of sedentarization; the reverse process is also known to

have taken place repeatedly. Settled villagers have taken up nomadism, either completely or partially. The cultivation of the soil and animal husbandry can co-exist and mutually compliment each other.

c. Dual Organization

The largest traditional social grouping to be found all over the Middle East is a loose, informal two fold faction which at the same time is powerful in the hold it exercises over the population whether nomadic or sedentary, often referred to as moiety or dual organization.²⁶⁾ In some parts of the Middle East, especially Arabia, entire tribes and villages belong to one or the other of these dual factions which go by such names as Qahtans and Adnan, Yafa' and Hamdan, Hinawi and Ghafari, Qais and Yaman.

Interaction, manifested mainly in commercial contacts between the nomads and agriculturalists is an important characteristic of the Middle East. Social life everywhere, and sales or barter take place primarily in the towns. The commercial contact taking place in the towns is actually three fold: the town sells its products of domestic industry; the village its agricultural products; and the nomadic tribe its animal hides, wool, rugs, clarified butter; each buys from the other two what it needs. The pastoral nomads are then the suppliers of beast of burden, meat, milk and other vital products to the sedentary populations, whose cultivated land is too precious to devote to growing fodder crop. In return the villagers provide the tribesmen with grain, dates and fruit and the townspeople supply sugar, tea, cloth and weapons.

d. Religion

Though officially the vast majority of the Middle East population belongs to one or another sect of Islam, actually their religious life contains many elements which go back to pre-Islamic and even pre-Christian and pre-Jewish days. The belief in and propitiation of spirits, ghosts, and demons, divination, the evil eye - these are in the main, the more ancient elements of belief and ritual with often only a thinly spread varnish of Islamic doctrine and practice superimposed over them. This is characteristic of both the nomadic and sedentary populations, though the latter are more inclined to venerate saints, to take annual pilgrimages to their tombs and to observe the five pillars of the Faith, notoriously and habitually neglected by the nomadic populations.²⁷⁾

More significant though is the basically religious general attitude of the Middle Eastern people. The totality of life is permeated with religion which holds supreme sway over the nomadic camp and the agricultural village.²⁸⁾

Religion is the fundamental motivating force in most phases and aspects of culture and has its say in practically every act and movement of life. The observance of the traditional forms and rites is an integral part of every day life. Religion not expressed in formal observance is unthinkable. Again morality always appears in the guise of religion and is merely one of the aspects of religion, a moral law disassociated from religion cannot even be conceived of by people steeped in Middle Eastern culture.²⁹⁾

Another characteristic aspect of religion in the Middle East is its distinctively dual aspect of materialism on the one hand and spiritualism on the other. The two neatly balanced main concerns in Middle Eastern religion are physical well-being and this world, and spiritual welfare after the death of the body. For the great masses of the poor, religion with its moralistic and spiritualistic tenets and its great promise of further reward is an asset of unestimable psychological value.³⁰⁾

In Islamic culture as a whole, the pervasive and dominating belief is that earthly differences between which man places one above the other in an economic or political hierarchy are absolutely unimportant when compared with the difference between man and God. For men in submission to God are equally his servants and the God of Islam sanctions no status difference between men. The "real world" of superordinate and subordinate human relations and the ideal world of equality before God seem nowhere to have achieved better mutual accommodation than in the predominantly Islamic states of the world.³¹⁾ Yet it is just these characteristics of the predominant religion of the Middle East which act to retard spontaneous change, and to retard new developments. The name Islam itself implies submission to divine authority and the entire history of ^{the} Islamic community points to the system as an overriding cultural factor. It has been stated by some that the anachronistic tenets of traditional Islam

in the socio-political sphere have been the underlying cause of the present day "ills" of the Middle East.³²⁾

In summary, it can be said that the Middle East can be regarded as one culture area, exhibiting certain common culture complexes such as Islamic religion, dual social organization, tripartite structure, and patrilineal, patrilocal, and patriarchal, extended family. This culture area is made up of four major segments each with a desert - steppe - and more fertile periphery. These areas include North Africa, Arabia, Iranian plateau, and Asia Minor. This paper will deal specifically with the pastoral nomadic population of the Arabian segment. To some extent, the conclusions drawn concerning the structuring factors of the pastoral nomads may be applicable to the other segments of the Middle East culture area. (For the purposes of this paper, the Arabian segment will include the modern political states of Saudi Arabia, Jordan, Syria, and Iraq, with occasional references to the U.A.R.).

2.3 General Tribal Structure: Arab Tribal Society

At this point, let us examine briefly the general social structure of one portion of the Middle Eastern population, the tribal peoples, as tribal organization and its ideological superstructure are found in all the pastoral nomadic populations of the Middle East as well as the settled Arabs, sometimes slightly "changed by differing natural conditions."³³⁾ Tribal social relations which characterize all pastoral nomadic groups in general are dominated by kinship, which assumes very broad political and economic functions in particular.³⁴⁾ It might be observed that within the kinship design, personal kinship with members of associations, is a common basis of recruitment, and that the idiom of group solidarity is frequently kinship. This is exemplified in the general propensity of tribal people to cloak alliances of convenience in kinship terminology. Wherever a condition is necessary or desirable, kinship is extended to effect it.

a. Group Organization

On the level of group organizations, are the descent groups, a body of kinsmen united by common ancestry, generally reckoned patrilineally. Patrilineality is of overwhelming importance in this culture; the tribeman's position within the formal organization of the tribe as well as his more general reputation and social standing in the community at large depend on his paternal ancestry.³⁵⁾ The descent group is also corporate, in the sense of perpetual units of the tribal system, extending forever though individuals come and go. The group has a "reality" that transcends the mortal span of persons. Within such a group, to proceed by force against a fellow clansman is to proceed against oneself - often subject to dire traditional consequences.

The tribal system of the Middle Eastern culture area has often been described as that of segmentary lineages with a tendency to develop into chiefdoms. Whereas a segmentary tribe is a permutation of the general anthropological model in the direction of extreme decentralization, to the extent that the burden of culture is carried in small, local, autonomous groups,³⁶⁾ the chiefdom is a development in the other direction toward integration of the segmentary system at higher levels. A political superstructure is established and on that basis a wider and more elaborate organization of economy, ideology, and other aspects of culture is established.

It should be kept in mind that the tribal system as with any other system may be defined as a cultural ideal or as an imperfectly realized sociological reality: there is no absolute correspondence between the two statements although they are importantly related. The Middle Eastern tribal system, as a cultural ideal may be explained by utilizing the descriptive category, pervasive throughout the region, of "segmentary lineage systems". Originally used by Evans-Pritchard and Fortes and others in African Political Systems, it was later elaborated in such studies as Tribes Without Rulers ed. by John Middleton and David Tait. The term "segmentary" noted by Middleton and Tait has two basic features: (1) The "nestling attribute of segmentary series" and (2) the characteristic of "being in a state of segmentation and complementary opposition."

The series may be one of lineages, smaller ones nestling inside and composing larger ones, which in turn compose still larger ones, and so on; or it may be one of territorial groups, or of others. Subtraction or change in size of segments leads to a reorganization, although not necessarily to a re-structuring of the total system. Analysis of the process involved in this reorganization of an unchanging total structure has led to the use of the term used to refer to the second characteristic. This is the process of continual segmentation of the structure.

This continual segmentation of the structure refers to the process whereby new segments of the same order within the structure separate in response to forces such as population pressure or subsistence requirements. This continual segmentation of the structure is the society's response to a highly unpredictable and often hazardous environment. This cultural model may prevail whether or not the society's resources are sufficient to fill all the parts of the theoretical structure.

When factors in the natural or social environment are such as to result in an unequitable distribution of economic wealth or political power between the ideally equal segments of the social system, the latter may cease to function.

Once a subsection within such a system has a monopoly of power, the checks and balances of complementary opposition are clearly at an end and the tribal system becomes centrally rather than segmentally ordered for most political and economic purposes. It begins to develop a chiefdom superstructure, over the segmentary lineage structure.

b. Organization and Power of Lineages

In daily life, the power of the lineage to hold people together is great. In the nomadic tribe, the actual migratory unit may be composed of several patrilineages which camp, fight, march and graze the herd in close association, ^{with,} but at the same time separately from each other. In the village compound the lineage each have fixed lands, guest houses, thrashing floors, etc. 37)

That the model of lineage is the parental family as well, is well illustrated in the Middle East. "In fact the lineage, even a tribe and ultimately the Arab nation are considered as simply an enlarged family exemplified by the process of tribal fusion. For example: When a lineage or larger unit A attaches itself to a more powerful unit as a tribe B, an association usually secured for reasons of safety, within two or three generations the ancestry of group A will have been incorporated into the tribal geneology of group B.

or

Of two originally equal sub-tribes A and B, conceptualized in the persons of two eponymous ancestors as brothers, one A, becomes weak, thereafter this change in relative status will be reflected in the emergence of a new traditional geneology in which A becomes son of B".³⁸⁾ Thus not only is existing lineage structure projected "backwards as pseudo-history", but this backward projection constantly changes in order to keep up with the changing structures of lineages or larger units.

Historically, Arab tribal society is known to have expanded in numbers and territories, and the social system has accommodated these increases through the fission of agnatic lines. Patrilineal units split off from parent units through segmentation of the sibling group. In time, the offspring agnatic line attains considerable size and it in turn segments. Ideally, accurate geneologies are maintained whereby these ramified and scattered groups may trace common ancestry.

W. Robertson Smith summarized Arab social structure as: "According to the theories of the Arab geneologists the groups were all patriarchal tribes, formed, by subdivisions of an original stock, on the system of kinship through male descent. A tribe was but a larger family, the tribal name was the name of the common ancestor. In the process of time it broke up into two or more tribes, each embracing the descendants of one of the greater ancestor's sons and taking its name from him. These tribes were again divided and sub-divided on the same principle, and so at length that the extreme state of division was reached which we find in the peninsula at the time of the prophet. Between a nation, a tribe, a sept or subtribe and a family there is no difference, in this theory, except in size and distance from the common ancestor. As time

rolls on, the sons of a household become heads of separate families. The families grow into septs, and finally the septs become great tribes or even nations embracing great tribes." ³⁹⁾

That this society follows fundamentally the same principles at all levels of organization can be seen when one considers the maximal units of the society. Ideally all Arabs, whether nomadic or sedentary form a single super-lineage, the member units of which trace common ancestry to the prophet Abraham. Following Abraham there is a bifurcation of the Arabs into two great maximal lineages. One of these, the descendants of Adnan, constitute the present day north Arabs. The other, the line of Qahtan, includes the south Arabs or Yemenites. Opposition between the two groups often rationalized intertribal wars, and today a split of peasant villages into two antagonistic factors is common. ⁴⁰⁾

Arab society can be characterized by its potentiality of massive aggregation of its agnatic units, on one hand and atomistic individualism on the other. Cohesive relations between and within sections do not have an enduring continuing quality, but are situational and opportunistic. The most stable segment is the tribe, which as it is usually defined in the literature, consists of those sections tracing common ancestry and possessing corporate rights in grazing lands and water-holes. ⁴¹⁾ It is the tribal territory which is the only corporately held property among the tribe; this mode of tenure is a simple ecological necessity in a pastoral community. All other forms and sources of wealth are owned by individuals. Even this seemingly stable unit is subject to shifts of membership and realignment of its sections in accord with the process of segmentation and the realities of desert life.

c. Importance of Geneological Relationships

Relations between groups and individuals and alignments in conflict are ordered through geneology and the generational distance from a common ancestor. ⁴²⁾ The importance of the degree of relationship as a principle of Arab social structure may be seen in the institution of blood responsibility. The group that shares blood guilt, or is responsible for the exaction of blood revenge or money consists in most Arab tribes of all persons within five degrees of agnatic relationship to the malefactor or victim. ⁴³⁾

Parallel cousin marriage is an essential ideal factor in the structuring of Arab society. Parallel cousin marriage within the tribal society is ultimately preferential endogamy within the agnatic line. The isolating effect of this custom has been noted by Barth as having the opposite effect of cross cousin marriage which is generally considered to be a means by which kin groups interrelate and thus become integrated into the larger society. Parallel cousin marriage with patrilineality allows for agnatic segmentation and structural opposition that extends even to the level of the nuclear family. In contrast, formal patrilineality and patrilineality as an ideology provide the basis for the large scale integration of which Arab society is capable.⁴⁴⁾ Parallel cousin marriage therefore contributes to the extreme fission of agnatic lines in Arab society, and through intermarriage encephals the patrilineal segments. Under these circumstances integration of larger social units is accomplished vertically, and not horizontally.⁴⁵⁾ Common ancestry whether myth or fact has been an effective means of obtaining the great coalitions necessary to the persistence of the Arab society on the fringe of an agrarian state. Conversely, the ability of larger units to fractionate into micro-units without disturbing the social structure gives the society a quality of resilience and adaptability in the face of adversity and chance.

