

NOTES AND COMMENTS

NOMADIC PASTORALISM AND AGRICULTURAL MODERNIZATION

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INTRODUCTION

This paper presents a model for the integration of pastoral nomads into nation-states. To this end, two areas of the world in which pastoral nomadism had been predominant within historic times—Central Asia and West Africa—were examined. Security considerations tended to overshadow economic considerations in the formation of state policy toward nomadic peoples in the two areas. However, a broader trend, involving the expansion of the world economic system can also be discerned. This pattern held constant under both capitalistic and socialistic governments.

In recent times, the settlement of pastoral nomads and their integration into national economies has become a hotly debated issue in a number of developing nations. Disasters such as the Sahel drought and famine in the early 1970s have brought world attention on the economic and ecological consequences of nomadism and settlement. Similarly, armed uprisings by nomadic peoples against the governments of Morocco, Ethiopia, the Chad, Iran and Afghanistan have brought the political grievances of nomads to world attention. This paper will compare two attempts by modern nation states to transform the traditional economies of nomadic pastoralist Soviet Central Asia and West Africa. In both cases the development policies pursued by the central government sought to change the traditional power relationship within nomadic society, as well as its economic activities. These policies were a natural outgrowth of attempts by the central governments involved to integrate nomadic peoples into the larger world economy.

Two schools of thought have emerged from the debate over the future of nomadic pastoralism. The first holds the present

tendency toward the sedentization of nomadic peoples to be simply one phase in the cyclical shifts between nomadic and sedentary life styles which have dominated the histories of the world's semi-arid regions (Salzman et al., 1980). The other school believes the tendency toward sedentization to be the result, not of a natural cycle, but rather a massive intervention on the part of central governments in order to obtain this end (Bodley, 1975: 118-120). In short, the degree of contact nomadic peoples ought to have with the nation state is discussed as if the nation state had no class structure, and as if the nomads were unaware of this fact. Further, the debate does not deal adequately with the role of the nomads themselves as state builders in many parts of Eurasia and Africa.

THE ECOLOGICAL SETTING

The geographic and ecological environments of Central Asia and West Africa contrast sharply.

Lying along the middle and upper latitudes, the taiga forests, steppes and deserts of Central Asia tend to be rigidly defined by annual precipitation. V.V. Ponomareva has pointed out that the boundaries between various biomes in the region are a function, not only of the availability of moisture, but also of the leaching effect of ground water on mineral nutrients in the region's soils. Ponomareva has concluded from his studies that the boundary between the steppe and the taiga is a fairly stable one, determined largely by such factors as topography and the availability of mineral nutrients (Ponomareva, 1973:514). M.S. Gilyarov assumes the boundaries of the desert regions of Central Asia to have remained basically stable since Miocene times (Gilyarov, 1979: 678-680).

The boundaries between various biomes in West Africa are believed to be far more unstable than their Central Asian counterparts. Heinrich Schiffers believes the area to have undergone a series of radical climatic shifts causing expansions and contractions of the Sahara Desert over the past two and a half million years. Schiffers postulates that the latest drying trend in the region began about 3,000 B.C. and continues to the present

(Schiffers, 1973:148). A general drying of the Sahara is indicated by the presence of land snail shells and the skeletons of swamp animals in Mesolithic archaeological sites near Khartoum (Fairservis, 1964:82).

In what way does the presence of nomadic peoples influence these two highly diverse environments? This question is hardly easy to answer, and is not the central problem of this paper. Still, an understanding of the interaction between nomads and their environment is necessary to an understanding of the culture and economy of both regions, so a brief review of the factors affecting desertification in both regions is in order.

Schiffers and Fairservis, in works cited above, both assign a major role to overgrazing and deforestation as factors leading to the advance of the Sahara in Africa. McCloud and Bula (1973: 377) have noted the more rapid rate of plant growth which occurs in the tropics requires greater amounts of water to sustain it than that occurring in temperate zones. Evapotranspiration is also, of course, greater in warmer climates. Indeed, V.M. Sveshnikora has pointed out that evapotranspiration does occur at lower rates in Central Asia than in other desert regions of the world (Sveshnikora, 1975:420). K.P. Papov has also pointed out the remarkable ability of some of the region's sierozem soils to retain moisture during periods of dry weather (Papov, 1975: 55-61). The fact that ten inches of rainfall in tropical Africa does not go as far as ten inches of rainfall in temperate Central Asia may have a great deal to do with differences in the rates of desertification in the two areas. As for the human factor in desertification, S.I. Rudenko, in his excavations of 6th and 7th century B.C. nomadic sites, has found little difference in pollen samples from the time of habitation to the present (Rudenko, 1970:6). Studies of cyclical changes in the make-up of the taiga forest by K.K. Dzhansaitov, V.V. Kus'michev, and V.P. Cherkasin would tend to indicate that natural rather than human factors may be responsible for what little variation Rudenko did detect (1978:113-115). Still, Soviet studies of desertification have tended to focus on natural processes as opposed to human factors (Viktarov, Ata'ev and Kalenov, 1973:198-202). It must also be noted that Kahuranga found that tropical savannahs in East

Africa tended to develop a higher percentage of unpalatable and poisonous plants as a result of overgrazing rather than becoming desertified (1979:76).

