

From Camel to Truck : A Study of Pastoral Adaptation

By *Dawn Chatty*

This paper contains a description and analysis of the effects of the introduction of a technological device on a traditional pastoral system. It also pursues an argument of greater generality concerning the nature of pastoral systems. The hypothesis is offered that the recent shift from the use of camels, as beasts of burden, to the use of trucks among two Bedouin sheep-raising tribes in the Middle East serves to emphasize the unique nature of the pastoral specialization as a dynamic system of adaption ¹.

In the Middle East as well as other regions today, pastoral societies are often regarded as major obstacles to economic development. They are frequently viewed by government officials and administrators as anachronistic systems, marginal to the regional economy. More careful consideration of a pastoral society and its relationship and interdependence with sedentary communities reveals that, under certain conditions, pastoralism is not a marginal holdover from an irrational past, nor in a state of decline or degeneration: rather it is a dynamic system of adaptation which is increasingly becoming more integrated into the regional economy.

The Al-Fadl and Al-Hassanna are sheep-raising Bedouin tribes in the Syria-Lebanon region. Their way of life, pastoralism, is an integral part of the 'ecological trilogy' (i. e. city, village and tribe) prevailing in the Middle East. Changes are taking place in each sector of the trilogy, some as the result of modernization. Among the primarily sheep-raising sector, a shift has occurred in the last twenty years from the use of camels as beasts of burden, to the use of trucks.

The Al-Fadl's and Al-Hassanna's shift from camel to truck transport during the 1960's generated changes in their annual migratory cycle, labor expenditure, as well as means and networks of distribution. These changes not only encouraged the expansion of traditional economic spheres to include direct market trade and long-term commercial agreements with businessmen,

landowners and villagers; they also encouraged the opening of new economic horizons never before possible.

Today these Bedouin tribes are effecting their own widespread integration into the regional economy. Contrary to the belief of many, these pastoral societies are not major obstacles to economic development; nor are they anachronistic systems marginal to the regional economy². It has not been necessary, as many believed, for pastoralists to 'settle' and become cultivators in order to 'modernize' or become more integrated into the regional economy.

Traditional Economy

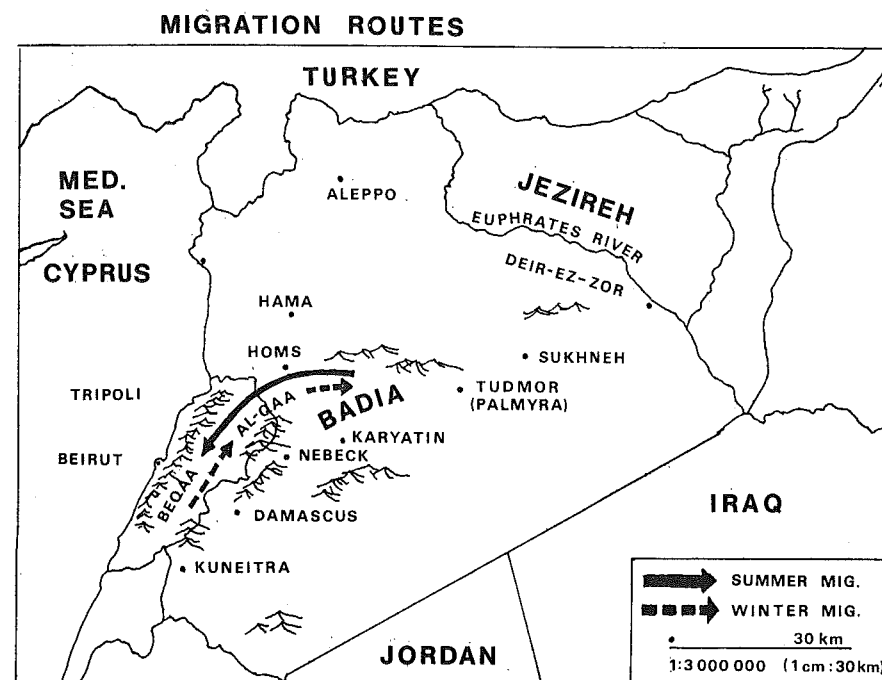
The annual pastoral cycle of the Al-Fadl and the Al-Hassanna was, and to a large extent still is, shaped by ecological factors. The seventy-five mile long and five to eight mile wide Beqaa Valley is the major setting of their pastoral cycle. The year is divided into two basic seasons: a long, hot, dry summer and a cold, wet winter. Pastoral movements are largely characterized by adjustments to these seasons and the associated grass cover of grazing areas.