In summary then, Arab tribal society which includes all pastoral nomads as well as some "settled" nomads can be seen as more than just a simple patrilineal, segmentary society. In a very real sense, its plasticity, its capacity for fusion and fission, and its lack of bounded and stable descent groups has contributed to its enormous persistence in time. Arab tribal society has maintained itself for centuries despite the varied physical and social environment. Since even the nuclear family is a miniature of the larger social system, the population may expand in numbers and area, or become fragmented and dispersed, without any disturbance of the social system itself. Such dispersals may result from warfare with agrarian states or other tribes and from less violent conditions, occurring annually as part of the ecology of the pastoral nomadism in the Middle East. The essential characteristic of each of these pastoral nomadic as well as "settled" groups is that their numbers

are distinguished by belonging to a specific group and not to a specific place, village or town. They retain this characteristic even when they constitute a fixed agricultural community. The specific units to which such an individual belongs has been classified by Berger as:⁴⁶⁾

1. the tribe or Qabila, mother or stem usually headed by an Amir or Sheikh who is the grand chief of all the branches and sub-branches of the tribe. The tribe's territory is called Manzel or Watan and is divided into zones.
2. Ashir or Hamula, clan or daughter or the tribe (the camping unit) headed by a sheikh or chief of the branch. The clan's zone or area is called Ghait or Muntaja where the herds of the clan graze or where some shifting agriculture is practiced by some members of the clan.
3. Bait the house or family is the sub-branch or granddaughter of the tribe and daughter of the clan, usually headed by a representative of the sheikh of the clan. Grazing or shifting cultivation may be at different places in the tribal territory and the place where the tents are installed is called Madrab.

CHAPTER III

HYPOTHESIS

3.1 Historical Reconstruction

The rise of nomadic life has often posed a question to historians and anthropologists and other social scientists. At one time it was believed especially by "evolutionists" that nomadism was a form of life which evolved immediately from the hunter and gatherer stage, and that the exercise in animal domestication led to plant domestication and therefore the development of agriculture. Marshall Sahlins maintains for example that "tribes occupy a position in cultural evolution. They took over from simpler hunters; they gave way to the more advanced culture we call civilization."⁴⁷⁾ However, if the generally mixed economy of early Middle Eastern sites are taken as the neolithic prototype, pastoralism represents a specialized offshoot.⁴⁸⁾

Archeological evidence in Southwest Asia has clearly shown the fallacy in the Evolutionist argument. Rather nomadism as a form seems to have emerged from agricultural forms when pressures or factors arose. It is in the Neolithic sites of Southwest Asia, that the first remains of domesticated animals (sheep and goat) are found.⁴⁹⁾ It would seem that at a certain point in the development of technology, some communities, presumably those with ample rainfall or facilities for irrigation, specialized in agriculture and kept a few sheep, while others moved out into the grasslands and devoted most attention to sheep and goat breeding.⁵⁰⁾

Even in Central Asia, the phenomena makes a similar appearance. Pastoralism seems to have developed around 2500 B.C., as an offshoot of mixed farming. For thousands of years before, diversified neolithic economies had at many points approached the semi-arid land, occupying transitional environments which formed emphasis on the animal side of the subsistence complex. Yet no extensive adaption to the grassland seems to have been made, as if there were some impediment to a conclusive separation from the neolithic heartlands. In 1935, Toynbee regarded the increasing challenge of desiccation as the principle factor in the development of pastoral nomadism from people who were originally cultivators.

Other reasons put forward were population increase leading to over population so that families and kinship groups were forced to move away.⁵¹⁾ This reluctance to move out to more arid grasslands may be attributed to two factors. One (ecological), during all this time suitable transport for humans, which large scale herding required in the steppe, was absent. The second factor may have been the absence of external forces. There was not yet a sufficient push from behind which could have rendered continual occupation of the marginal economic zone unappealing, and the semi-desert attractive. These possible factors have lead Owen Lattimore to maintain that it was the expansion of a dominant and exploitative civilization which supplied the decisive force.⁵²⁾ To take up mobile herding was for people of the border an act of resistance, even freedom.

The domestication of the camel came much later. Available evidence from bones, wall drawings, inscriptions, figurines, and historical accounts do not tell where, when or why camels became domesticated.⁵³⁾ Mesopotamian records establish the camel as an important domestic animal during the Assyrian era, with earlier knowledge recorded on the bronze gates of Shalmaneser III (860 B.C.).

Arabian classical records do not go back far enough to establish Arabia as the place of domestication. Most probably the domestication was effected in preliterate times by a people with a prior knowledge of the ass. A substitute domestication of the dromedary may be inferred to have taken place as agricultural peoples moved to the edge of the arid land.⁵⁴⁾ Sheep and goat herders probably took up a few dromedaries from sedentary peoples. As the agriculture prospered, the sheep and goat herders began to move to less prosperous land, and to rely more heavily on the camel.

From the use of the camel as a beast of burden and from the present distribution of the camel complex the camel would appear to have been first employed intensively in the west, specifically in South Arabia and from there to have gradually diffused northward.⁵⁵⁾

Carlton Coon suggests that the camel breeding nomads may be derived from a people like the cattle breeding Gora of the Hadhramant who with some agriculture and a few camels for transport moved into the desert.⁵⁶⁾ The multi-animal nomad (goat and sheep) along the fringe may well have a core continuum descending from the Neolithic or Chalcolithic period, a people who emphasized herding rather than agriculture and who in the course of time added cattle and camel to their stock without changing very much their way of life.

Only one group in Southwest Asia appears to have evolved from a pre-agricultural hunting and gathering economy. These are the "Sleyb" who today hunt and gather while being drawn into a symbiotic relationship with the camel breeding nomads and townsmen of Arabia. The camel nomads themselves appear to feel that the Sleyb are most ancient inhabitants of the country which they occupy.⁵⁷⁾ Other theories on their origin place them as descendants of Crusaders or their camp followers, their name resembling the Arabic word for cross.⁵⁸⁾

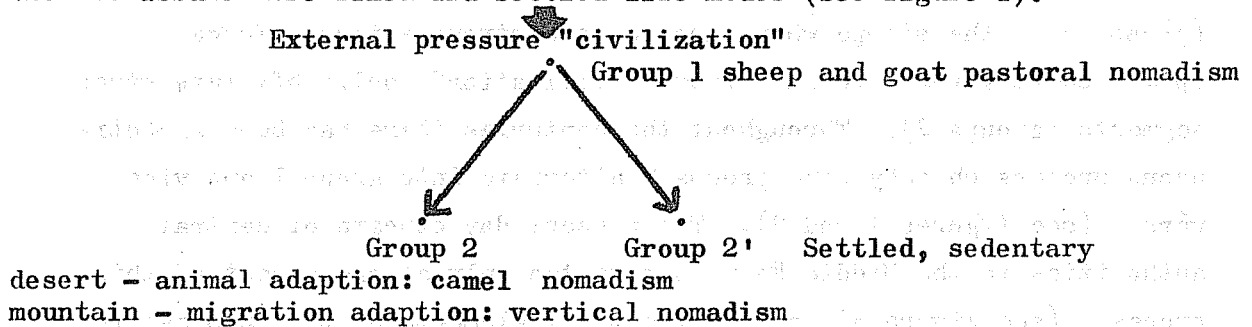
Thus rather than being examples of the pre-agriculture stage of man's evolution, pastoral nomadism appears to have been a development from the agricultural stage. Certain factors or conditions at that time, motivated groups to move to more isolated or marginal areas, and to take those adaptive measures, and modifications necessary for their new external and ecological surroundings. There appears to be, historically, a cyclical process whereby certain factors influence whole groups to change from settled patterns of existence to nomadic patterns and vice versa.

Around 100 A.D., for example, the Kingdom of the Nabataeans was incorporated into the Roman Empire. The destruction of this kingdom, in which a close connection was made between state - culture - economy - led to more severe repercussions. What followed was a transition of part of the population from settled life to nomadism, clearly comprehensible in view of the decline of the Southern Arabian economy.⁵⁹⁾ Urban settlements existing from ages past were partly occupied by nomads in the course of the nomadization and the collapse of the border states. In Arabia and the Fertile Crescent, the process of de-nomadization (sedentarization) and re-nomadization can be traced fairly exactly. In Jordan these processes can be proved by archeological evidence.⁶⁰⁾

Historically the Middle East has been one of the most productive culture hearths in the world. This semi-arid land with an unfavorable desert to sown ratio and with few resources was the home of the "agricultural revolution" in the Fertile Crescent, and the "urban revolution" in the river valleys of Mesopotamia. The Achaemenids, the Arab and the Ottoman Turkish empires rose in this region. Four of the world's great religions, Zoroastrianism, Judaism, Christianity, and Islam developed here. In questioning how the Middle East, given this poor resource base, has been able to support these civilizations, Paul W. English maintains that it is in the delicately balanced cultural adaptation to the land, the "ecological trilogy" that the answer can be found.⁶¹⁾ This system of mutual dependence between the city, village and nomadic tribe - each operating in a different setting, each contributing to the support of the other two, thereby maintains the total society. A. Tannous states that in Southwest Asia, pastoral nomadism is an integral and dynamic part of the culture prevailing in the region. The tribal unit existing side by side with the agricultural village and the trading city has in its relationship with them shared a role that is as significant to the local culture as those played by the other parts.⁶²⁾ This phenomena is a "product" of the Principle of Stabilization as described by Sahlins and Service. The presence of an open and diverse habitat leads to a process of extensive variation. The most common conditions in which cultural divergence of specialization occurs is within a varied environment. In the process of adaptation different segments of a society will become technologically and in other ways specialized for the exploitation of particular facets of the environment,⁶³⁾ yet the basic social structure will remain unchanged to facilitate future adaptations.

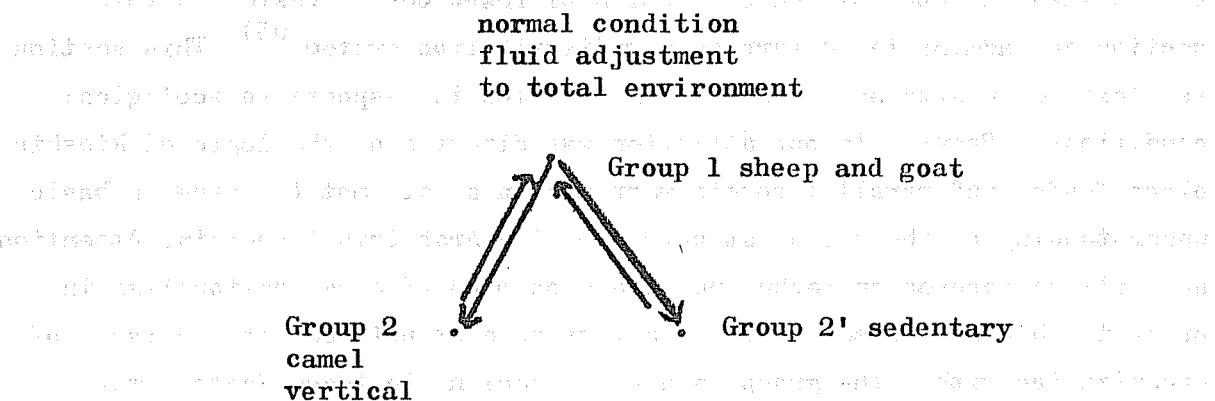
This phenomena serves also to explain the existence of different forms of pastoral nomadism in the Middle East. As various factors and pressures mounted (note O. Lattimore's hypothesis of the pressure of "civilization" as a determinate factor in pushing groups off the steppe into other regions), some segments (at group 1) moved to more arid regions, and the necessary cultural modifications and the ecological adaptations (necessitating a basic change of stock to animals able to survive the increasingly arid territory) lead to camel pastoral nomadism.