The two primary factors in defining any biome are temperature and the presence of water. Human adaptation to these two factors differs, of course, from other organisms in that it is largely cultural, not physiological. The culture is, in itself, unique in that it is largely reactive as opposed to active. Other cultures have inhabited the low temperature environments of Central Asia, the semi-arid environments of the African savannahs without turning to the narrow resource base the nomads exploit. It will later be seen that this has formed a key element in the history of relations between nomadic and sedentary peoples in the two regions.

Due to the harsh winters of the region, Central Asian nomads tend to prefer sheep and goats whose foraging abilities are superior to that of other species of livestock. Krader estimates that sheep and goats account for between two-thirds to three-fourths of the livestock owned by the Kazakhs (1962:23). Lattimore has also noted the dependence of Central Asian nomads on their flocks of sheep (Lattimore, 1940:75). The cultivation of fodder crops and their storage as hay was not unknown in Central Asia during pre-colonial times. S.I. Rudenko has inferred from the archaeological record that the practice existed among the peoples in the Altai region in the 6th and 7th centuries B.C., but on a very limited scale (Rudenko, 1970:50,80). Matley has pointed out that the Kazakhs did not practice the making of hay prior to the Russian conquest, however the Turkmens did store hay in connection with their horse-raising industry (Matley, 1967:129). Still, it should be noted that even in the case of the Turkmens, the number of horses raised was considerably less than those raised by the Kazakhs under open range conditions (Krader, 1962:25). The main response to seasonal changes remained migration. As a result of the slower rate of plant growth in temperate areas as well as the tendency of sheep and goats to more thoroughly graze ranges than cattle, the distances covered by Central Asian nomads is frequently greater than their West African counterparts.

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In tropical Africa it is water rather than temperature that is the causative factor in nomadic migrations (Hoper, 1958:18). West African nomads, in other words, tend to move south during the dry season, toward rainier climates. This is quite a different situation from that prevailing in Central Asia. Fulani cattle are prized for their ability to survive dry seasons, and insect pests, rather than cold winters.

The life style produced by pastoral nomadism in both tropical Africa and temperate Asia was highly specialized to its ecology. Further, its ability to consciously alter its ecology was extremely limited. This, in turn, produced highly specialized economies centered around the intensive utilization of animal products. The next section of this paper will deal with the impact of these economies on the policies pursued by nomadic groups in various parts of Africa and Asia.

THE HISTORIC SETTING

Before examining the processes by which the power relationships in nomadic societies were changed through subjugation by outside powers, it will be profitable to review briefly how nomads organized and manipulated the political institutions of their societies. This section of the paper will focus on coercive institutions which can be used to enforce state power, and their relationship to the resource base of the societies.

The ability of pastoral nomads to raise large and fairly effective military forces is well known. Among mounted pastoralists, these forces have traditionally consisted of light cavalry; among pedestrian pastoralists they have consisted of light, highly mobile infantry. The military achievements of pastoralists are remarkable when they are compared with those of contemporaneous settled societies. For example, the army of Byzantine Emperor Belisarius in 534 A.D. was about 25,000—large by Byzantine standards (Bolte and Cole, 1967:447). In a later campaign by the Byzantines against the Persians, the nomadically based Khazar Empire and an ally of the Byzantines supplied 40,000 men (Dunlop, 1967:28). The military achievements of

nomads are even more remarkable when compared with supposedly more advanced societies. For example, the followers of Chingis Khan in the 13th century may have numbered as many as 700,000 (Fuller and Herr, 1967:112). Total Confederate forces raised during the American Civil War by comparison may have numbered as few as 600,000 (Henry and Kreidberg, 1961:57). In American military history, prior to the Civil War, total forces engaged on both sides in major battles rarely exceeded 50,000; however the Mongol division or "touman" consisted of 10,000, with three touman forming an army.

The historic ability of pastoralists to raise large armies seems to be based directly on their ability to provision them. Mair in her study of state formation in Africa, has shown that the Zulu army solved the key problem of provisioning by taking large "royal herds" on their campaigns to provide meat and milk (Mair, 1977:69). Similarly, the large Mongol forces mentioned above were generally followed by large herds of livestock (Fuller and Herr, 1967:112). The Mongols also relied on the horses accompanying their cavalry forces to provide them with milk and blood during long marches (Polo, 1948:87-88). Khazaria again provides an interesting illustration of the connection between pastoral nomadism and military power. During successive Turkic and Hunnic invasions, the Khazars took refuge in the Volga River delta, apparently developing sedentary agriculture. However, with the florescence of their empire, their society again developed a large nomadic component, corresponding closely to the cyclical model of sedentization and nomadization propounded by Salzman. The nomadically based military reserve, when not at war, seems to have engaged in quasi-military activities such as slave raiding (Dunlop, 1967:89-115). It also must be noted that even as late as the American Civil War, beef was delivered to the armies on the hoof (Hart, 1961:101). This occurred in spite of the fact that canning had been perfected almost fifty years earlier during the Napoleonic wars. In this regard, nomadic pastoralists were not deviating from standard military practice down to the mid-19th century; instead their subsistence pattern had only made them much more proficient at it.