At the close of the rainy season (April-May), the Al-Fadl and the Al-Hassanna camping units gradually migrate into the Beqaa Steppe along the Anti-Lebanon Mountains from the north and east. The women of each household dismantle and pack the tents on the backs of the household camels. Three, four and sometimes as many as fifteen households move together. The camels, carrying the household baggage, small children and sometimes the women, are gradually moved south along the base and slopes of the mountain range for one or two months.

After the grain harvest in June, the Al-Fadl and the Al-Hassanna break up into smaller residence units rarely larger than three households. These smaller units maintain particular relationships with landowners in the Beqaa Valley. Each household head arranges with a landowner to graze the sheep on the stubble of harvested fields.

This grazing pattern continues throughout the hot summer months. By late September or early October, the Al-Fadl and the Al-Hassanna begin to return north. By November, most of the camping units are in the northern part of the Beqaa Valley (the *Al-Qaa*). When the winter rains commence, they move north and east to their traditional winter grazing land east of Homs. These pastures are in bloom during January, February and March. Once there, camping units disperse, and a relatively inactive period of pastoral activity sets in until the lambing of the flock in February and/or March.

Before the advent of the truck, the economic transactions of these tribal units were almost exclusively carried out in the Beqaa Valley during the spring and summer. To a great extent, the slow moving baggage camels de-



limited the range of movement. And consequently, the buying and selling of critical items was conducted through middlemen and brokers along migration routes rather than at market centers³. In the course of their migration, these tribal units sold butter, wool and some male lambs to enterprising middlemen. Thus, by avoiding main market centers and dealing almost exclusively with middlemen, the traditional pastoral contribution to the regional economy was easily overlooked and minimized.

Household Income and Expenditure prior to the use of the Truck

Household of 5-8 persons with herd of 134 sheep 1962-1963

Income		Expenditure	
sale of sheep's butter		animal produce consumed	900 L.L.
sale of wool		agricultural produce	350 L.L.
	4422 L.L.	repairs, cloths	800 L.L.
camel service (two camels)	2700 L.L.	pasture rental	90 L.L.
Total income	= 7122 L.L.	Total expenditure	= 2140 L.L.

(2.5 L.L. = \$1)

The table above is adapted from Sheikh Fadl's estimate (Al-Faour: 345-349) as well as oral estimates of annual incomes and expenditures in the past.

Initial Impact of the Truck

In the mid 1960's (1963-1965), a spontaneous change occurred within the minimal lineages of these sheep-raising tribal units. As far as can be determined, decisions were reached by the heads of extended families (the tribal elders) to improve upon their mode of transportation and beasts of burden. The camels on which these units relied were sold and trucks were bought to replace them⁴. Within a two year span, these decisions were so widespread that camels, which had previously been counted in the several thousands, virtually disappeared from the Beqaa Valley.

The most immediate effect of the truck was in terms of the migratory cycle. Whereas the tribal units had previously spent two to three months in slow, camel transported migrations north-east towards Tudmor and south-west towards the Beqaa, the truck now drastically shortened these migrations to sometimes only one day's duration. The proportion of the year spent in the Beqaa Valley increased. By 1972-73, using trucks instead of camels for transport, the tribal units and herds entered the Beqaa as early as March and remained as late as November.

The change in the pastoral cycle and the prolonged residence in areas easily accessible by road, directly affected the labor expenditures of the Al-Fadl and Al-Hassanna. The traditional orientation of labor expenditure was primarily to satisfy household needs; the marketing of occasional surpluses was a secondary concern. With the introduction of the truck and the concomitant reduction in migration activities (i.e. the number of camp sites set up), labor expenditures began to take a market orientation. For example, household butter, which had once been sold sporadically along migration routes, ceased to be produced. Instead, women began to direct more attention to the milking of sheep and household goats for daily sales. By 1972-1973, in each household of my sample, women, generally the *Ahl-il-beit* or the oldest daughter-in-law, took charge of the twice daily milking of the sheep.

The sale of lambs or older sheep also became less haphazard and began to take on a market orientation. With increased mobility, the pastoralists could now search for the best market conditions. Only when prices were sufficiently high would they sell their sheep. It was not uncommon for a household head to transport three or four sheep at a time by truck from one sheep market to another until a 'good' price was agreed upon.