It is also probably that the same pressures may have pushed other segments into more mountainous regions (necessitating reduced horizontal movement and increased altitudinal movement), whereby the necessary cultural modifications and ecological adaptations lead to a vertical migratory route for the herd or vertical pastoral nomadism.⁶⁴⁾ In addition these same pressures may have lead some some segments to remain and adapt their mode of existence to their present "political" or "economic" reality, requiring them to assume more fixed and settled life modes (see figure 1).



These segments exhibited fundamentally similar social structures, the major difference lying in the stress which is placed on certain social institutions due to the cultural adaptations and ecological modifications already undertaken.

This history of each of these adaptive life modes is full of transitional phases; groups at point 1 - the original form from which segments moved and underwent adaptation and modification in response to their new environment - have historically continually been in the process of moving to point 2 and vice versa. Very rarely however, have groups moved from point 2 directly to another point 2' (or vice versa) except under extreme political pressure from an external force (one such example is the Wahhabbi reform movement in Saudi Arabia which will be discussed later, and the movement in Jordan in the 19th century (see figure 2).



CHAPTER IV

STRUCTURING FACTORS

4.1 A. Internal

The earlier analysis of the historical development of pastoral nomadism in the Middle East has led to the hypothesis supported by Owen Lattimore that the sheep and goat herding nomadic tribal groups (group 1) of the steppe when exposed to a strong external force (political-military pressure from "civilization") split off into other segments (groups 2). Throughout the centuries there has been a continuous process whereby some groups 2 alternate into group 1 and vice versa. (see figures 1 and 2). The present day concern of central authorities in the Middle East is directed only at one aspect of this process, (see figure 3) how to direct all elements of this process to one end - settled and sedentary segments. An understanding of the structuring factors of the segments which central authorities are trying to redirect may serve as an important guide or aid to future planning activities. The structuring factors will be grouped as internal, ecological and external. The analysis of internal structural forces will center mainly on the group 2 - camel nomadic pastoralist - on the assumption that any exaggerated forms of the social structure found within this group (in relation to groups 1 and 2') can be attributed to the cultural adaption and ecological modifications they have undertaken in response to their total environment.

In order to better examine the internal organization of camel nomadism in particular, and the factors which have structured its organization, the tribal unit, frequently referred to as the minimal camping unit will be examined, as control and protection of resources is vested in this section and administered through a redistribution system.⁶⁵⁾ This section is flexible in size and internal organization in response to ecological conditions. Previously our attention was directed at the logic of kinship, blood feuds, and parallel cousin marriage in an attempt to gather a basic understanding of the social structure of the Arab tribal society. Attention now will be focused on techniques and economics of camel pastoralism in order to show how these internal factors have structured certain types of organization within the group, and how a decline in these factors may lead to re-adaption to another life mode.

a. Role of Herding Animal

Camel breeding tribes have, by virtue of their ability to exploit the grazing ranges into which other local economies cannot spread, and by virtue of their fighting strength, mobility, and control of communication routes, maintained a distinctive pattern and a dominant position over other societies and settlements in their territories.⁶⁶⁾ The camel is their basic resource and tool for dominance (Rwala, Shammar, and Mutair).

The camel, the largest of the domesticated animals of Arabia, is the basis of most of the cultural modifications and ecological adaptations which these pastoral nomads have undertaken. As a source of food it provides both meat and milk. In the desert and steppe, few other food resources are available. Game (gazelle, lizard, bird) plants (truffles, semh seed) and locust are used seasonally and sporadically. The camel herds provide a more stable food supply. But camels mature slowly and reproduce slowly as compared with sheep and goat. The female is bred in the 6th year and only produces a single offspring once in two years.⁶⁷⁾ The female gives milk for eleven to fifteen months and this long lactation period makes the camel a year round source of food. Although according to Musil the daily yield is quite small.⁶⁸⁾ Minimum herd size must be maintained so that both pregnant and lactating females are available to ensure a continuous supply. This creates very strong pressures to increase the herd size.

It is difficult to estimate the minimum number of animals required to support a family. Louise Sweet reports that her Dosiri informant in Kuwait regarded his family as relatively secure and well off with 18 female camels.⁶⁹⁾ British estimates of tribal herd strength in 1917 allowed 20 camels as an average figure per tent.⁷⁰⁾

The camel's significance is probably equally important as a means of transport. This use as well as its peculiar capacities, enable the pastoralist dependent on the camel to penetrate grazing ranges inaccessible to small animal breeders, covering greater distances, with greater degrees of mobility. Although the camel is rarely eaten as part of their diet, the camel pastoralist often sells part of the herd for meat (especially

in Egypt, oasis towns of North Arabia, and the urban centers of the Levant). This factor also exerts pressure to maximize the herds. The camel is thus a multi-purpose resource for food and other materials, a commodity for exchange, a means of caravan and baggage transport, and a fast moving mount for defensive or offensive movement.

The capacity of camels to tolerate extremes of heat and lack of water, to thrive on desert plants beyond the capacity of other domestic animals, and to cover greater distances in the course of nomadic grazing supports the life on the outer ranges of the "ecological niche" of desert pastoralism. The mechanism whereby the camel is able to withstand extremes in heat is explained by E.B. Edney. When a man and other animals lose water, this occurs from both the tissues and from the blood, so that the blood becomes more viscous until, at a critical point, the heart is unable to circulate it fast enough to transfer central body heat to the surface for cooling. At this point the animal rapidly dies in what is called "explosive heat" death by Adolph and Dill. Camels, on the other hand do tolerate much greater water loss, because of some physiological process whose mechanism is not fully understood. Water is withdrawn mainly from the tissue and the gut, so that the blood suffers almost no concentration. In conditions leading to severe dehydration, it was found that camels lost 20.45% of their body weight in nine days. Since camels can also absorb huge quantities of water rapidly and tolerate the osmotic stress which must result, it would seem that there is some form of physiological waterspace in the tissue. Camels do not store water in bulk in the hump or elsewhere. The hump is fat. Another adaptation shown by the camel is that unlike most mammals, they permit their body temperature to vary over a wide range.⁷¹⁾

b. Role of Terrain/Migratory Pattern

Movement of camel and other pastoral nomads is determined by a combination of seasonal and areal variability in the location of pasture and water. Because water and grass are in short supply in one area during one season of the year at the same time that they are abundant elsewhere in the tribal territory, survival of both herds and herders makes movement from deficit to surplus areas both logical and necessary.

Movement of a seasonal nature is the key characteristic of a pastoral society. The pastoral nomadic migratory regime is tied to the seasonal regime of the region. Pasture and water are seldom found randomly scattered about a given region, but generally are distributed in a regular fashion in accordance with a particular seasonal pattern of climate. This pattern has both long and short term regularity, although in any arid environment variability in precipitation totals is always expected. It is not only the orderly succession of well-known seasons which serves to regularize the nomad's yearly movements, but also his sense of territoriality. Every tribe seeks to control a territory that contains enough resources to sustain tribal life. Each tribe has a definite zone with well-understood, though often variable limits, and has certain rights of usufruct denied other tribes at the price of war. Only in emergency does a tribe attempt to graze its herds outside the traditional tribal area. Thus the regular sequence of climatic seasons and the tribal sense of territoriality combine to place the normal pastoral nomadic cycle beyond the realm of the random and aimless. The yearly rainy season, and period of crucial importance in the regeneration of the nomad pasture, may vary from year to year in its inception, duration, intensity, location, and value and in so doing has an important effect upon the migration regime.

A series of relatively wet years may be balanced by a series of relatively dry years with the nomad's economic wellbeing fluctuating around the fulcrum of an imaginary "average" year. In a series of wet years the herd will rapidly increase. On the other hand, a series of dry years will result in a corresponding decrease in herd size as disease, poor grazing, inadequate water and debilitation take effect. As a result the alteration of wet and dry years serves as a natural mechanism to keep the herds, and the nomads living off them, in balance with their environment.

The tremendous flexibility within the pastoral nomadic social structure permits adjustments to be made to local variations in the seasonal availability of pasture and water. This adjustment involves a moving to either side of a median migration line, moving for greater or lesser distances into the interior, moving in smaller or larger

groups depending upon the carrying capacity of the pastures. Here one can see that the internal and ecological factors go hand in hand. The seasonal regime gives shape and substance to the nomadic movements, while the flexibility of the social structure permits fluidity in meeting the demands of the immediate situation.

Seasonality in nomadism is marked, and usually involves clustering around summer wells during the dry, hot desiccated portion of the year. These wells are the permanent possessions of the tribe or occasionally the camping units. A rainy season is always present, and it is this season that makes movement possible. Once the rainy season begins, the tribesmen move out from the summer quarters into regions that are usually too arid for exploitation in the dry season. Here the herds graze on annual grasses and water is derived from wells or rainpools. Movement is also motivated by a desire to conserve and allow the regeneration of the overgrazed pastures close to the dry season wells. Return to the dry season wells commences once rainfall fails, rainpools evaporate, and vegetation starts to desiccate. However, all elements of the nomadic populations try to prolong the amount of time spent in rainy season pastures as long as possible.

The range of a pastoral nomadic society, thus includes winter pastures, permanent watering places for summer, and access to an urban market. These are the basic features of the tribal territory, and it is the relatively stable dominance over such territory, with its other inhabitants, over time by a group of genealogically related agnatic segments which identifies the pastoral nomadic tribe.⁷³⁾ One example is the Rwala tribe. Its territory extends from the vicinity of Damascus, the summer camping zone to the southeast between the Wadi Sirhan and the Anaizah highland, into the Nefud desert - a distance of 800 kilometers.⁷⁴⁾ Thus long nomadic grazing treks and extensively large tribal territories are an integral characteristic of camel pastoralism. A forced or imposed reduction of either necessitates modification in the way of life.

These extensive ranges seem to be required because of the sparse and sporadic distribution of the vegetation and the variable rainfall pattern. The desert vegetation of annual grasses and plants require a good sequence

of rains from early October to mid April. If the autumn and winter rains fail or are meager for two or three years, then the growth of the annuals fails altogether.⁷⁵⁾ The resulting extreme drought, necessitates movements of entire tribes which can be accomplished by threat, use of force or peaceable agreement with allied tribes.⁷⁶⁾ Such was the case in 1947, a year of extreme drought, in which the Rwala lost many camels before they successfully threatened and negotiated their way into the territory of a neighboring tribe for the season.⁷⁷⁾ Usually however within the extensive tribal territory, the rainfall pattern varies each year in such a way that areas of barren pasture one year may be good pasture the next. This produces a localized phenomena which will effect the camping unit rather than the entire tribe.

c. Role of Subsistence Motivation

The minimal camping unit, as with the whole tribe, strives to maintain and increase the size of the herd in order to counteract any hazards of the habitat. The survival herd size necessary for the pastoral nomad is not set only by the subsistence and transport use of the animal, but also by its exchange value for equipment and supplementary foods and its military use for offense and defense. A surplus of camels is required above the subsistence needs. When this surplus level is threatened (by slow breeding rate, drought, theft, raid, population pressures) there are several formalized recourses available which are not found in such exaggeration in groups 1 and 2'.