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It should not be surprising then, that nomadic empires tended to be co-extensive with the ecological limits of nomadism in both Asia and Africa. Since nomadic migrations in Asia usually covered longer distances than those in Africa, empires built by Asian nomads tended to be, as a rule, larger than their African counterparts. These empires were heavily dependent on the direct extraction of surpluses from their subject peoples to remain economically viable. Trade usually remained in the hands of alien minorities alternately patronized and exploited by the empire builders. It was conquest and not trade that expanded the empire's domains. To quote one scholar:

An empire cannot be conceived as an entrepreneur as can a state in a world economy. For an empire pretends to be the whole. It cannot enrich its economy by draining from other economies, since it is the only economy. . . . One can of course increase the share of the emperor in the distribution of the economy. But this means the state seeks not entrepreneurial profits but increased tribute (Wallerstein, 1974:61).

Evidence in support of this hypothesis can be found in the history of attempts by nomadic conquerors to extend livestock ranges at the expense of sedentary cultivators. In both China and Persia following the Mongol conquests of the 13th century, a large part of the settled population was displaced to create pastures for Mongol stock (Saunders, 1971:128, 142). At first, these actions may seem to have been justified to the conquerors. A small portion of the tribute paying population was sacrificed to make way for the flocks and herds which formed the direct and indirect bases of wealth in the conqueror's society. Yet, while these actions helped to perpetuate the Mongol war machine, they acted against the growth of commerce and other mercantile activity.

Social relations of production in nomadically dominated societies tended to center around familial groupings engaged directly in the care of livestock and the maintenance of the household, or around various forms of unfree labor, usually engaged in occupations of a sedentary nature. Occasionally, as

in the incorporation of slaves into nomadic households as concubines and retainers, a blending of the two types can be seen. The division, however, between basically familial labor in the pastoral sector of the economy and unfree or tributary labor in the sedentary sector permitted a greater specialization of labor while at the same time inhibiting the growth of trade and market relationships. This concept of political-economy is represented in the diagram below:

LIVESTOCK —————> MILITARY —————> SLAVES AND TRIBUTE

We will now need to examine cases in which this feudal system was transformed by outside intervention.

SOVIET CENTRAL ASIA

At the time of Russian colonization in the mid-19th century the territory presently comprising the Soviet Central Asian Republics evidenced a wide variety of pastoral production patterns. These ranged from the fully developed (horizontal nomadism) of the Kasakh to the (vertical patterns of nomadism) practiced by the Kirgriz, to the transhumanat pattern of the Turkmen and Uzbek (Krader, 1962:23-24). Politically, the area was dominated by the Bukharan Emirate, which like many other states in Central Asia, was formed as a result of a long series of conquests carried out by Turkic-speaking nomads following the Mongol Empire's collapse. The Emirate remained, legally at least, intact from the time of the Uzbek conquest in the 16th century until its partition by Soviet authorities in the 1920s. Prior to the Russian conquest, military power in the region seems to have been based largely on cavalry recruited from among the pastoral peoples. While there is no evidence that these forces were exceptionally large, they were apparently highly mobile.

How did this monopoly of power in the hands of pastoralists affect the region's agriculture? First, the settled population was apparently forced in a number of ways—not always involving the direct extraction of products—to accommodate the interests of the pastoralists. Large irrigation systems destroyed

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during the Mongol wars were never rebuilt. Where irrigation was developed, it apparently concentrated on the production of fodder and stover¹ for the livestock of the pastoralists (Matley, 1967:267). This seems to have applied in particular to the highly specialized horse-breeding industry of the Turkmens (Matley, 1967:129, 271). It is interesting in this regard to note that nomadic groups, such as the Kazakhs and Kirgiz, who remained outside the Bukharan state, never developed irrigation agriculture. This again emphasizes how the state among Central Asian nomads functioned primarily as a collector of tribute rather than a promoter of trade.

While the failure to develop irrigation to its full extent may seem to be an oversight on the part of the pastorally oriented ruling class, recent experience with soil salinization in irrigated areas of Central Asia suggest that the desire to extend livestock ranges was not the only reason for the lack of interest in irrigation (Blackburn and Cornish, 1979:149-50).

The second major effect of nomadic access to state power was the sharpening of class divisions within the nomadic community, and between the sedentary and nomadic communities. This is clearly shown by the increasing importance of slavery among Central Asian societies (Allworth, 1967:30-35), in sharp contrast to the institution's earlier unimportance (Rudenko, 1970:214-15).

In their employment of slaves, the Central Asian peoples seem to have conformed closely to the model outlined earlier. Slavery was restricted to subsidiary but important roles such as child care and among the Turkmens, the maintenance of irrigation systems. The acquisition of concubines may also have served an economic function in allowing wealthier individuals to expand their families to keep pace with the demand for labor created by their larger herds. Here we see a peculiar blending of slave and familial labor again.