The use of trucks, which permitted extended residence in the Beqaa Valley, is a key factor in both changing and increasing labor expenditures. This change from primarily household oriented production to market oriented production is closely associated with the development of new economic relationships.

Direct Market Trade and Agreements

The traditional avoidance of main market centers, and the almost exclusive reliance on middlemen to market pastoral products declined rapidly after the introduction of the truck. Direct trade and contractual agreements with businessmen, large landowners and villagers rapidly developed in which substantial profits were recorded by the pastoralists.

Perhaps the most 'conspicuous' development is in the emergence of a dairy concern. Mobility and accessibility are prominent factors in the creation of direct and long-term relationships between the pastoral women and dairy companies. As camping units became less temporary, and more easily reached by road, the importance of milk production increased⁵. Al-Fadl and Al-Hassanna women no longer found it necessary to convert daily milk surpluses into butter to avoid spoilage or loss; fresh milk could now be sold each day. Thus agreements were made with dairy businesses in Zahlé and Chtaura, the major suppliers of dairy products for Beirut. During the lactation period of the ewes, which is between eight and nine months, these dairy companies send their trucks daily.

For a five to six month period the pastoral households receive a daily income from their sheep milk production. (The price per kilo of milk in 1973 averaged .70 L.L. during the months of April to September). The daily average of milk sold by the pastoral household can fluctuate greatly, depending not only on herd size⁶, but also on domestic preparation of such items as *laban* or *kisk*. In one household, I recorded daily fluctuations involving forty kilos; on some days 20-25 kilos of milk were sold to the dairy companies, while on others 60-65 kilos were sold.

Despite fluctuations, income from milk sales to dairy companies far exceeds the traditional income derived from sales of butter. Traditional butter transactions used to permit middlemen to derive great profits after transporting the commodity to urban town centers. Now, the removal of traditional intermediaries, as well as adjustments to national consumption demands, accounts, in part, for the rapid rise in dairy production among pastoral households.

Wool production has also provided greater profits since the adoption of truck transport. The amount of wool which one sheep yields varies between two and three kilos. In the past, this wool was sold to brokers who came to the pastoralists and entered into arrangements whereby they paid for wool, not by weight, but rather by animal number. In 1962-1963, Sheikh Fadl estimated that the yield per sheep was about five L.L. (Al-Faour: 346). The percentage of profit which these brokers enjoyed was exceptionally large⁷.

With the physical mobility provided by truck transport, Al-Fadl and Al-Hassanna men were able to 'test' market conditions and choose the wool buyers to whom they delivered their merchandize. The pastoralists then asked

current market prices per kilo of wool, which usually meant from seven to nine L.L. per sheep. By dealing directly with wool merchants, the pastoralists were no longer bound to set prices. For example, in 1973, unusual world market conditions forced the price of wool to rise in Lebanon from three L.L. to seven L.L. per kilo. Without exception, every household head in my sample was aware of this situation and by selling directly to merchants, was able to benefit from this market condition.

The use of the truck was also an important factor in strengthening traditional relations with large landowners. The relatively greater stability of the camping residences allowed individual household heads to enter into wider and longer term contractual agreements. Traditionally, these landowners hired the camels and their herders to transport the harvest each summer. This service was generally of three months duration and involved one or two male household members. After the Al-Fadl and Al-Hassanna shifted to truck transport, they continued to carry out this service, but on a larger scale. Today, not only do a greater number of men work seasonally transporting harvest and driving tractors; but young girls and unmarried women are also found working alongside the men. The women are generally engaged for this three month period picking various crops such as potatoes, onions or sugar beets. Unmarried men, who have no access to trucks, frequently work during this period on experimental agricultural and sheep stations or sugar beet factories.

Today, an 'average' household of five to nine persons generally has two or three girls and one or two men engaged in seasonal labor. In the past, an average household of five to nine persons generally had one or two men engaged in seasonal 'camel' service. Now, due in part to the prolonged residence and greater familiarity between pastoralists and landowners, from three to five members of an average household are engaged in seasonal labor. In some cases, the households in my sample estimated that seasonal labor could yield a daily income of between 25 to 40 L.L.

A comparison of the income derived from three similar economic activities in 1962-1963 and in 1972-1973 reveals that the 'average' household in 1972-1973, with similar herd size realizes a two-fold increase in income.