1. Institution of raiding other tribes for camels.

This predation is affected against camel as well as non-camel pastoralists and is equally widespread and prevented only by the payment of tribute or protection fee. Thus a tribute relationship with oasis cultivators often results which also acts as a redistributive mechanism in that the tribute portion of the harvest of the oasis cultivator is transmitted to the section sheikh who then distributes it among the kin groups of the section.⁷⁸⁾ This redistributive function of the section sheikh is a marked characteristic of the nomadic pastoralist society. It functions not only with respect to the obligations of hospitality and the distribution of valuable goods received, but also in calling upon the collectivity to support the individual.⁷⁹⁾ The sheikh is expected to see that every needy family has at least the minimum requirement in animals for keeping up with

the section. Thus the raid is an institution developed for increasing or restoring the herds of the section, or ensuring the surplus necessary for maintaining regional dominance. The major objective is the capture of camels, especially adult females. Only in rare instances will other property in tents and desirable furnishings be seized. Though raiding relations are formally declared between tribes, the organization of raids takes place in the tribal section (camping unit). Louise Sweet offers the hypothesis that the taking and retaking of camels through the raid serves as a means of circulating or distributing a scarce resource over a wide area.⁸⁰⁾ The raiding complex itself appears to be an adaptive feature not found among other segments of the Arab tribal society.

2. Tribal unit emigration during localized drought.

The previously stated freedom of the minimal lineage groups, families or even siblings to split off from their kinsmen and nomadize by themselves or to join, through the custom of establishing "neighboring relations" with other sections than their own is a means of adapting to unfavorable habitat conditions for grazing in local areas at least temporarily.

3. Abandonment of camel pastoralism.

Persons or families who have lost their herds entirely or who have never succeeded in acquiring enough camels to support themselves may join other more fortunate families as clients. But this subservient role and the ensuing loss of prestige often leads the unfortunate family to partially or completely abandon specialized camel breeding by moving out of the "ecological niche" in which it flourishes and becoming sheep herders. (This is the process which took place among Shammar tribes who moved in the 19th century across the Euphrates to the Jazira region of Syria, as well as the Shabana who moved from the Nefud to the Shat-al-Arab region in the same century.⁸¹⁾ It is important to note that as the primary recourse in the face of ecological and other pressures, the raid, a principle adaptive feature of this group, has been almost entirely destroyed by the policy and administration of central authority. The only real alternatives remaining to the camel pastoralist who fears for his security are points two and three.

There are in addition several other cultural adaptations which have been designed not primarily for the minimal camping units interest or the tribe as discussed above such as raiding, tribute and redistribution, but primarily for the benefit of the individual. Numerous customs and practices regarding hospitality and safe conduct afforded some protection to the individual at a time when raiding was widespread. Also it served to make travel across a number of tribal territories possible, thereby bringing news of events in the outside world to the members of small isolated camps. The provision of protection and safe conduct of a traveller was felt to be a display of power and authority and more importantly a sign of assured control of the territory occupied. The arrival of a stranger in camp was often the occasion for great competition in offering hospitality, as it was a means for the host to acquire prestige.⁸²⁾ The importance of these social devices can be readily appreciated in view of the narrow margins of subsistence and the limited lines of travel in areas where camps are always moving, and attack and plunder were the basis of prestige. These social devices made any communication possible. Yet in the present age, modern telecommunication, radio, and rapid methods of transport have left these social devices for communication obsolete.

The basic Arab tribal ethos then, such as the principle of collective responsibility, expressed in such institutions as the blood feud and raiding, the social devices of hospitality and safe conduct, concepts of honor, prestige, and nobility appears in its most intensive form among the camel nomads, and successively loses its significance as one proceeds from the camel nomad to sheep and goat herders and to settled tribal cultivators (or as one proceeds from the group 2 of modified and adaptive organization, to the group 1 of basic unexaggerated organization).⁸³⁾

d. Role of Individual Behavior Norms

So far in discussing the internal structuring forces found in the social system of pastoral nomads, we have taken a social anthropological interpretation. At this point it may be helpful to view the pastoral nomadic society in a cultural anthropological interpretation. The pastoral nomadic tribal community in its own right, is the possessor of a cultural heritage, the material aspects of which are very simple, not going beyond a few implements, tools and objects for the satisfaction of elementary human needs.

On the other hand, the non-material aspect is relatively highly developed and consists of clearly defined patterns of behavior, within which A. Tannous states "such basic social values as individual independence and prowess, reverence of leadership, respect for old age, hospitality, and generosity, honoring of the promised word, respect for individual rights, mutual aid, community consciousness and loyalty" are found.⁸⁴⁾ Many of these cultural values are at the foundation of pastoral nomadic life and can be observed in their functional aspects more clearly in the "extreme" forms, such as camel nomadism than in the basic form as exhibited by sheep and goat pastoral nomads.

In discussing the cultural characteristics of the pastoral nomadic tribal community of South Iraq, Fernea states that pride in ancestry, emphasis on generous hospitality, recognition of the duty to revenge kinsmen wronged in feud, belief in the values of warriorhood and other features are widely shared by both the settled and nomadic populations of the tribal community.

It must be remembered that these traditional tribal ideals of conduct and behavior originate under nomadic conditions and often are not well attuned to the circumstances of sedentary life. These characteristics are but a function of the total situation of the pastoral nomadic society. Although they are treated as highly admirable and praiseworthy characteristics in the European sense, they are simply the behavior norms which have evolved through time, and have been found to be the most useful, pragmatic and efficient in terms of the pastoral nomadic total environment.

It is when these values and ideals are assessed in reference to regional or national development that much debate occurs. Some anthropologists (McLoughlin in A.A., 1966, p. 1005) maintain that the personality of the pastoralists are better suited to progressive adaption to Western technology, being readier for development than their primary agricultural neighbors, and will more quickly move on the path to development. Whereas Fernea maintains that the tribesmen are anything but committed, when manual labor is called for. "One has the impression that many would rather do anything else."⁸⁵⁾ Coon argues that the tremendous

flexibility and room for change within the pastoral nomadic society would allow Western culture to be most easily accepted and assimilated among them. It is Walter Goldschmidt, however who wisely cautions that personality attributes are only one factor. "The nature of the rewards obtainable by a new life mode and the kinds of social interactions and subordinations generally required by development projects are just as relevant (American Anthropologist, Vol.69, p.223)." In addition it is not self evident that greater independence or that the ability to appraise the world realistically, two particular traits often attributed to the pastoral nomads, will lead to an acceptance of an alien economic program dominated by outsiders for the pursuit of foreign cultural goals.

4.1 B. Ecological

a. Pasture

Up to this point we have been discussing primarily the internal structuring factors of pastoral nomadism (with special emphasis on camel nomadism). However, as the social organization of each pastoral nomadic group is so closely associated with the adaptations and modifications it has made to its herd animal and the environment in which the animal can survive, it is difficult to strictly separate ecological factors from internal factors. Implicit ecological considerations have already been made in the previous analysis. It has been implicit that a short term ecological balance with the environment is achieved by migration and dispersals into minimum camping units. Thus the intensity of usage of pasture is adjusted to the carrying capacity of the different pastures at different seasons, while the long term balance between herds and pasture is beyond the control of the tribesmen, and depends mainly on natural growth rates, disease and taxation.

A study of the ethnographic literature on the nomadic pastoralists by Musil, Dickson and Murray suggests that the competition for pasture between tribal and sub-tribal groups does not lead to conflict. Rather the first concern of the migration unit is to locate the best pasturage and water resources ahead of them. Scouts are sent out, information collected from travellers, messages are sent to other groups. These general descriptions suggest that a kind of "squatters rights" process takes place: once a good pasture area has been located and settled on by one group, others seek elsewhere, unless the pasture is sufficient for all. The sectional or unit movement of migration seems to reduce greatly any random searching. Sections appear to have customary lines of movement, favorite sites, which may vary over the years with the distribution of rainfall.⁸⁶⁾ Both Dickson and Muller suggest that camps move before pasturage is eaten out or trampled down completely, in order to conserve the plants for the future.⁸⁷⁾ Dickson suggests in addition that pasturage left for two weeks or so recovers and that the annuals especially continue to sprout and develop.

b. Environmental Stress

Apart from the need to move the tribal camping unit at frequent intervals to provide for pasture for the livestock and water for men, climate is a stringent and dangerous factor. The camel pastoral nomad of the desert must accommodate himself to intense solar radiation, high evaporation rates, scorching heat by day and cold by night. The abaya acts as an adaptive mechanism whereby the individual is protected at all times. Yet it is a cumbersome garment for manual labor, and serves as a social device to indicate the individual's relative "prestige" and distaste for manual labor (As a garment it continues to be worn even by tribal individuals when they have been forced to take on a sedentary agricultural life).⁸⁸⁾

The strong winds of the desert are another source of environmental stress and irritation. Here the traditional nomad mounted on camel is much better adapted to his environment than a man in a motor car. On a camel back, but not in a car, one is often above most of the sand blown in a desert wind.

c. Water Resources

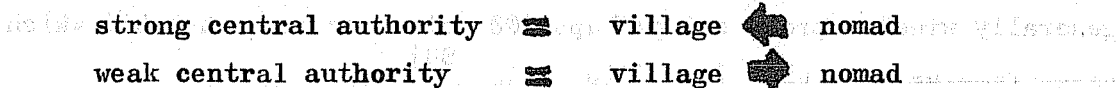
Even in this arid area, rain is a mixed blessing. Protracted rains may immobilize the nomad when the desert turns quagmire. Especially heavy rains may even imply actual danger for him, drowning men and animals in a desert flood. Fear of flash floods keep nomads from camping in a wadi bed. Often the encampment is tucked away in a side valley as a protection against the wind (as well as other camping units). Tents are generally widely spread out perhaps 100 meters or more, a habit which often remains even when forced to settle.⁸⁹⁾

In villages, the major consideration is water supply, where as in the camping nomadic unit, the first consideration is for pasture. The nomad is used to bringing water from distant wells, in the past in leather bags, now in jerry cans. This habit of bringing water to the place of residence also remains with those who take permanent residence in villages.⁹⁰⁾

4.1 C Demographic

In discussing internal and ecological factors which structure the pastoral nomadic life mode, one further type of relationship will be considered. This is the demographic aspect which involves both the ecological and biological as well as internal and social considerations. Although reliable demographic data does not exist for the tribes, several general trends can be isolated.

It appears that the balance between factors of natural fecundity and the natural control of death rate and birth control gives a high net rate of natural growth within the tribe. It also appears that as the effects of modern medicine have not yet reached the nomadic camps, a consistently high rate of growth has been a characteristic of the tribal population in previous times as well (a net growth of at least three per generation is suggested by Barth).⁹¹⁾ In order to maintain a balance, there must be a natural process which drains off at least a major portion of this natural increase each generation. This is mainly achieved through emigration and sedentarization. This can occur in large groups such as the Shammar or the Shabana of the Euphrates region, or individually as shown by previous mechanisms discussed. These processes must at the same time balance the natural accretion rate, whereby foreign nomad groups become attached to the tribal group. Also there is the movement of persons from villages to the tribe,⁹²⁾ especially in regions where forced sedentarization has occurred within the last two or three generations, due to generally external political factors.



The dramatic population control of epidemic and famine seem to have less effect in pastoral nomadic society than on sedentary peoples. Perhaps the nomads' dispersed living arrangements make them less susceptible to contagion, proper herd balance releases the pastoral nomadic group from the threat of famine (villagers normally undernourished, packed together in unhygienic villages, often with polluted water, are much more subject to contagion and disease).

The stability of a pastoral population depends upon the maintenance then of a balance between three phenomena - pasture - animal population - and human population. Pasture available set a maximal limit to the total animal population an area will support; the pattern of production and consumption at the same time set a minimal limit to the size of the herd that will support a household. Thus there is special difficulty in establishing a population balance in a pastoral economy which is not found in other life modes.