Some writers, most notably Krader (1979:221-34) have held that class contradictions within Eurasian nomadic society were a major contributing factor in state formation. Whatever the case, the acquisition of non-pastoral means of production by pastoralists has been shown to cause increased social stratification among

the Lurs and the Bakhtyari of Iran (Salzman, 1979:434-35). Lattimore has also shown how the development of sedentary property rights among the Mongols increased the power of the elite to extract surpluses from the pastoral sector of the economy (Lattimore, 1939:91-92). These phenomena seem to have strong parallels among the Uzbeks, Turkmens, and other pastoral peoples clustered around the Bukharan Emirate. The acquisition of rights over sedentary means of production in Bukhara seems to have had a mutually reinforcing effect on the elites holding state power by increasing the power of the elite to extract surpluses from both sectors of the economy (Allworth, 1967:30-35).

The feudal society of Central Asia stood firmly outside the world economy. The Bukharan Emirate itself has been founded at a time when overland caravan trade between Europe and the Far East was declining due to the discovery of the Cape route. We must now examine the transformation of Central Asia's economy to Tsarist and later Soviet policies.

The first effect of Tsarist rule was the rapid dismantling of the feudal land tenure system (Matley, 1967:281). It is interesting to note with regard to this phenomena, that it seems to have occurred in Central Asia much more rapidly than it did in European Russia. Tsarist officials in this case were probably moving much more rapidly against the vanquished feudal elites of Central Asia than against their own powerful and entrenched aristocracy. The change in land tenure was accompanied on a large scale by the cultivation of cotton under share cropping arrangements. In addition, Great Russian and Ukrainian settlers were encouraged to colonize the conquered territories. Together, these moves had the effect of depriving Central Asia's nomadic population of much of its traditional pastures.

The decline in the livestock industry under the Russians caused Central Asia to import an increasing number of livestock from neighboring Iran and Afghanistan (Churchill, 1979:22-23, 280-281).² The social consequences of Tsarist rule can be seen in the 1916 rebellion. The rebels, in most instances, were members of nomadic groups who lost their grazing lands and feudal supremacy under the Russian administration (d'Encausse, 1967:208-210). When the Bolshevik Revolution spread to Central Asia,

it became largely a movement of the European settler population (d'Encausse, 1967:221). As the revolution progressed in Central Asia, the anti-communist Basmachi took root among the region's indigenous Muslim population. Interestingly, irrigation channels were a prime target for Basmachi attacks (Matley, 1967:285).

In analyzing Soviet policy toward the pastoral population of Central Asia, it must be remembered that as in other pastoral societies, livestock constituted a major measure of individual and familial wealth. As a result, livestock was in the peculiar condition of being both the means of production and the functional equivalent of a monetary unit. The Soviet policy of collectivization sought to "demonetize" the nomadically owned livestock. Once stock had become the property of a collective farm under Party supervision, it could no longer be used as a medium of exchange among the pastoralists; collectivization would enhance state security. In theory, the pastoralist would have to accept the fact that their animals were collectively owned capital goods producing meat, milk and fiber for a wider national economy.

The response of the pastoralist of Central Asia was to slaughter their livestock "en masse" rather than accept collectivization. While this may at first seem like a totally irrational act on the part of the pastoral nomads, one must remember that it is something like the case of a miser who might burn a large amount of paper currency because the government had just declared it to be worthless. While these events destroyed—at least temporarily—the livestock industry in Central Asia, they left the way open for the utilization of pasture land for cotton and other cash crops. They also created a large pool of cheap labor to work in collectivized agriculture.

Continued neglect of the livestock industry following collectivization in Central Asia is reflected by a cursory glance at the statistics. Of the five Central Asian Soviet Socialist Republics (S.S.R.'s), three had lower sheep populations in 1941 than in 1916: The Kazakh S.S.R. from 18,364,000 to 8,132,000; the Turkmen S.S.R. from 4,580,000 to 2,596,000; the Kirgriz S.S.R. from 2,544,000 to 2,529,000. Only the Uzbek and Tadzhik

S.S.R.'s showed increases in sheep population during the 1916-1941 period (Krader, 1962:261). And these two republics had the distinction of having the least nomadic populations prior to collectivization. In some areas herds were not fully rebuilt until the 1950s.

From the Soviet point of view, however, the collapse of the Central Asian livestock industry was more than compensated for by the shift to cotton production in the same region. In 1923, raw cotton had accounted for 76 percent of Soviet imports from the U.S.A. and continued to account for over 50 percent of imports originating in America until 1928 (Goldman, 1975: 16). By the 1960s, the U.S.S.R. was producing an average of 9,000,000 bales of cotton annually (Weigmann, 1973:276) and was the world's second largest producer. In 1972, export earnings from cotton were \$216,000,000 (Goldman, 1975:126).

Perhaps one of the greatest ironies of the Soviet experience in Central Asia is that a good deal of the herds were rebuilt with private capital and labor. By 1978, roughly 20 percent of Soviet sheep and goats were privately owned, 19 percent of Soviet wool production was in private hands as, in fact, was about 33 percent of the country's livestock products (Gaivorontsev, 1979: 26). Far from attempting to discourage private ownership of livestock, Soviet authorities were, in fact, subsidizing it (Gaivorontsev, 1979:26).