'Average' household of 5-8 persons with 134 sheep					
1962-1963			1972-1973		
butter per year per ewe	27		milk per year per ewe	70	9380
wool per ewe	5	4422	wool per ewe	15	2010
service per day (two camels)	30	2700	service per day, (truck, 3 girls)	30	2700
yearly total	=	L.L. 7122	yearly total	=	L.L. 14090

(2.5 L.L. = \$1)

This large increase in income among the Al-Fadl and the Al-Hassanna in the last ten years can be attributed, in part, to their shift from household oriented production to market oriented production. This shift in orientation is partially a development of the increased use of the truck and the accompanying modifications in the pastoral cycle.

The desire to acquire land has also stimulated the expansion of productive activities to increase family income. Of the thirty-one households sampled, twenty-two household heads have acquired land. This land acquisition takes several forms:

1. Some units of these two tribes are acquiring land which they intend to keep as pastures for their sheep. One tribal elder explained that with open pastures rapidly disappearing in the Beqaa and being replaced by orchards⁸, it is necessary for them to acquire land which can be used by the herds. These pasture areas are seeded each fall with vetch or barley to provide a good grass cover for the following year.
2. Eight of the twenty-two households are acquiring land which they rent to farmers. This arrangement provides them with the agricultural products they require for their households. In addition, it serves as a form of security against sudden herd depletion. Some of these households have expressed a desire to build stone houses, now that the truck has brought their traditional migratory range within easy access.
3. Six of the twenty-two households have bought land which they themselves cultivate. These units are mixing cultivation with pastoralism. Their crop production is designed to compliment their pastoral production. Some fields are seeded to provide pasture for their herds when they return in the spring to the Beqaa. The remaining fields are planted with vegetables such as onions, potatoes and corn, and their herds graze on these fields after the summer harvest.

Perhaps the most interesting crop which they cultivate is the sugar beet⁹. It is harvested in early October and then sold to the government at fixed prices. Those herds still in the Beqaa, then graze on the stubble of the sugar beet fields. When the herds move north either to the *Al-Qaa* or the *Badia*, the pastoralists buy *tifl* (sugar beet pulp) from the sugar beet factories. Truck loads of *tifl* are then transported to the *Al-Qaa* and it serves as a major winter feed for the herds. This procedure has already substantially reduced the winter mortality rate of sheep, who previously were markedly undernourished in winter and susceptible to pneumonia.

Relationships with small farmers and villagers have also grown stronger. The relative permanence of many camping units near roadsides and villages as well as the tendency of some pastoral households to cultivate crops has led to closer economic co-operation and exchange with village communities. The traditional itinerant trader, who once supplied women in pastoral house-

holds with small items, has in large measure been replaced by the village store or gas station. Convenience or proximity probably accounts for the popularity of these village centers.

In addition, food stuffs, such as *laban* are often traded for eggs or vegetables. The growing similarity of a combined agricultural and pastoral diet in villager and pastoral households, can be viewed as an indicator of the closer relationship between pastoral and sedentary society in the region.

Among the men of pastoral and villager households, co-operative efforts of a large scale are becoming evident. The basic concern is for water. Thus, joint activities are undertaken to improve existing services and develop new ones. For example, wells and water pumps are shared. It is not unusual for a villager to take water from a well on land owned by a pastoralist; nor is it unusual for a pastoralist to use a village owned water pump. The villager needs water to irrigate his fields, and the pastoralist needs water for his herds.

With the advent of the truck, the 'marginal' economic spheres of the Al-Fadl and the Al-Hassanna have expanded and improved considerably. As their pastoral activities have become more market oriented, they have begun to enter into long term contractual agreements with businessmen. Their relationship and interdependence with sedentary groups have become more pronounced and visible, so that today, their impact on the regional economy is more evident.

Forms of Distribution

A viable pastoral economy involves close integration of three spheres of activities: herding, husbandry and marketing (see Paine, 1971: 52-67). The traditional pastoral economy of the Al-Fadl and the Al-Hassanna was principally concerned with herding, or the control and nutrition of animals, and husbandry, or the growth of herd capital. Marketing, or the formation of profits through careful circulation was not a primary concern. The distribution of sheep was customarily conducted through middlemen. This form of exchange, which placed the actual marketing of commodities in the hands of intermediaries, did not permit the pastoralists to realize large profit margins through the sale of sheep.