The human population must be sensitive to imbalance between its herd and pasture. It cannot allow a type of Malthusian population control to work (growth in population leads to starvation then rise in death rate and return to balance in population), because its subsistence base is not land as with agricultural or hunting and collecting people, but rather the herd or food itself.⁹³⁾ The pastoral economy can only be maintained as long as this "large store of food" is not under pressure or threat of being invaded and consumed. Effective population controls must intervene before those of starvation and death rate. The most effective balance between pasture, herd and people and a stable pastoral population can only be maintained if the rate of emigration is sensitive to the population pressure of animals on the pasture. This rate of emigration and sometimes sedentarization has increased also due to the growing desiccation of pastures especially in the region around North Arabia.

Fredrik Barth has shown that this condition does actually obtain. Different phases of growth in the total size of herds show two forms of emigration. With growing herd, the frequency of emigration by upward mobility increases (this is the transfer to landed property of accumulated wealth). As a herd owner's wealth increases, there are growing economic incentives for him to transfer part of his capital accumulation to another form than in herd - in carpets, female jewelry, and land. In general wealthy nomads convert a fraction of their wealth of herds into landed property, and eventually emigrate to the city where they become part of the urban elite (This phenomena has seen a sharp rise recently partially as the result of land reform). Emigration through impoverishment is more strictly subject to Malthusian controls of the animal population. Over-

population of animals results in poor health and increased density of the herd, making it susceptible to epidemic animal diseases. Thus animal epidemics serve to control not only the size of the animal population, but also that of the pastoral population.

Thus the manner of growth of nomad populations is checked by controls different from the alternate control of starvation and death rate. Animal populations growth beyond a certain point tends to be checked by controls which strike in such a way as to increase emigration, reducing the human population.

4.2 External

a. Economic

We have seen how certain internal and ecological factors structure the pastoral nomadic life mode. The external factors will be viewed in three groups; economic, political and administrative.

In discussing the economic factors, one must again consider the peculiar trilogy which was once the overwhelming economic scheme in the Middle East. The steppe and sown have economically always been bound together by mutual dependence. Within the Middle East, there are great areas of infertility where cultivation would be difficult if not impossible, but which may be profitable to grazing. Some ^{other} parts of the area may be utilized in either way, depending on the cultural interests and technological skills of the occupants. In these parts there may be fluctuations between cultivation and grazing. Agriculture, pastoralism and caravan trade represented specializations in exploiting the resources of the area.

The economic relationships between the sheep and goat pastoralists and the agriculturalists have not been as severely threatened as that between the camel pastoralists and the other segments of the traditional sphere of economic relationships due to the decline in caravan trade.

The arid area in general, with the exception of the oasis, is a habitat not desired by most peoples. Much of it is an area of retreat, inhabited by marginal populations. Some of these populations withdrew into the arid lands before the advance of more powerful populations in

adjoining areas. In arid lands located between densely settled non-arid lands, intensive development of transportation and communication occurred. Routes have to pass through arid areas. Their alignment and volume of travel depend on various factors: demand for traffic in both terminal areas, value of the goods to be transported, and technology of desert travel. In response to these factors, a whole way of life developed based on the camel as a beast of burden for the large caravans traversing the desert. As long as non-motorized traffic in the desert persisted, those who handled it enjoyed a key position. They provided a means of transportation, the men handling the animals, the guides who had the vital knowledge of routes and water places, often supplying food and travel equipment as well as knowing where to obtain pasture for the animal. These masters of the desert thus held a position based on all the privileges of monopoly. They levied heavy charges, extracted regular fees from oasis dwellers and villagers along the trade routes in exchange for protection from plunder. This situation prevailed in many areas until the beginning of this century, when the introduction of motorized travel and aircraft irrevocably changed the traditional pattern.⁹⁴⁾

Today, instead of travelling for weeks, goods and passengers can be moved at far less expense in a few days, and sometimes hours. The increasing range of the stages of travel has made motorized travel much more independent of the localized services which were vital for caravan traffic. No less revolutionary has been the introduction of air travel, both for goods and especially passengers. S.I. Hills gives an amusing description of the caravan travel before the introduction of motor travel. "The isolation and lack of effective control created a time honored extortion racket . . . any caravan large or small, wishing to travel there had to buy protection from nomadic tribes roaming the desert, otherwise these same tribes would raid the caravan. No purpose, however holy, would save the traveller from these raids. Until the 19th century the annual pilgrim caravans to the holy city of Mecca and Medina were often raided by nomads of the same Moslem faith as the pilgrims, who looted their goods and often sold the pilgrims themselves into slavery.

Nomads considered raids and robbery as part of their normal life, a perfectly proper and fitting activity, and protection money was considered a regular and legal source of income." 95) Railroads, motor cars and airplanes have all replaced the camel caravan, making its beast of burden obsolete, and the camel nomad obsolescent. The camel nomad has attempted some modifications in the light of these factors. Camels are being bred no longer mainly for baggage transport, but also for meat. Carlton Coon claims that although the market for camel as beast of burden has fallen, the demand for meat has increased, with the rise in the standard of living of the settled people. The Rwalas for example are now raising far more camels than ever before. Today the camel, once "proud ship of the desert", is mainly a source of meat supply. But the adjustment will gradually reduce the value of the camel as a prestige symbol, and further cultural modifications can be expected.

This factor is one of several which has increased the rate at which camel nomads are turning to sheep and goat pastoralism or other activities such as laborers in oil fields, truck drivers, industrial workers (here the change is voluntarily from group 2 to group 1 or else to a field outside of traditional spheres, but not directly to group 2', see figures 3 and 4).

However, the case for sheep and goat pastoralism is somewhat different. In many of the countries of the Middle East, the only natural resource which it possesses in abundance (other than oil) is extensive semi-arid land. These countries could export considerably more trade commodities such as meat, hair, wool and hides. However the low level of animal production per unit of land (caused by inadequate forage, poor local management, disadvantages of aridity, extremes in temperature, parasitism, and disease) leaves much room for future development and expansion, should central authorities decide to tap its economic potential. 97) In many areas, sheep and goat pastoral nomadism is the only fully rational and expedient form of land utilization. The external factors which diminished the importance of camel nomadism, have not affected sheep and goat pastoralism to a great extent. The increase in the market for camel meat, as reported by Coon, is paralleled and

superceded by the expanded market for sheep and goat meat. This increased demand as well as the vagaries of climate lead to cyclical alteration of prosperity and decimation (overstocking and overgrazing leading to animal epidemics and stock starvation).

At the present time, too many government projects have diverted their attention toward settling these nomads. W.B. Fisher, in enumerating cases where nomadism represents the only possible utilization of limited geographical opportunities states that this limited means of utilization does "not seem to be fully appreciated by some governments of states in which pastoral nomadism exists. The governments tend to regard the nomadic peoples as an inferior community to be civilized as quickly as possible by the imposition of a different way of life, usually agriculture."⁹⁸ However, the limits of increased agricultural output in the Middle East must be carefully considered.

Let us examine therefore the problems of dry farming briefly in the Middle East. The antiquity of rain farming or dry farming is well established in the Middle East, through trial and error procedures all aimed at producing the maximal amount of dry vegetable matter in the shortest possible growing season, with the minimum quantity of water derived from rain showers or conserved in the soil moisture. Nevertheless, whatever the techniques and whatever the crops, dry farming cannot be successful in the truly arid lands and the bulk of effective dry farming takes place in the semi-arid lands and more especially on the arid land margin zone. Even under the most favorable conditions, dry farming is necessarily an extensive type of cultivation which in general does not warrant or permit, for reasons of cost, the application of manures and artificial fertilizers since the amount of available soil moisture cannot sustain the increased vegetable growth. Yields are low and to produce harvest comparable with the humid lands much larger areas must be cropped.

Although perennial irrigation has undoubtedly had a beneficial effect on the economies of the countries of the dry lands and has permitted increased population and standards of living to levels well above those which could be achieved by dry farming or seasonal irrigation,

it has also created environmental problems in some areas reducing the area of land formerly under cultivation. If water can make the desert bloom it can also sterilize the land as effectively as does wind erosion under poor techniques of dry farming. The manipulation of the landscape in areas of perennial irrigation have led to many problems. With the increasingly high standards of technology there has been a tendency to ignore the fundamental principles of conforming with the environmental opportunities. It is now being realized that the almost universal perennial irrigation systems expressed in huge dams and major canals are wrong in principle, since they lead to silting, high rates of evaporation, and loss of water. The water is wasted, leading to major land use problems and in turn to problems in public health. One is almost forced to conclude that the "qanats" of the Middle East offer the best of both worlds, with underground storage fed by seasonal and perennial run-off. The most fruitful forms of perennial irrigation must, in the future, be more carefully devised to fit in with, rather than be built on to, the physical environment.⁹⁹⁾ Clearly there is a physical limit to convertibility of pastoral grazing lands into agricultural plots.

Attention is not often enough directed at less dramatic solutions. For example, planned improvement of domestic animals, considering also the extent to which the low productivity is due to the environment the animals and management have created, could greatly increase their contribution to the nations' economies.

Yet modern methods of animal husbandry in a pastoral environment (strategy and tactics of management designed to ensure the welfare, efficient reproduction and rearing, the optimum productivity of animals in balance with the ecosystem) may be difficult to incorporate into the thinking and practices of the pastoral nomads. The success of any program which may be planned will be largely influenced by the extent to which the benefits they provide can be fitted to the community's requirements and on the way in which any new methods or findings of research can be assimilated into the practices of the sheep and goat pastoral nomads.

b. Political

Previously we have seen that the pivotal position in the whole tribal organization is the sheikh. He is the central, autocratic leader of the tribe and traditionally granted a vast and not clearly delimited field of privilege and command, power emanating from him, rather than delegated to him by his subjects. His position is generally hereditary with specific families, and he is generally wealthier, largeness of tent, conspicuous consumption and hospitality being contingent on his status. The absence of specialized political institutions among the tribal society (such as parties, governing offices, courts, and police) place political functions upon more general agencies, generally the sheikhdom. The fields in which the sheikh regularly exercises authority are:

1. allotting pastures and co-ordinating the migration of the tribe,
2. settling disputes that are brought to him,
3. representing the tribe or any of its members in politically important dealings with sedentary peoples or central authorities.

The first two functions of the sheikh are internally directed. The co-ordination of tribal migration, is dependent upon certain aspects of the physical environment. The more rugged a terrain or the more complex the migration pattern, the more formal is the administrative apparatus at the sheikh's disposal. This can in some cases lead to extreme centralization as a response to some unusual features. For example in areas where migration must be carefully organized as in areas of vertical migration where difficulty can be found in getting through certain passes between summer and winter pasture, then a strong centralization of the chieftaincy will develop in order to assign routes and orders of march (examples include the Bakhtiyari confederacy and the Ait Altas).¹⁰⁰⁾

In addition the infringement of tribal lands into different nation states have created numerous problems in terms of migratory habits. At the division of the Ottoman Empire into numerous mandates and territories, each governed by a different system, no consideration was taken of the tribal lands which often lay across several international boundaries.¹⁰¹⁾

For example between the modern states of Iraq and Syria, numerous international disputes have been caused by the fact that the traditional tribal lands of the Shammar, as well as the Anza, cross this boundary. In some cases central authorities' attempts to control the movement of these tribes lead to international disputes when tribes cross the national boundaries in refuge. In other cases where central authority is strong and administrative control is good, the pastoral nomads are unable to cross national boundaries, and are cut off from parts of their tribal lands which lie across the national boundaries. Recently agreements between governments have been concluded whereby nomads in effect temporarily assume the nationality of the country in which they find themselves.¹⁰²⁾

The second function, settling of disputes, is generally settled informally, law being government by custom and compromise, and regulated by diffuse sanctions. Only when disputes cannot be settled informally is recourse made to the sheikh, and "non-codified" tribal court systems.