WEST AFRICA

Before examining "African pastoralism" in detail, we must first realize that we are, in effect, dealing not with a single phenomenon, but with a great many. Baker has pointed out the diverse nature of pastoralism on the African continent (Baker, 1975: 720). It is profitable, therefore, to examine one case of pastoralism from Africa which most closely parallels that of Asia. The Fulani of West Africa have been chosen for this comparison because their horizontal migration pattern, their mounted as opposed to pedestrian techniques of herding, and their history

of state building, all of which resemble those of the Central Asian groups examined above.

While the origins of the pastoral Fulani have been debated by scholars, it is known that they began to penetrate Hausaland-Northern Nigeria and adjoining areas of the neighboring Niger Republic in the 13th century A.D. (Hopen, 1959:7). This penetration was at first peaceful, not unlike that of the Gypsies into medieval Europe. Up to the early 19th century, the sedentary Hausa managed to retain their dominance in the region. By the latter half of the 19th century, however, discontent was apparently spreading throughout Hausaland as a result of population pressure and the increasing exactions of Hausa feudal lords. The result of this discontent was the Fulani Jihad of 1804 which culminated in the victory of the nomadic peoples over the sedentary.

The Jihad, under the dynamic leadership of Sheuh Osman danFodio, has frequently been portrayed as a struggle of Muslim religious fanaticism against the Hausa who are generally portrayed as relapsed pagans. This view of events, however, seems to be disproved by the fact that pagan Fulani and dissident Hausa fought in danFodio's armies (Hogben and Kirk-Green, 1966:121). Again, a struggle between the nomadic and sedentary populations appears. Highly mobile cavalry once more emerges as the dominant military force behind the nomadic conquests, and the flocks and herds of the nomads again provisioned the army, at least during the early stages of the conquest.

It is with the force accommodation of the sedentary population to the nomadic, however, that the most striking parallels between the Central Asian and West African cases emerge. It would seem at first, in a curious way, that the nomadic population was going against its own best ecological interests.

In tropical regions such as West Africa, the activities of man seem to have played a great role in changing the boundaries among rain forest, grassland, and desert biomes. This is particularly well documented in the case of shifting cultivation increasing savannah grassland at the expense of forests. Seavoy (1973:48-52) has documented this process in Kalimantan province of Indonesia where grasslands have expanded at the expense of forests without

a significant change in the region's rainfall. Seavoy holds this model to be readily applicable to many parts of tropical Africa as well. One might expect, therefore, to see a tacit partnership developing between nomadic pastoralists and shifting cultivators on the border between the savannah and the rain forests.³ Under such a hypothetical relationship, the pastoralists would utilize ranges extended by the activities of shifting cultivators. This did not occur in the Fulani Empire. Instead, the southern marches of the Empire were subjected to intensive slave raiding by the Fulani and the depopulation of this zone halted the advance of the savannah (Hogben and Kirk-Green, 1966:122).

It might be asserted that the Fulani were acting in an irrational manner because they were simply unaware of the complex ecology of the region in which they lived. This explanation does not seem plausible, however, in light of the fact that the Fulani are perfectly aware of the effect burning has on local vegetation (Hopen, 1959:17, 39, 151). Here we see a contradiction arising between a pastorally based empire's need for additional livestock range and its need for additional labor.

Before examining the transformation of the traditional Fulani economy, it might be valuable to take up briefly the subject of labor allocation in the pre-colonial period. Delgado, who has noted the key role played by labor inputs in the pastoral economy (1979:1), has also noted that these inputs are most effective when a division of labor is maintained between the sedentary and pastoral sectors of the economy (Delgado, 1979: 124-125). It is not surprising, therefore, to find unfree labor within the Fulani Empire concentrated in the sedentary sector of the economy in the form of so-called "slave villages." These villages were composed of war captives and their descendents, and were usually subject to a specific Fulani group to whom they supplied sedentary products such as grain.

Familial labor remained dominant within the pastoral sector of the traditional economy. Here we must note that pattern of investment which encouraged the expansion of livestock herds. Evidence obtained by Quam (1978:53) suggests the following pattern for investment among East African pastoralists:

LIVESTOCK → LABOR → GRAIN → LIVESTOCK

The first expenditure by the investor is the payment of the so-called "bride price." Following marriage, the labor provided by the wife and their children is used to produce grain which can be exchanged for more livestock. While these data come from East Africa alone, work by Delgado in the Upper Volta tends to confirm the general applicability of the model to West Africa as well (Delgado, 1978). We should also note the presence of concubinage in traditional Fulani society (Stenning, 1959:65, 67, 131, 132, 160). Here again we see a blending of slave and familial labor. In short, the Fulani fit rather well the model of a nomadically based empire outlined earlier, and we shall see, the fate of the Fulani Empire bears some similarities to that of its Central Asian counterparts.

French and British colonial rule in the West African savannah began at the turn of the century, shortly after a widespread rinderpest epidemic and destroyed the cattle herds comprising the economic and military basis of the Fulani Empire (Hopen, 1959:16). Attempts were made by both colonial powers to restrict the economic and political power of the region's nomads. This began with attempts to alter traditional forms of labor relationships through the abolition of slavery. This move was quickly followed by the imposition of the cattle tax or *Jangli*. A form of the *Jangli* had existed in pre-colonial times, but had always been levied in kind rather than in cash, as it was by the colonial authorities. Here, as in the abolition of feudal labor relations, we see a shift by the colonial powers from the extraction of economic surpluses as product to their extraction as commodity.