Traditionally, the Al-Fadl and the Al-Hassanna focused their attention on the well-being of the herd and its conservation. The capacity of the herds to grow rapidly was balanced by the risk factors of ecology and biology which continually threatened to reduce herd size. Maintenance of a herd sufficiently large to provide for household subsistence was a major concern. Thus, each year in early summer, urban middlemen travelled to tribal camping units in

order to buy whatever sheep the tribes were prepared to sell. The sales negotiations of the Al-Fadl and the Al-Hassanna usually resulted in their acquiring cash and/or credit from the middlemen. Once winter provisions had been bought, frequently through these same men, very little profit remained. All too often, the process of buying provisions from these established 'sheep' brokers was characterized by an ever growing pastoral indebtedness. This indebtedness took the form of a loan (with interest) or a credit advance on the sale of the following year's sheep and produce.

There are numerous examples of this traditional relationship between Al-Fadl and Al-Hassanna camping units and urban middlemen. Many wealthy families of Beirut and Damascus are remembered today by the tribal elders as descendants of such intermediaries. Although there are exceptions, these families are remembered for their 'rapacity' which often caught the pastoralists in a spiral of increasing indebtedness.

With the introduction of the truck in the mid 1960's, the pastoralist—middleman relationship was completely transformed, and the Al-Fadl and Al-Hassanna assumed direct control over the distribution of sheep. Selling of the two to three month old lambs at the early summer *suqs*¹⁰ was no longer limited to exchanges with established middlemen; it now involved competitive bidding. However, this particular pattern of marketing did not radically alter the profit margins of the Al-Fadl and the Al-Hassanna, as prices for lambs were relatively stable, and only fluctuated with animal weight.

Only the increased mobility offered by the truck permitted the pastoralists to adopt an innovative form of marketing and consequently to realize larger profits. Once released from their complete dependence upon middlemen and the early summer *suqs*, these pastoralists were able to control the distribution of the sheep according to the regional and seasonal variation in demand.

Though a substantial portion of the lambs continued to be sold at the early summer *suq*, increasingly larger numbers of lambs began to be set aside. These lambs were subsequently fattened in agricultural areas near urban markets, and sold when demand was high. The incomes derived from such sales were naturally much greater due to the higher market demands, as well as increased animal weight.

This entrepreneurial aspect in the control of livestock distribution is widespread today. One example is the camping unit of the household of Feisal and Gazi, two brothers of the Al-Hassanna tribe. Their combined herd size, after the early summer sale of 'unwanted lambs' comes to approximately four hundred sheep. Within this herd are a number of young lambs which will be sold at the end of the summer, after they have been fattened. By keeping these additional lambs, and fattening them, Feisal and Gazi are assuming new roles which once were exclusively held by middlemen. Now with the truck, Feisal and Gazi have the necessary mobility to control the distribu-

tion of their sheep, especially in the late summer—early winter when the demand for livestock is particularly high.

In the late summer—early winter, these two brothers transport twenty to twenty-five fattened lambs to various *sugs* (e. g. Baalbek, Nabatea, Marj'-ayoun). At these *sugs*, they enter into competition with various urban brokers who are also selling sheep. The price for an eight to nine month old lamb fluctuates between sixty to ninety L.L. depending upon its weight¹¹. This is a one hundred to two hundred percent increase over the price of two to three month old lambs. Only a slight increase in herding and husbandry expenditure is necessary in order to distribute part of the herd during periods of greater demand. This small increase in expenditure is rewarded by a tremendous rise in sale price.

Sheep Marketing Chart

SHEEP MARKETING					
age	wt.	price	input (expen.)	return (profit)	season
2-3 month lambs	20-30 k.	20-25 L.L.	5 L.L.	20 L.L.	early summer
8-9 month	40-50 k.	60-90 L.L.	20 L.L.	40 - 70 L.L.	late summer
mature sheep (one year or more)	50-80 k.	wide range 90 L.L. +	-----	-----	just prior to Eid-il Adha

A more prominent example of this entrepreneurial aspect of sheep distribution is exhibited by Guraib of the Al-Fadl. Guraib, a man close to forty years old, is unmarried. His household consists of himself, his mother and a younger brother (in his late teens). This household is unusually wealthy in comparison with other Al-Fadl and Al-Hassanna households, as it has approximately four hundred head of sheep after the early summer sale of 'unwanted lambs'.

Guraib, his brother, and two hired shepherds tend the herd. In 1971, Guraib needed only one hired shepherd, as he had sold most of his lambs in the spring, leaving his herd relatively smaller. However he maintains that the profits he gained in 1971 from the sale of the few lambs he had set aside for fattening convinced him to undertake the same venture on a larger scale in 1972. Consequently, Guraib is fattening between thirty and thirty-five lambs which he will transport and sell at various late summer—early winter sheep *sugs*.