Punishment is retributive and equalitarian. Its aim is to inflict upon the offender the same damage he inflicted on the victim. Its main function seems to be to compensate the victim through satisfying his desire for revenge or through awarding him blood money. Such an approach to punishment is in part merely the result of the pastoral nomadic society's isolation from the application of modern psychology and humanitarian ideas to community action.¹⁰³⁾

The third function however has now become the most important function - representing the tribe in its external relations with the central authorities,ⁱⁿ collecting government taxes, and in conflicts with sedentary communities. The sheikh is advised by a council of tribal elders (majlis) but its decisions are not formal and even implementation depends on the sheikh's influence. He is no more than a first of equals.¹⁰⁴⁾

According to F. Barth, this touches on a very fundamental problem in the organization of societies composed of distinct groups in close interdependence in some fields of social life. Where persons belonging

to such different parts of a plural society meet, there must be mechanisms mediating the relationship between them - within the limited situation of their interaction they must be "comparable" in some framework.¹⁰⁵⁾ Usually this situation is the market place, where people meet as buyers and sellers, producers and consumers, and are equally subject to the "terms of trade" (governed by supply and demand in a monetary exchange system¹⁰⁶⁾). When relations between tribesmen and others are of judicial nature there is a greater problem of equivalence and comparability. Pastoral nomadism affects the position of the nomad and limits his range of action in very determinate ways which are very different from restrictions implied by agriculture. As the pastoral nomad must move for the sake of his herd, and the agriculturalist must remain stationary, contact between the two cannot be maintained for long. Between the nomad and ^{the} sedentary there is no mechanism on the local level for the regulation of social relations by other means than by violence. A workable mechanism can be achieved by channeling such conflicts through administrative superstructures which bridge this difference by transforming this interest and the social units concerned to a point where they become comparable and thus able to communicate.¹⁰⁷⁾

This is the primary factor behind the development of the institution of centralized chieftainship. Whereas the tribesman (from the sedentary point of view) is elusive and irresponsible, the sheikh of the tribe is a known and responsible entity. It is in his interest to maintain stable and peaceful relations with the centers of power in sedentary society, and while the common tribesman's relations with the sedentary society are largely passing and unstable, his becomes continuous and permanent to a point where he becomes co-terminous with the land owning elite of sedentary society - though the sheikh's influence derives largely from his "de facto" power as leader of a powerful tribe, he becomes acceptable as a person and equal of the sedentary society. Thus the development of central chieftainship is a culturally adapted mechanism whereby the nomad's interests vis-à-vis the often formidable and confusing organizations that structure parts of his environment are mediated. Yet there remains fundamental disagreement

between the government and the tribes on questions of legal autonomy, and tribal law over matters as blood revenge or fasl payment, the ghazw, the khuwa.

A sheikh achieves his position of authority by the same means as he maintains it: by its effective and continuous exercise. Since in these functions he is independent of any formalized administrative machinery, his authority is not very closely delimited in the tribe, but can be extended to a variety of fields. At times, one sheikh is able to extend his sphere of control and encroach on or even usurp the authority of another. The effects of this process of encroachment and usurpation of authority by one sheikh over the subjects of another are further magnified by the response it calls forth in the nomad population at large. Sub-tribes or camping units seek out the stronger sheikh and submit to him; from him they obtain better protection and by him their interests are better safeguarded.¹⁰⁸⁾ Any imbalance between tribes in the effectiveness of centralized authority, stimulates an extension of the stronger center's claim to authority, and a voluntary flow of commoners from the weaker to the stronger center. This process is furthered by the very segmentary lineage structure peculiar to the tribe, which accommodates fission and fusion of its segments. For example a minor lineage sheikh within a section, dissatisfied with the section sheikh's treatment of him in the distribution of largess or collection of tax may remove his kin group from the section temporarily (this fissioning has been emphasized as a major trait of nomadic pastoral social processes). Even after a critical event as murder, the revenge unit or khamasa of the murder may split apart from the section and go into refuge with another tribe until the blood price can be arranged. Once settled these kinsmen are always welcome back.¹⁰⁹⁾ The variability of desert grazing conditions, however, demand flexibility in social arrangements; hence fissioning serves as a means of meeting threatening conditions, and a means whereby centralized chieftaincy is strengthened.

This type of institution develops as the pastoral nomads begin to have greater contact with large sedentary populations entirely unconnected to the tribal organization. The tribal communities, by accepting

such a rise of leadership can obtain substantial benefits. But since they lack strong leaders within (the camping units or sub-tribes) their communities, they lack the mechanism for delimiting and containing the powers which they had earlier conveyed to leaders on higher levels of tribal organization; thus they become subjects of the sheikh on terms of autocratic dominance/submission.

Previously we have said that the segmentary model is the tribesman's conception of their social organization. Structurally "equal segments" of this system were able to adjust any developing inequalities under the flexible conditions of nomadic life. Yet external factors have, however, played a definitive role in the emergence of a dominant lineage group, with proportionally greater control of resources, and ultimately greater power within the tribal group than any other segment. Some observers have commented on the practice of central authorities to register disproportionately large amounts of land in the names of sheikhs, transforming the "tribe from a democratic institution where wealth was widely shared and decisions consensually based, into a feudal dictatorship in which the sheikh is absolute ruler and tribesmen mere serfs." 110)

As in any delicately balanced system, growth in one sector triggers a reaction or response in another. The processes of transitions between group 1 and group 2 (see figure 2) is not new. Throughout the history of the Arabs there have been many cases in which nomad pastoralists served as a force by whose aid new kingdoms were established or conquered. The Maqqaddima of the 14th century historian, Ibn Khaldun, analyzes the cyclical nature of this process. Drought or new forces which arose in the desert, have at times, driven migratory tribes to the borders of settled regions. For the past 150 years, nomadic pastoral society, has been in a continuous state of decline. This decline has been and is a direct response to the establishment of orderly and stable central authority or government. It has been an authority which determined to assume protection of agricultural settlements and thereby prevented the pastoral nomads from collecting the "khuwa" or tribute, as it needed the funds itself in the form of taxes. Thus many tribes which moved along the edge of the settled districts were in this way forced to surrender to the central authorities and eventually to settle as an important source of livelihood was lost.

There is a direct relationship between the extent of power of central authority and the range of pastoral nomadism; as central authority increases and becomes stronger, certain forms of pastoral nomadism weaken and transform themselves. This was probably the case of the sedentary Shabana tribesmen in south Iraq, who assert that they came originally from the Nejd in the 18th century, claiming descent from the camel pastoralist tribes of the Arabian and Syrian Desert such as the Shammar. The Shabana therefore appear to be the result of the transformation which occurred as the ancestors of the present day tribesmen switched from pastoral nomadism of desert life to a more sedentary existence, in response to the development and growth of the central authority.¹¹¹⁾ Yet this settlement is not always permanent. In the past, weak rule in central authority or a breakdown in their power often caused a return to nomadism. One such example occurred in the 1890s in Jordan, where "a lack of security lead the Huwaytat tribe of Jordan to go back to complete nomadism after a trial period of agriculture."¹¹²⁾

The considerable degree to which external political factors - as central authority - influences pastoral nomadism is well expressed by Forde. "If a central authority over a wide region can guarantee security to villagers and townsmen, the herdsmen of goat and sheep re-occupy deserted oases, build houses, and hamlets and are transformed into settled farmers. They in turn entrust their livestock to pastoral nomads who ceasing camel raising in the inner desert (and its concomitant dependence on certain adaptive features such as raiding and the "khuwa" which are difficult to undertake under strong central authority), are often transformed into drovers of sheep and goat. But if there is no strong government in the settled country, the cultivators of the territories exposed to the attacks of raiders often abandon their villages for moveable tents and come to depend partly or entirely on their flocks."¹¹³⁾

It can be seen therefore that as a general external factor, central authority has an inhibitive effect on the phenomena of pastoral nomadism. More specifically it can be seen that certain administrative policies of central authorities (whatever the political, social or humanitarian ideas motivating them) have resulted in further adaptations and modifications in pastoral nomadic society's life mode.

c. Administrative

First the effect of land registration and land reform policy will be dealt with. In general nomads keep to lands and wadis, wells and springs and oasis which they claim by force of arms, and as they are willing to defend their claims, there are few who cared to contest them in the past. Tribal boundaries are often the subject of disputes and this merely expresses the conception that each tribe has its own land, with its water and pasture and should not trespass beyond its limits. It is of course possible that some pastoral nomadic group might ask permission to graze their herds in the lands of another tribe; though such permission is seldom denied, the fact that it must be sought demonstrates the right of each tribe to its land.

The perpetual, or seasonal migrations which pastoral nomads carry out in search of new pastures, and the irregularity of rain, thus raise many problems concerning the ownership of land and the rights to exploit it. These problems involve not only the various tribes, but also central authorities for whereas the tribes claim that they have owned and inherited the land since immemorial times the central authorities insist that all land is the exclusive property of the state with the right of usufruct granted to the people.

There is a certain correlation between the right to exploit land and the distribution of clans or tribal sections, and the inner segmentation of each clan. In spite of the wide dispersal of its members, each clan or tribal section is associated with certain areas of land and has been for generations. Thus despite the distinction between ownership and usufruct, the two are practically welded together; and the people defend the boundaries of the areas to which they have always been associated. The clan whose name is associated with a certain area has the right to exploit it to the exclusion of all other clans.¹¹⁴⁾

It is important to note that land is held in common. The question of individual or private ownership of particular parts of the tribal land does not arise. The only right an individual has is the use of land in accordance to the tribal customs or as the tribal authority directs. The internal economy and the administration of the land rests with the tribal

authority alone. This type of organization has necessitated modifications in the tribal system when land registration was introduced by central authorities. For example in 1916, Syria initiated land registration, allowing individuals to claim ownership of any specific area of land on the condition that they could prove that it had been cultivated for ten successive years. It may be significant that two main tribal groups of the Jazira, the Shammar and the Jeboor claim ownership of more than two million donems each. Grazing grounds are similarly distributed among the tribal groups according to traditional and well-established rules, (that each tribal group actually gets enough pasture for its animals). Pasture lands are not subject to dispute among the various sub-tribes except under exceptional hardships. Just how the grazing land is registered in the name of the Shammar and Jeboor is unclear. Yet in essence, a confusion remains between ownership and usufruct rights, for grazing lands are usually regarded by the peoples as tribal territory. Lands under the occupation of each tribe belong to that tribe as a whole, which indicates communal or joint ownership. No part of such lands can be disposed of, by anyone individual as he does not personally carry any property rights for such an action. With this traditional system in mind, it is clear that tribal groups have made modifications in their social organization in order to accommodate the pressures of central authorities to register land - a concept previously alien to their social system.

As the pastoral nomadic social structure defined the tribal land as belonging collectively to the whole tribe, with subunits utilizing various parts at different times, the introduction of land registration by central authorities introduced many adaptations and alterations within the tribal social system. Large stretches of land came into the hands of sheikhs in the Fertile Crescent for example. Their economic standing, and their closer contact with settled and urban populations, enabled them to register much more tribal land in their names. Among tribes which settled in the 19th and early 20th centuries, the ex-sheikhs became large land owners while the tribal members were scattered among the fellah tenants as laborers. This is clearly the case among the

Shabana and the El-Shatti of South Iraq.¹¹⁵⁾ In Egypt, rulers granted the sheikhs large stretches of uncultivated land in order to bring such land into agricultural use and speed up colonization of the tribe. Such settlements generally brought great wealth to the sheikhs who gradually moved to towns where they entered high ranks of urban society and became identified with the vested interests of that society while tribal connections weakened.¹¹⁶⁾ Yet this weakening of the tribal connections has not in general been the rule. Often the sheikh, finding himself with a greater extension of power is able to increase the solidarity of the tribe, and often thus convert his prestige, authority, and increased wealth into national political power. This is especially true in Iraq, where of 135 members of parliament in the 1960s, 66 were ex-sheikhs.