In northern Nigeria, large European owned ranching operations took advantage of the new tax by purchasing Fulani cattle at the time it was collected. The marketing of cattle at tax time, in fact, became a major economic activity in northern Nigeria under the control of Syrian and African merchants (Stenning, 1959:88, 90, 219).

The abolition of the "slave villages" by the colonial authorities seems to have destroyed the focal points around which the

Fulani transhumance cycle centered; as a result, the Fulani became even more nomadic than in pre-colonial times (Hopen, 1959:49). The response of the British was to create new village settlements for the Fulani under government appointed headmen who were responsible for collecting taxes and maintaining order (Stenning, 1959:88).

These moves against the nomadic population of West Africa, while not as dramatic as those taken in Central Asia, do have certain structural similarities. They were both justified on the grounds of state security as well as the grounds that existing range land could be better utilized for the cultivation of cash crops. They were also justified by the need to suppress an indigenous pre-colonial feudal system—something they did indeed accomplish.

CONCLUSIONS

In examining the history of nomadic pastoralism, one central question stands out: why did some of the most sophisticated military organizations of their time collapse? And why was this collapse so sudden, affecting nomadically based empires in so many disparate parts of the world during such a short span of time? One could easily point to the increasing vulnerability of cavalry forces as the result of changes in military technology during the 19th century. This was particularly true after the introduction of the rifle barrel. Still, cavalry officers in more "advanced" countries had little trouble adapting their forces to so-called "mounted infantry" or "dragoon" tactics.

It is easy to see then that forces broader than the changes in military technology which occurred in the 19th century were at work in the down fall of the nomadic empires. These forces were, first, expansion of the world economy (a process which had been underway since the 16th century), and secondly, the internal nature of the pastoral nomadic economies themselves.

Capitalism has been defined by one author as "an economic mode...based on the fact that the economic factors operate within an arena larger than that which any political entity can

totally control" (Wallerstein, 1974:348). By choosing to ignore the regions beyond which their armies could safely proceed as legitimate regions for competition, the rulers of nomadically based empires conceded these regions to the foreigners who ultimately overran their domain. By not seeing trade as a legitimate means of obtaining power, the nomads also left themselves open to domination by foreign traders.

The second dynamic operating from within was that of the so-called "insurance" concept—discussed by Baker (1975) and Swift (1979). Under this concept, the pastoralist must keep a surplus of livestock in order to guard against potential losses. The "insurance" concept creates a situation which discourages the nomadic pastoralist from participating to any great extent in a market economy while at the same time creating a demand for labor involved directly or indirectly in the maintenance of livestock. It was, in fact, a concept which could exist only where surpluses were extracted as products not obtained in the uneven exchange of commodities. To decide not to risk through trade the vast herds of livestock which had made nomadic conquerors conquerors was simply unacceptable. The failure to take this risk—or perhaps the inability to do so—led to their downfall.

It is therefore fundamentally erroneous to see the present cycle of sedentization as similar to past cycles. Today it is the impersonal and all pervasive world economy, not the edict of a self-proclaimed world empire which enforces the choice between nomadism and sedentization.

FOOTNOTES

1. Stalks or straw from which the grain has been removed.
2. Other factors may have been involved in Iran; in particular, the increasing cultivation of such cash crops as cotton and tobacco may have disrupted traditional relationships which allowed pastoralists to pasture their animals on wheat and millet stubble in exchange for the manure the animals dropped on the fields. Once these "manuring relationships" were disrupted, many pastoralists may have attempted to sell their livestock in neighboring countries (Dr. Jaffar Javadi, Personal Communication).
3. A similar partnership between shifting cultivators and ranch owners has been documented in Guatemala by Carter (Carter, 1969:4-5).

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REFERENCES

- Allworth, Edward (ed.)
1973 *Central Asia: A Century of Russian Rule*, Praeger Publishers, New York.
- Baker, P.R.
1975 *Nomadism in Africa* in Williamson, Grahane and Payne, eds. *Introduction to Animal Husbandry in the Tropics*, Longunaus, London.
- Becker, Seymour
1973 *National Consciousness and the Politics of the Bukhara People's Conciliar Republic* in Allworth, Edward, *The Nationality Question in Soviet Central Asia*, Praeger Publishers, New York.
- Blackburn, G. and Cornish, J.B.
1979 "The Treatment of Salt-Affected Soils Under Irrigation in the U.S.S.R.: Any Lessons for Australia?" *The Journal of the Australian Institute of Agricultural Science*, Vol. 45, No. 3.
- Bodley, John H.
1975 *Victims of Progress*, Cummuings Publishing Company, Menlo Park, California.
- Bolte, Charles and Cole, Hugh Marshall
1967 *Army*, in the *Encyclopedia Britannica*, Vol. 2.
- Burham, Philip
1979 *Spatial Mobility and Political Centralization in Pastoral Societies* in Goldschmidt, Walter, ed., *Pastoral Production and Society*, Cambridge University Press, London.
- Carter, William E.,
1969 *New Lands and Old Traditions: the Kekchi Cultivators in the Guatemalan Lowlands*, Center for Latin American Studies, University of Florida, Gainesville.
- Churchill, Rogers Platt
1939 *The Anglo-Russian Convention of 1907*, Torth Press, Cedar Rapids, Iowa.
- "Connections: Eat, Drink and Be Merry," Broadcast by K.E.T.C.-P.B.S., St. Louis, Sunday, November 18, 1979.
- Delgado, Christopher L.
1979 "The Southern Fulani Farming System in Upper Volta: A Model for the Integration of Crop and Live-Stock Production in the West African Savannah," *African Rural Economy Paper*, No. 20, Department of Agricultural Economics, Michigan State University, East Lansing, Michigan.
- e'Encausse, Helen Carrer
1967 *The Fall of the Czarist Empire* in Allworth, Edward, ed., *Central Asia: A Century of Russian Rule*, Columbia University Press, New York.