The large profit Guraib expects to gain will, he says, be re-invested in the herd (e. g. special feed concentrates, wages for two or perhaps more hired shepherds) as well as in the purchase of a small car to supplement the

half-ton truck he already owns. It appears as though Guraib, with the necessary mobility to control the distribution of his herds, is methodically transforming his traditional animal husbandry activities into a 'modern ranching' enterprise.

The large increase in profits which the Al-Fadl and the Al-Hassanna have begun to realize from marketing and distribution activities, is, in part, re-invested in traditional holdings: land and livestock. Individual herds are growing slightly (within the limits of pasture carrying capacity and manpower demands). And land holdings, though scattered, are rapidly increasing. Up to the present time, this increased wealth of pastoral households has not led to sedentarization and discontinuance of pastoral pursuits.

Traditionally, sedentarization and discontinuance of pastoral pursuits take place under two conditions. Fredrik Barth (1964: 106-111; 1962: 350) describes these conditions as 'upward mobility' and 'downward mobility'.

1. 'Upward mobility' occurs when prosperous pastoral households re-invest their capital savings. Since only a small part of this capital could be re-invested in livestock¹², the major portion had to be re-invested in land. As land holdings increased, these households came to be assimilated into the elite land owning sedentary society.

2. 'Downward mobility' occurs when pastoral households are progressively depleted of their herds (through accident, negligence or debt). As herd size became smaller, the household was forced to labor increasingly in sedentary occupations. A stage was finally reached where their poverty resulted in complete assimilation into the landless peasantry. The frequency of this pattern among the Basseri tribes, was, according to F. Barth, approximately one out of three (i. e. four men out of eleven settle; see Barth, 1964: 116-117).

Surprisingly, these patterns of sedentarization due to 'upward' and 'downward' mobility do not appear to be widespread among the Al-Fadl and the Al-Hassanna. On the contrary, though a wide variety of residences (both of goat hair and stone) are found today¹³, pastoral pursuits of herding, husbandry, and marketing *continue* to receive careful attention and management. In other words, though the Al-Fadl and the Al-Hassanna are expanding their economic pursuits, they are neither losing contact with their pastoral community and depending increasingly on sedentary sources of income (i. e. a traditional characteristic of sedentarization by 'downward mobility') nor quitting their pastoral pursuits in order to supervise and control property holdings (i. e. a traditional characteristic of sedentarization by 'upward mobility').

The introduction of a new element, the truck, is a possible explanation of the inapplicability of these patterns of sedentarization described by F. Barth. Among the Al-Fadl and the Al-Hassanna, it seems that 'upward' and

'downward' mobility do not necessarily imply eventual sedentarization (i. e. an "eventual integration into the sedentary community" in the status of "propertyless villagers" or "sedentary landlords", Barth, 1964: 109). Traditionally pastoral groups had only two forms of capital in which to invest: land and livestock. Heavy and continuous investment in this direction has historically culminated in sedentarization. However, the Al-Fadl and the Al-Hassanna do not exclusively invest in these traditional holdings. Through the use of truck transport, they are investing in a wide range of related entrepreneurial and commercial activities which maximize their assets.

Today, investments of profits are increasingly being directed at points in the regional economic system where major discrepancies between supply and demand exist. Considering the growing demand for meat in Lebanon, where four fifths of the local demand must be imported¹⁴, enterprising individuals of both the Al-Fadl and the Al-Hassanna have begun to undertake new strategies of sheep distribution and circulation.

Once the Al-Fadl and the Al-Hassanna were able to effectively control the marketing of sheep, some individuals within these two communities began to develop the potentials of the truck even further. These individuals assumed an entrepreneurial role within the regional market. They began buying lambs at the early summer sheep *sug*s, distributing them among their herds (or, herds of kinsmen), and reselling the fattened animals in the late summer—early winter, or at a time when the demand for meat was especially great.

One case in point is the entrepreneurial activity of Ali of the Al-Fadl. Ali holds capital in two forms: land and livestock. He recently acquired ten donums of land on which he cultivates, among other crops, sugar beets. This crop is sold to the government at fixed prices. His livestock holdings are relatively small: consisting of about sixty sheep and fourteen household goats. Moreover, he is part owner of a truck. In early summer he bought one hundred lambs at the sheep *sug* with money he had earned by selling his agricultural harvest. These lambs were herded by a shepherd together with his own small flock and his cousin's flocks.