The pressure of central authorities to register land has resulted in an increase in the wealth of the sheikh who either uses his power within the tribe, or turns it externally toward the national political system.

Other administrative and related policies of central authorities have had varying degrees of stress on the pastoral nomadic society.

First, in general, the relative increase of security as a result of the activities of the central authorities has been followed by changes in the economy from subsistence to cash crop agriculture within the country. This has in turn triggered the decline in barter transactions, and placed an increasing importance in cash money as a method of economic transactions. This had lead many pastoral nomadic groups to search seasonally, at least, for sources of cash and money wages. Large numbers of them (especially the younger generation) engage in whatever seasonal jobs are available such as road construction. Work for the oil companies is another source of cash, but in most cases it is only available to those near centers of operations, as was the case with the Shammar tribes in connection with the Iraqi Petroleum Company of Iraq. A further example is given by Akkad in Saudi Arabia, who maintains that the discovery of oil has created great economic expansion with increased job opportunities in urban centers. He maintains that the nomads migrate to these centers offering the needed labor force for the growing oil industry, for the

implementation of various construction plans, and for growing commercial and government activities especially the army. The Arab Legion of Jordan depends largely on the pastoral nomads rather than on the town dwellers and among the bigger tribes, there are about 1,000 families receiving some financial income from the salaries of the members of the tribe employed in the army.

Although central authorities or government in the Middle East assert that they are striving for social and economic development of their respective countries, there have been few policies directed to the pastoral nomads immediately concerned with the social or economic conditions of their society. In general any conscious direction has been at "sedentarization" of the tribe.

Only a few projects endeavor to develop grazing potential rather than agriculture, when dealing with the question of sedentarization. The largest such scheme is the Ras el Hikma project in Egypt. The logic of the project is derived from A. Toynbee's theory of the growing desiccation as a principle factor in the development of pastoral nomadism. The theory is that the excessive misuse of pasture plants have caused aridity and consequently obliged the people to adopt a nomadic type of life in search of pasture for their animals. Therefore if pasture lands could be developed and grazing land practices organized, it would be easy to bring the herders back to a form of sedentary life in which they could practise animal husbandry. It is believed that the long term result of this project will be both an increase in livestock production and a greater interest in the land and in intensive agriculture. 118)

Most projects contemplated by the various governments tend to achieve sedentarization by encouraging agriculture, at the expense of animal husbandry; at least they do not give this vital item in the economic life of the nomads due care and consideration. Such policy may in the end be harmful to animal production and may have deleterious effects on the animal resources. The effect may be more obvious in a country like Egypt where animal resources are relatively meager and thousands of herds of animal must be imported each year.

It has always been argued that nomadism represents a real obstacle to all efforts designed to extend social services to the inhabitants of the desert. Their perpetual movement over large areas prevent the introduction of effective services in the field of welfare, education, hygiene and even justice. Thus it is thought that sedentarization will allow the authorities concerned to provide the peoples of the desert with such services especially education and medical care. However, let us examine a few existing programs directly concerned with the social, economic or welfare conditions of the tribe.

Perhaps the most well-known program is the Hijra scheme in Saudi Arabia, which was primarily influenced by the religious movement of the Wahabis in Saudi Arabia. According to Awad, the Hijra was unique throughout the Middle East, both, because it was entirely a native inspiration, and because its aim was to transform the lax religious practices of the pastoral nomads into strict reformist observances. The result of this movement has been that there are now over 200 such Hijras (oasis where permanent dwellings have been built to accommodate nomads willing to engage in agriculture), and many tribes like the Tameen have become completely sedentary. But as to whether these pastoral nomadic tribesmen have become more spiritual or whether their social and economic conditions have improved is subject to question.¹¹⁹⁾

The Syrian experiment was to establish primary schools at the more important centers in which nomadic groups usually cluster for longer periods and to recruit pupils from these clans. Education, food and lodging were offered. Five schools were established. The pupils were recruited coercively and much resistance was and is still displayed by some of the tribal groups especially the Rwala.¹²⁰⁾

Services in the field of public hygiene have not been extended to the inhabitants of the desert. The explanation of the central authorities has been that the dispersal of the nomadic populations and the lack of adequate and quick means of transportation make it extremely difficult to provide these populations with the necessary public hygienic services.

But these social services in the fields of welfare, education and public hygiene are not yet fully available to the settled populations. It appears somewhat meaningless therefore to offer services not yet fully existent as an excuse or inducement for settlement to the pastoral nomadic peoples.

CHAPTER V

CONCLUDING REMARKS

Pastoral nomadism in the Middle East appears as a phenomena some-time during or after the Neolithic era, most probably a direct response to external pressures from stronger civilization. Structurally it has taken several forms as a response to immediate internal, ecological and external factors. The basic or original pattern of pastoral nomadism appears to have been sheep and goat raising in the semi-arid lands. The pressure of a stronger civilization appears to have caused certain sectors of this group (group 1) to move out into more remote or isolated areas either desert or mountain (group 2), and in accordance with the Principle of Stabilization, make the necessary cultural adaptations and human ecological modifications without changing the basic social system. This resulted in the case of those who retreated to desert areas in an adaption in terms of the animals that could survive in the new environment - the camel raising. In the case of those who retreated to mountainous areas, it resulted in an adaption in terms of the seasonal migration for pasture which were vertically differentiated - vertical migration. Other sectors of this group turned or rather retreated instead to a settled life (group 2') (see figure 1).

Yet groups 1, 2, 2' all have the same basic social organization and structure, the Arab tribal organization. One essential characteristic of these three groups being that their numbers are distinguished as belonging to a specific group and not to a specific place, village, or town. Each of these groups is part of the simple patrilineal, segmentary Arab tribal society. Its plasticity, its capability for fission and fusion, its lack of bounded and stable descent groups has fundamentally contributed to its enormous persistence in time. Arab tribal society has maintained itself for centuries despite the physical and social environment. Its inherent capacity of adaption, and modification has allowed it to come to terms with very different pressures. Its fluidity and flexibility has contributed to what appears as a continuous and never ending process of movement within that sphere from group 1 to 2 or 2' and vice

versa in direct response to immediate internal, ecological and/or external pressures. As groups move from one point to another, certain adaptations and modifications are made in response to their new "total environment". There is a form of continuity and stability in this particular pattern of movement (see figure 2).

However, when the pattern of movement is forced by strong external pressures (especially central authorities) into a different pattern from that in the figure 2, into a movement from group 2 across to group 2', the resultant form is not always of long stability, and may return to its original form or else be destroyed in the process (see figure 3). One historical example is in Jordan which has been given before. The case of the Basseri in South Persia may be considered also. "During the enforced settlement in the reign of Reza Shah, only a small fraction of the Basseri were able to continue their nomadic habit ... on Reza Shah's abdication in 1941 migratory life was resumed by most of the tribesmen. The sections and camping groups of the tribe experienced a considerable period of revival".¹²¹⁾ A classical example of complete destruction of a way of life, and much human suffering and loss in animal wealth due to enforced sedentarization is that of the Kazakh nomads in the 1930's where the loss in terms of capital wealth could be measured by the drastic loss in animal stock, from 7 million to 1.6 million.¹²²⁾

For the past 150 years, pastoral nomadism has been in a state of decline. Camel pastoral nomads are gradually shifting to sheep and goat herding as groups or as individuals, or leaving pastoralism altogether, and entering the labor market of the new industries developing in the Middle East. This is in general a response to the present day reality that the market is greatly shrinking, and that a reduction in herd size is greatly desirable. The camel is no longer a caravan animal, but is now raised for meat. The economic reality as well as the abolishment of many adapted institutions of the camel nomadic pastoral society has resulted in a reduction of the numbers of camel raisers, but not in an end to that mode of life.

At the same time some sheep and goat pastoral nomads are gradually shifting to more settled agricultural life modes. These transitions are in part due to the pastoral nomad's natural response to changing internal, ecological and external factors - all closely related, and often effecting more than one aspect of the pastoral nomadic life mode.

The pressures that have arisen in the relationship of the nomads to their physical and social environment do not come mainly from economic sources. That the camel is no longer as useful an animal for trade, and that its market is declining, that often the best pastures have been lost, that traditional barter economy has been replaced with cash economy, do not overcome the most important single reality; that there exists no competing or more effective means of utilizing the semi-arid seasonal pastures on which the nomadic pastoral adaption is based. The major factor and most powerful force arises out of the development of modern central authority and administration which exhibits a greater degree of stability and coercive power than has ever been displayed before in regions where a balance of power between the two forces - pastoral nomads and central authorities - had previously been in a state of precarious balance. When central authority was strong, the pastoral nomadic society was weak and often forced to pay taxes and indemnities and sometimes to settle. At other times, the central authorities became more than usually corrupt, security then became shaky and services would decay, resulting in the growth of pastoral nomads and its concomitant institutions. These cycles have now been entirely disrupted by the general strength and modernization of the central authority and the nation state.

The nomadic communities have not, like the sedentary communities, been able to adapt to and benefit from this particular development. As a result, sedentarization of nomads has often been seen by central authorities as the only satisfactory solution of the nomad problem. The need for improving the living conditions of the pastoral nomads and integrating them into the nation state successfully are cited as the two major factors. Awad in special reference to the countries of the Middle East considers that it is the duty of the governments "to carry

out a policy of settling, either completely or partially the nomad group. Whether promoted by humanitarian, political, or economic strategies or administrative motives, such a course must be adapted and the desired result achieved as quickly as possible." 123)

It seems as though Awad has overlooked certain aspects of the pastoral nomads viewpoint. In general the average standard of living is higher in the nomad camp than in the village or sedentary community. The tendency to settle through impoverishment only tends to increase the size of the politically volatile rural proletariat. The strong economic interdependence which develops between nomad, village and urban dwellers produces a situation of symbiosis where they mutually depend on each other's products and where the whole economy of the area is based on the presence of all the groups. The removal of one such group from such a system can only result in an economic decline for the region. 124)

Capot-Rey during the same symposium on the present state of nomadism, stressed the opposite view of Awad, maintaining that the complete disappearance of nomadism not only would leave human beings without employment but would leave the steppes unused, since they cannot be utilized in any other way. This would mean a definite loss of income and food supplies. 125)

It appears as though the possibilities of modifications and adaptations of pastoral nomadic forms to present day conditions have not been sufficiently considered. This paper has hopefully shown that there is no lack of adaptability and modification among the pastoral nomads. The continuous cycles and processes of settlement in the history of pastoral nomadism shows that individuals are fully able to cope with the re-adjustment required in settling, and the endless varieties and adaptive cultural mechanisms in the forms of pastoral nomadism show their flexibility, will and ability to adapt and modify. Their resistance to sedentarization has been explained quite convincingly by Barth in terms of self interest - few are willing to accept the reduction in standards of living which sedentarization implies except when forced to do so because of economic loss or administrative duress.

The major explication, improving the living conditions, of central authorities, for their desire to sedentarize the pastoral nomad is not entirely convincing. If central authorities mean that in order to extend health, welfare, and medical as well as other social services to the nomads, they must be settled, it may be perhaps more effective to first establish such services to a larger extent among the sedentary populations and later the lure of such services will attract the interests of the pastoral nomads. The expense of the numerous experimental settlement schemes which are by no means self sufficient could very well be funnelled to finance the expansion of national education, public hygiene, medical programs and other welfare services for the entire population.