Agricultural Modernization

d'Encausse, Helen Carrer

- 1967 *Civil War and New Government in Allworth*, Edward, ed.,
Central Asia: A Century of Russian Rule, Columbia University
Press, New York.

Dunlop, D.M.

- 1967 *The History of the Jewish Khazars*, Schocken Books, New
York.

*Dzhanseitov, K.K., Kaz'michev, V.V., and Cherkashin, V.P.

- 1978 "Space and Time Variations in the Growth Processes in Forests,"
Doklady Biological Sciences, March-April, Vol. 239, No. 1-6.

Esposito, Vincent J., ed.

- 1969 *The West Point Atlas of American Wars*, Vol. I, 1688-1900,
Frederick Praeger, New York.

Evans, Joe L.

- 1973 *Forages for Horses in Forages: The Science of Grassland Agri-
culture*, in Heath, Metcalfe, Barnes, eds., *The Iowa State Univer-
sity Press*, Ames, Iowa.

Fairservis, Walter A.

- 1964 *Predynastic Egypt in Man Before History*, Gabel, Creighton,
ed., Prentice Hall, Inc., Englewood Cliffs, New Jersey.

*Gaivarontsev, I.

- 1979 "Subsidiary Plots of Land for Citizens of the U.S.S.R.," *Cent-
rosyoyous Review*, No. 7.

*Gilyarov, M.S.

- 1979 "Juniper Groves and Soil Fauna as an Indicator of Ancient
Biogeographic Links of the Mountains of West Turkmenstan,"
Doklady Biological Sciences, Vol. 244, No. 1-6.

Goldman, Marshall I.

- 1975 *Detente and Dollars: Doing Business with the Soviets*, Basic
Books, New York.

Goldschmidt, Walter, ed.

- 1979 "Pastoral Production and Society," Cambridge University
Press, New York.

Hart, Eugene F.

- 1961 "Revolution in Technology and Logistics," *Army Informa-
tion Digest*, August.

Heath, Maurice E. et al.

- 1973 *Forages: The Science of Grassland Agriculture*, University of
Iowa Press, Ames, Iowa.

Herr, John Knowles and Fuller, John Frederick Charles

- 1967 *Cavalry in Encyclopedia Britannica*, Vol. 5.

Hogben, S.J. and Kirk-Green, A.H.M.

- 1966 *The Emirates of Northern Nigeria: Preliminary Survey of
Their Historical Traditions*, Oxford University Press, London.

Mid-American Review of Sociology

- Hopen, C. Edward
1958 *The Pastoral Fulbe Family in Gwandu*, Oxford University Press, London.
- Irons, William
1979 *Political Stratification Among Pastoral Nomads in Goldschmidt, Walter, ed. Pastoral Production and Society*, Cambridge University Press, London.
- Jacobs, Victor E.
1973 *Forage Production Economics in Forages: The Science of Grassland Agriculture*, Heath, Metcalfe, and Barnes, eds., Iowa State University Press, Ames, Iowa.
- Kahurananga, J.
1979 "The Vegetation of the Simanjiro Plains, Northern Tanzania," *African Journal of Ecology*, Vol. 17. June.
- Keller, Wesley, and Klebs, Adel Leslie J.
Hay, Pasture and Range Seedings for the Intermountain Area and Alaska, in *Forages: The Science of Grassland Agriculture*, Heath, Metcalfe and Barnes, eds.
- Konczacki, Z.A.
1978 *The Economics of Pastoralism: A Case Study of Sub-Saharan Africa*, Frank Cass and Company Ltd., London.
- Krader, Lawrence
1979 *The Origins of the State Among the Nomads of Asia* in Goldschmidt, Walter, ed., *Pastoral Production and Society*, Cambridge University Press, London.
1963 *Peoples of Central Asia*, Mouton and Co., The Hague.
- Kreidberg, Marvin A., and Henry, Merton G.
1961 "Raising the Armies," *Army Information Digest*, August.
- Lattimore, Owen
1940 *Inner Asian Frontiers of China*, American Geographical Society, New York.
- Livingston, Ian,
1977 "Economic Irrationality Among Pastoral Peoples: Myth or Reality?" *Development and Change*, Vol. 8.
- Matley, Ian Murray
1967 *The Population and the Land in Allworth, Edward, ed., Central Asia: A Century of Russian Rule*, Columbia University Press, New York.
1967 *Agricultural Development in Allworth, ed., Central Asia: A Century of Russian Rule*, Columbia University Press, New York.
1973 *Ethnic Groups of the Bukharan State Ca. 1920* in Allworth, Edward, ed., *The Nationality Question in Central Asia*, Praeger Publishers, New York.