In the late summer—early winter, he began a systematic marketing of these fattened sheep. On some days, he transported three sheep to a nearby town for sale, and on other days he drove nine sheep to more distant points. In each case, the marketing of these sheep meant an income of one hundred to two hundred percent over his original investment. By the time winter had set in, he had marketed all the original one hundred lambs throughout the region where the demand for sheep was greatest.

By thus investing the income he earned from a government sponsored crop into an innovative 'ranching' or husbandry activity, Ali was not following traditional capital investment patterns. He was not only able to realize large returns on his original investment, but also able to respond to market de-

mands throughout the region. Ali's progressive increase in herd capital or 'upward mobility', has not, as yet, led to his assimilation into the sedentary community. His entrepreneurial investments are being used to perpetuate his pastoral activities, not his real estate holdings. In other words, Ali is re-investing his earnings into animal husbandry related activities not property accumulations. Thus his concern is in managing and developing his pastoral activities rather than in directing his attention to land or property interest.

'Downward mobility', or progressive loss of herd capital also need not signal the end of pastoral activities among the Al-Fadl and the Al-Hassanna. One example is Sheikh Hamdaan of the Al-Fadl. This man has four sons (two of whom work seasonally in sugar beet factories). He has small land holdings in Syria and Lebanon, but his herds have recently been greatly depleted. In the early summer of 1973 he bought forty lambs from the sheep *sug*, which his younger sons herded throughout the summer.

In later summer—early winter, most of the fattened lambs were taken by truck and sold at relatively high rates of 90–110 L.L. each. The large income from these sales permitted Sheikh Hamdaan to supply his household with winter provisions without incurring a debt. Next year, he says, he may be able to buy a larger number of lambs in the early summer—and perhaps increase his herd capital. Thus the entrepreneurial activities of Sheikh Hamdaan permit his household to remain in the specialized occupation even though traditionally he would have been assimilated into the peasant population through 'downward mobility'.

By effective utilization of the truck, households whose herds have been greatly depleted no longer inevitably pass from the pastoral to the sedentary agricultural society. Some households, such as that of Sheikh Hamdaan, are able to integrate their economic activities successfully into the regional economy by maintaining a diversity of pastoral and agricultural pursuits. The incomes from seasonal labor serve as a basis upon which careful sheep husbandry and distribution is undertaken.

Income from sedentary sources is important in that it is able to launch several highly profitable pastoral activities. Moreover, the higher profit realized in these pastoral enterprises successfully curbs the traditional trend of sedentarization which F. Barth describes as "increased dependence on sources within a village, and eventual integration into the sedentary community" (1964: 109).

Evidence over the past ten years suggests that the Al-Fadl and the Al-Hassanna households, by utilizing the truck in entrepreneurial activities (whether on lower or higher bands on the economic spectrum), do not tend to discontinue pastoral pursuits. Among these two tribes, increased mobility has permitted a diversification of pastoral activities closely attuned to regional market demands. These innovative activities, by yielding large profit

margins, have further permitted the expansion of economic horizons. Although these new horizons are not strictly in the realm of pastoral pursuits, they are logical extensions of the traditional economy.

For example, over the past ten years, the Al-Fadl have achieved regional recognition for their contribution to the *maslakh*, or the slaughter house district of Beirut. The events which marked the development of a 'quasi-monopoly' of sheep meat distribution in Beirut are well known. In the mid 1960's, three households of the Al-Fadl sold all their livestock and moved to Beirut. They settled in the slaughter house district of the city and began a series of activities which involved buying sheep, slaughtering sheep and distributing meat to butchers and markets throughout Beirut.

The occupation of these households is no longer technically a pastoral pursuit; it is an economic outgrowth of the pastoral specialization. This occupation is uncommonly successful, since its resources are managed and circulated through a kinship network. Its market, the Beirut population, is also expanding, since both the consumption demand for meat and the population itself are increasing. Sheep are procured by kinsmen either from their own herds or from sheep *sugs*. The actual distributors are individual members of the Al-Fadl tribe in the Beqaa. They serve as links between the market demands in the city and supplies in the rural or outlying areas.

Among the Al-Fadl, one such individual is Salih, a man in his forty's. He owns land in the Beqaa, part of which is used for pasture, and part of which is rented to farmers. His herds number about three hundred head, and are herded by hired shepherds. In addition, he is building a stone house together with his three brothers on a small plot of land along the Anti-Lebanon Mountains. By effectively utilizing the truck, he has developed a profitable economic association with the regional livestock market. Demands in Beirut, channelled through Al-Fadl kin in the *maslakh*, are rapidly met by him.