As to the question of national integration, enforced sedentarization does not necessarily disrupt the relationship between the individual and his tribe. As often is the case, enforced sedentarization results in a strengthening of tribal ties and attachments. Tribal groups which lead completely sedentary life with agriculture as their main occupation are very common throughout the Middle East. In most instances their conversion to sedentary life has been recent, but even where this is not the case, they still continue to maintain their tribal solidarity and refuse to intermarry with earlier settlers and fellahin. A good example is the Hawara of Egypt. Though their political power is a thing of the past, they still maintain their tribal cohesion and refuse to give their daughters in marriage even to wealthy fellahin. This "reality" leads Awad to conclude that the problem of merging tribal and non-tribal groups may be somewhat different from that of converting the nomads to sedentary life and that local tribal solidarity is a handicap in the development of a national spirit and outlook.¹²⁶⁾

The transfer of loyalties from the pastoral nomadic traditional system to the national system cannot be forced. But administrative activity can promote integrative mechanisms such as helping in the economic effectiveness of pastoralism (improvement of livestock and pastures) supervising and governing the rights of all citizens in exchange, security, land and justice. These activities can prove more effective than an imposed political integration. Furthermore if central authorities will accept pastoral nomadism as a specialized economic pursuit within a wider economic and social system, then the transformations and adaption of tribal institutions to their immediate environment may very well take the form of coordinating or bargaining organizations for the pastoral nomadic herders (see figure 4).

Footnotes

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- 105) Barth, "Nomadism in the Mountains and Plateaus of the Southwest Asia", UNESCO, 1962, pp.344-347.
- 106) Furnival, 1944, p.98.
- 107) Barth, 1965, p.78.
- 108) Forde, p.321.
- 109) Musil, pp.489-493.
- 110) D. Warriner, Land Reform in the Middle East, 1957, pp.55-70.
- 111) Fernea, p.37.
- 112) Baer, pp.119-137.
- 113) Forde, p.310
- 114) Panel of Consultants, ILO, p.38.
- 115) Fernea, p.12.
- 116) Baer, pp.119-137.
- 117) Yacoub, UNESOB, p.44.
- 118) Abou Zeid, "The Sedentarization of Nomads in the Western Desert of Egypt", 1959, pp.550-559.
- 119) Awad, "Settlement of Nomadic and Semi-Nomadic Groups in the Middle East, International Social Science Journal, 1959, p.38.
- 120) Yacoub, UNESOB, p.37.
- 121) Barth, 1965, p.3.
- 122) Monteil, "The Evolution and Settling of Nomads in the Sahara", International Social Science Journal, 1959, pp.572-585.
- 123) Awad, 1962, p.325.
- 124) Barth, 1962, p.353.
- 125) Capot-Rey, "The Present State of Nomadism", UNESCO, 1962, pp.301-310.
- 126) Awad, 1959, pp.25-56.

APPENDIX I

PRESENT PASTORAL NOMADIC POPULATION IN THE MIDDLE EAST

Saudi Arabia

Population of Saudi Arabia is about 6 million, distributed over more than 1 million square miles (Europa Publication, 1960-69). Vast majority of the population (80%) is distributed among the many tribes numbering about 100 and differing greatly in size and in form of pastoral nomadism. Estimates of the camel and goat and sheep nomads in Saudi Arabia vary. Awad (1962, p.326) places the population at not more than 250,000 whereas Mathews and Bashir (1969, p.3) places the population at about 1,000,000. It is estimated that about 14,666,650 sheep and goat plus 10,008,339 camels are owned by the pastoral nomads of Saudi Arabia. This relatively huge animal stock is important for the future development of the kingdom (and is partially responsible for the great care with which the Saudi government is dealing with the "nomadic problem").

Iraq

The population of Iraq number 8.4 million (Europa Publication 1960-69) and can be divided into 1) camel, goat and sheep pastoral nomads; 2) sedentary tribal groups; 3) peasants; 4) city dwellers. The country's nomadic population is nearly 400,000. One source ('Oraim 1965, p.23) places Arab tribal groups at 238,932 and Kurdish tribal segments at 32,902. The interesting features of the population of Iraq however is that more than half its population is made up of tribal groups. At present they are mostly sedentary, but that is a recent phenomena associated with pressure from central authorities. Awad divides the pastoral nomadic segments of the population into five tribal groups, most of which have branches in Arabia or Syria. They are: the Shammar (also found in Syria and Arabia); the Sinjara in north-western Iraq and in the Nejd; the Zawba most east of the Euphrates; the Abda, mostly west of the Euphrates. The animal wealth owned by the nomadic tribal groups in Iraq is estimated at about 9,700,000 sheep and goat and 200,000 camels (Awad, 1962).

Syria

The population is estimated at between 4.6 and 5.9 million. The tribal segments are well represented here, being classified as camel pastoral tribes, sheep and goat pastoralist and settled tribal groups. According to Tae'i (1965, p.3) the number of camel pastoral nomads was about 200,000 while the sheep and goat pastoral nomads was 150,000. The camel raising nomadic tribes or "Jammaleh" number presently about eight tribes.

- a. The Ruwala and Hassana of the Syrian Desert,
- b. The Butainat and 'Abdah of Todmur neighborhood,
- c. The Fad'an Walad and Fad'an Khorsah in the desert bordering the Euphrates,
- d. The Shammar and the Deiz-ez-Zur neighborhood.

The goat and sheep raisers, the "Ghannameh", have increased greatly in size due to pressures exerted on the camel nomads, and to the relative high demand for sheep products relative to camel and their products. The Jezirah area to the north, once the home of the camel-nomad, is now the principle granary of Syria, due to government pacification of the area and schemes to convert the camel raising nomads into sheep and goat raisers and agriculturalists (the Shammar are a good example). In Syria, whole areas in the Eastern and North-eastern districts are designated as "Badia", areas in which the pastoral nomads can enjoy legal privileges (i.e. carrying arms). Once across the boundary, he must obtain special permits for his guns, and submit in all other respects to the exigencies of a settled sedentary life. The Badia Authority controls the Badia with guard stations but is also available for assistance and rendering medical and other services. Available statistics show Syria possesses 100,000 camels, 4,700,000 sheep and 2,600,000 goats.

Jordan

The population is little over 2 million (Europa Publication 1960-69). One F.A.O. report (1965, p.55) places the pastoral nomadic segment of the population at 80,000 (4%) while the Arab League (1965, p.112) places the population at 120,000 (7%). The Badia of Jordan consists of the area east of the railway line starting at Dirah, Syria and ending at Ras-al-nagah.

This area is divided into north, central and southern parts for administrative purposes. The herds in this region are mainly camel although a few sheep and goats may be found. The tribal groups can be divided into camel raisers (Ahl-Alabal), mainly Howaitat and Bani Sakhr; sheep raisers (Ahl-Alghanam), occupying areas around the Jahr, Bayer, Asraq and Ghussein oases; and settled tribes (Ashair-al-mutahadhirah) and village settlers (mainly Al-Adwan, Bani Hassan and Sardiyeh).

Kuwait

In 1965 the population was estimated at 467,339 (Europa Publication 1960-69), out of which 17,747 lived in the Badia and were classified as camel raisers; while 25,573 were classified as sheep and goat raisers. As in Iraq and Saudi Arabia, discovery of oil in Kuwait has contributed greatly to the large scale shift from camel to sheep and goat raising and even to wage labor in oil industry.

Source: Preliminary report to the UNESOB, 1970, Salah Jacoub "Sedentarization and Settlement of the Nomadic Populations".

APPENDIX II

MEASURES OF CENTRAL AUTHORITIES

General

Political adjustments on the division of the Ottoman Empire after World War I and particularly the establishment of frontiers between independent countries, was an important factor which handicapped the pastoral nomads especially in the northern parts of the Arabian Peninsula. These frontiers and the treaties and agreements between the new countries greatly limited the pastoral nomads freedom of movement; the "watan" was curtailed and some of the tribes were cut off from their traditional pasture lands (Toynbee, 1927, pp.324-46).

Modern rule also involved land registration by modern methods. In the Fertile Crescent countries, this began in the 1930's. Many areas which had previously been no-man's lands (mawat or masha) became private property.

Saudi Arabia

The more specific measures involving the pastoral nomads are:

1. Direct provisions of out right gifts
2. Education and health measures
 - a. monthly financial grants to families with children in state boarding schools (Helaissi, 1959, p.534)
 - b. Hospitals, clinics (some mobile), free medical care
 - c. Drilling and artesian wells, 44 in 1961
3. Agriculture
 - a. mechanized machinery, low rental, and financial aid
 - b. agricultural advisors and free veterinary service
4. Grazing and pasture land - projects to improve traditional animal husbandry
5. Settlement schemes
 - a. Wadi Sirhan in Shararat and Anza region
 - b. Tabouk Basin settlement
 - c. Harad Settlement

Syria

Following independence, a definite policy to settle all nomads was included in the constitution of 1950, as article 158. The early measures were largely limited to providing education to the pastoral nomadic children. Six boarding schools were established, and artesian wells were drilled. More recent measures and trends (accentuated by the creation of Directorate of Animal wealth to substitute for the former General director of Tribes) include:

1. land reform of 1958, redistribution of land among landless peasants, small land owners and tribal groups
2. Improvement of livestock and increasing their productivity, various livestock projects and breeding stations established including:
 - a. Jub-Ramleh cattle station
 - b. Deir-ez-Zour cattle station
 - c. Hamayoneh cattle station
 - d. Kityan cattle station
3. technical assistance through the U.N. World Food Program to distribute feed concentrates.

Iraq

There is no well defined policy in Iraq concerning the pastoral nomads. However, some measures include:

1. distribution of land ownership titles based on the laws of 1932 and 1928 which gave an accurate classification of all lands and laid down rules for transfer
2. Agrarian Reform Law of 1958, limiting ownership of land and resulting in redistribution of land and settlement of many pastoralists in the Jezirah area.
3. provisions for water, 995 wells were drilled by 1965, of which 530 were in the Badia (Al Barazi, 1969, p.159).

Jordan

Recent measures especially in the southern more arid lands include:

1. renovation of old Roman cisterns to store natural percipitation, improvement of desert wells, and drilling of deep water wells.
2. Northern settlement projects as:
 - a. Al-Qrain
 - b. Al-Hasa
 - c. Al-Jafr
 - d. Al-Hussainieh
3. Al-Qrain Development Project - a housing program for ex-soldiers and their families of nomadic origins.

United Arab Republic

Priorities here seem to be somewhat different than in other Middle Eastern countries. The central authorities express a concern first in increasing the national income and to exploit the desert in order to ease the problem of over-population as the basis for their projects. Attempts to develop co-operative desert communities in the North-west coastal zone has shown the difficulty of converting tribal communities into settled agriculturalists. One government advisor has concluded his report by saying that "experience has shown that voluntary and willful co-operation is the most fruitful way to attain such conversion and that every possible service has to be rendered with a view to strengthening the man and land relationship."

Source: Panel of Consultants on Indigenous and Tribal Populations, 1962, International Labor Organizations.

APPENDIX III

ARID LAND COMPOSITION

Syria

Syrian Desert covers 2/3 of the whole area of the country, but only the inner parts of the inland to the east, known as hamad, are really arid and uncultivable desert due to scarcity of rain and sub-surface water. This hamad covers about 20% of the total area inhabited by pastoral nomadic tribal people.

Iraq

About 40% of its 168,000 square miles is arid land known as the southern or northern deserts. Both deserts lie to the south and southwest of the irrigation zone of the Tigris-Euphrates region.

Jordan

More than 86% of its area is arid land, receiving less than 200 mm rainfall per year, which is generally too remote from water even to be irrigated.

Saudi Arabia

It has two major desert areas, the Rub-al-Kali in the south and the Nefud. Most of the land with the exception of a number of centers of settlement distributed in Nejd, Hijaz, and Asir are occupied by pastoral nomadic tribal peoples.

United Arab Republic

The inhabited part of Egypt consists ^{of} about 3.5% of the total area of the country. Its three deserts, the Libyan or Western Desert, Arabian or Eastern Desert, and "Sinia" cover 96.5% of the total area.

Source: Selim, S.M., A Survey of Conditions and Problems of Nomadic and Semi-Nomadic Tribal Populations of Jordan and Iraq, ILO, unpublished.

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