Agricultural Modernization

- Mair, Lucy
1977 African Kingdoms, Oxford University Press, London.
- McCloud, Darrel and Bula, R.J.
Climatic Factors in Forage Production in Heath, Metcalfe and Barnes, eds., Forages.
- Miller, John M.
1961 "Men, Weapons and Tactics." Army Information Digest, August.
- Polo, Marco
1948 The Travels of Marco Polo, the Venetian, translated by William Marsden, Doubleday and Co., Garden City, New Jersey.
- *Ponomareva, V.V.
1972 "Soil and Ecological Characterization of Certain Types of Vegetation-Forest Meadow and Forest Steppe Components," The Soviet Journal of Ecology, Vol. 3, No. 6.
- *Popov, K.P.
1975 "Temperature Regimes and Moisture-Content Dynamics of Sierozems in the Semi-savannah of Southern Tadzhikistan," The Soviet Journal of Ecology, Vol. 6, No. 1.
- Quam, Michael D.
1978 "Cattle Marketing and Pastoral Conservatism: Karamaja District, Uganda 1948-70," African Studies Review, Vol. XXI, No. 1.
- Rotar, Peter P. and Pucknett, Donald L.
Tropical and Sub-Tropical Forages in Heath, Metcalfe and Barnes, eds., Forages.
- *Rudenko, S.I.
1970 Frozen Tombs of Siberia: The Pazgyrk Burial of Iron Age Horsemen, translated by M.W. Thompson, University of California Press, Berkeley.
- Salzman, Philip et al.
1980 When Nomads Settle, Praeger, New York.
Inequality and Oppression in Nomadic Society in Goldschmidt, Walter, ed., Pastoral Production and Society.
- Saunders, J.J.
1971 The History of the Mongol Conquests, Barnes and Noble, New York.
- Schiffer, Heinrich
Sahara in the Encyclopedia Britannica, Vol. 16, 15th Edition.
- Seavoy, Ronald E.
1975 "The Origins of Tropical Grasslands in Kalimantan Indonesia," The Journal of Tropical Geography, Vol. 40, June.
- *Sveshnikova, V.M.
1975 "The Water Regime of Central Asian Desert Plants," The Soviet Journal of Ecology, Vol. 6, No. 5.

Mid-American Review of Sociology

Swift, Jeremy

The Development of Livestock Trading in a Nomadic Pastoral Economy: The Somali Case in Goldschmidt, Walter, ed., *Pastoral Production and Society*.

Taylor, T.H. and Templeton, W.C.

Grassland Eco-System Concepts in Heath, Metcalfe and Barnes, eds., *Forages*.

Terril, Clair E., and Lindahl, Ivan and Price, Donald

Sheep-Efficient Users of Forage in Heath, Metcalfe and Barnes, eds., *Forages*.

Tietze, U.

1973 "A Matter of Terminology: A Critical Look at Migratory Stock Breeding," *Geoforum*, Vol. 13.

*Viktarov, S.V., Ata'ev, E.A., and Kalenor, G.S.

1973 "Main Trends and Results of Indicative Investigations of Deserts of the U.S.S.R.," *The Soviet Journal of Ecology*, Vol. 4, No. 3.

Wallerstein, Immanuel

1974 *The Modern World System, Vol. I, Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century*, Academic Press, New York.

Weigmann, Hans-Dietrich

"Fibers, Natural" in *Encyclopedia Britannica*, Vol. 7 15th ed.

ALTRUISM AND SOCIAL EXCHANGE THEORY: THE VICARIOUS REWARDS OF THE ALTRUIST*

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The position is taken that the altruistic person who is giving a reward to another is in a one-up or dominating position. The person receiving the reward is in a submissive role by virtue of acceptance of the reward. They may even feel that the reward is a cost if they are unable to reciprocate. Equity may enter into the context as the target of the altruism seeks to reestablish balance. While altruistic behavior may not result in immediate reward on the part of the "rewarder," there may be delayed or vicarious reward.

It has been a considerable point of critical debate that social exchange theory and altruistic behavior are diametrically opposed concepts (Chadwick-Jones, 1976:251). If people are seeking to maximize rewards and minimize costs in interpersonal relationships, then how can we account for the variance of altruistic intentions or that helping behavior which is prevalent in some situations such that there appears to be the dispensing of a reward rather than the dispenser receiving a reward. It is the intent of this analysis, to posit that while at one level, altruistic behavior is indeed the giving up of a resource or reward and at another level, it encompasses the receiving of different types of "gifts."

Thibault and Kelley (1959) used the term, "fate control," to refer to a condition where one person has power over another and is in a position to allocate rewards to the self, irrespective of the choice of action by the other. Thus, altruism may be viewed as a situation whereby the actor dispenses rewards to the other and also receives vicarious rewards by virtue of being in a position where resources can be allocated to the other. A person with fate

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