After the introduction of the truck in the mid 1960's, the Al-Fadl and the Al-Hassanna were able to expand their pastoral products within the regional economy. Despite the non-participation of government authorities, these two tribes have been able to develop a viable and highly profitable economic system, mobilized by the truck, which integrates pastoralism with agriculture.

The economic development and expansion of these two tribes corresponds remarkably with the F.A.O.'s urgent recommendations to national governments in the Middle East. The F.A.O. views the development of the livestock sector as a crucial issue, if consumption demands are to be met in the future. It recommends that a stratified pattern of sheep production be encouraged. This calls for sheep rearing to be concentrated in the *Badia* or steppeland, and sheep fattening to be undertaken close to urban markets (see F.A.O. 1972: 28-29). This stratification naturally implies close integration of pastoralism with agriculture.

In Lebanon, government policies have been directed neither towards settlement nor development of the Bedouin tribes. This situation of 'benign neglect' has permitted the Bedouin to fully utilize their physical, technological, and social environment to best advantage. The improvements of the national infrastructure, the government subsidies and controls of crops such as wheat and barley, and the nationally sponsored sugar beet crop, have all indirectly assisted the Al-Fadl and the Al-Hassanna. With improved roads, these two tribal groups have been able to effectively manage and expand their pastoral production. Their crop production of wheat, barley and sugar beet have permitted them access to additional fodder. Consequently, they are now expanding husbandry practices so as to include a larger number of sheep for fattening and eventual marketing throughout the year. This expansion and diversification, in which the truck is a key factor, clearly reveals the unique nature of the pastoral specialization as a dynamic system of adaptation well integrated into the 'modernizing' regional economy.

NOTES

1. The field research was conducted during 1972-1973 and was made possible by a grant from the National Science Foundation (Grant number GS - 36419).
2. See Chatty, 1972/73.
3. A tent count in the Beqaa Valley indicated a pastoral community of approximately two hundred households. My sample consisted of thirty-one households.
4. Of the eight vehicles in my sample of thirty-one households, there were four Chevrolet and Honda half-ton trucks, two International Harvester tractors and bale wagons, and one stake truck.
5. Government statistics of 1965 show that the Lebanese consumption needs for dairy products greatly exceeded supplies. Dairy cows which yielded 54,000 metric tons of milk only covered 40 % of consumption needs. Yet the existent sheep and goat population could easily supply an additional 50,000 metric tons or 40 % of consumption needs.
6. The herds of the Al-Fadl and the Al-Hassanna fluctuate greatly in size. In my sample, the range extended from 60 sheep to 400 sheep in a herd. However, over half of the herds fell within a range of 125-160 sheep. Furthermore, as my informants insisted that an average of ca. 130-135 sheep is a minimum for household viability, I will take the figure 134 sheep as 'average' for the purposes of discussion.
7. Since the average market price of one kilo of wool was approximately three L.L. in 1962, these brokers were buying from pastoralists at 20-45 % below market prices. L.L. = Lebanese pound. 2.5 L.L. = \$ 1.
8. Although the pastoralists can effectively graze their herds on fields that have been harvested, they cannot use orchards.
9. Sugar beet was introduced in Lebanon in 1958. It is actively encouraged by the government, which exclusively controls, buys and sells this crop (the same is true for barley and wheat).

10. Sheep *sug* – the area in a market place where sheep are regularly bought and sold. The largest in the region are in Homs and Baalbek.
11. Due to a scarcity condition, in 1973, the price of an eight to nine month old lamb fluctuated between 90–110 L.L. It is not yet possible to determine whether this condition is temporary or will remain even in non-drought or non-scarcity years.
12. The balance which must be maintained between herds, pastures and human population is an effective brake against extreme herd accumulation.
13. Stone houses together with tents have been 'associated' with the Al-Fadl and the Al-Hassanna since at least 1920 (see Montagne, 1947: 224–225).
14. Imports of meat from live animals increased from 18,000 tons (24.4 million L.L.) in 1956, to 28,000 tons (112 million L.L.) in 1968. This is a rise of 50 % and 350 % respectively (Statistics drawn from F.A.O. *Country Notes*, 1972: 222).

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Dawn Chatty

American University of Beirut
Lebanon