

**Population Displacement and
Resettlement:
Development and Conflict in the
Middle East**

Edited by
Seteney Shami

1994
Center for Migration Studies
New York

Petroleum Exploitation and the Displacement of Pastoral Nomadic Households in Oman

Dawn Chatty
Sultan Qaboos University

For centuries pastoral nomadic populations of the Middle East have occupied the most remote, marginal, and inaccessible parts of the region. For a few pastoral groups this setting has been difficult-to-reach mountainous regions. For most, however, it has been the vast stretches of arid and semiarid land that make up over 80 percent of the Arabian peninsula. It is a way of life dependent upon the raising of livestock by natural graze and browse.¹ Migrations from areas deficient in pasture and water to ones with a surplus define this way of life, leading to a cyclical pattern of group movement in response to environmental, as well as social and political factors. Throughout history, pastoral nomadic tribes have either displaced, or been displaced by, other groups in the struggle for control of pasture and water adequate for survival. What is unique to the twentieth century – and in particular to the Sultanate of Oman – is the steady dislocation and incipient displacement of individual households within a traditional grazing area.

Pastoral nomadic systems have been, and continue to be, responsive to change. The delicate balance between human and animal populations and available graze and browse meant that surplus members were always leaving the system through extremes of either wealth or poverty (Barth, 1964). By the mid-twentieth century, however, the petroleum industry began to impinge upon this way of life and to threaten its most basic point of organization, the household. Between World War I and World War II petroleum was found on the fringes of the Arabian peninsula. Several decades later, petroleum was being extracted from a number of places in the more remote desert regions. By the 1970s these petroleum centers were acting like magnets, drawing, among others, members of pastoral nomadic groups from far-flung desert areas to work in the oil fields. At the same time individual households were discouraged from following historical patterns of migration based primarily upon ecological factors. The long-term consequences of this disruption and incipient displacement have been profound. Nevertheless, few studies of the phenomenon exist.

The Sultanate of Oman was among the last of the Middle East countries to be explored for petroleum. While extraction commenced only in the late 1960s,

¹Elsewhere, pastoralism is defined as "animal husbandry by natural graze with some access to crop cultivation" (Chatty, 1972/73:28). This definition seemed adequate for the mainly sheep and goat pastoralism of Northern Arabia. In Oman, however, where herds are mainly goat and camel browsers, it is necessary to expand the definition to include the bush and tree browse that is as abundant, if not more so, as graze.

it was not until the late 1970s and early 1980s that the impact of petroleum exploitation began to be felt by the pastoral nomadic tribes of Oman's central desert. One dimension of the situation – the responses of individual pastoral nomadic households to the superior forces which threaten to displace or dislocate them from their normal habitat – is the focus of this paper, showing the extent to which individual household heads attempt to modify and manipulate their requirements to make the best use of the ever-dwindling resources available to them in an effort to adapt their way of life rather than give it up all together.²

After outlining the way in which pastoral nomadic tribes have adapted historically to the ecological, political, and economic pressures in their universe, the modern political and economic history of the Harasiis tribe in the Jiddat-il-Harasiis of Oman is provided along with how the dislocation of individual households within their traditional territory has followed a number of phases. These phases have ranged from modified migration patterns to changes in the division of labor and herd management practices, and finally, in the last few years, to the steady but increasing stream of out-migration of individuals and households for better employment and welfare opportunities. There is still hope that, with reform of labor practices in the local petroleum industry, the tendency to migrate out for work can be halted and that the incipient displacement of pastoral households and its associated consequences can be alleviated.

Historical Displacement of Groups³

By definition, a pastoral nomadic tribe must attempt to establish control over a number of resources: pasture land, water holes, and agricultural centers. Thus, the pastoral nomadic tribes of the Middle East – often referred to as the Bedouin – have historically struggled with one another to establish their hegemony. One tribe's success was always at the expense of other tribes, who were generally displaced as a group and forced to move elsewhere in search of the requirements for survival. The historically documented struggles of the Aneza and Shammar confederation of tribes of the Nejd in the late seventeenth, eighteenth, and nineteenth centuries is but one example (Oppenheim, 1939). In their struggle for control over sufficient pasture and water, first the Shammar were first pushed out of the Nejd into the Syrian desert. As other Aneza tribes arrived who contested their rights, the Shammar moved again into present-day Iraq. Throughout the eighteenth and nineteenth centuries, the Syrian desert was the

²Unlike pastoral nomads in the Northern Arabian Syrian desert, the Harasiis have no border zone between agriculture and pastoralism. They cannot "settle" temporarily on areas marginal to agriculture until conditions allow them to reemphasize their animal husbandry practices. For the Harasiis it is an either/or situation. Either they continue to survive as pastoralists or they leave the Jiddat-il-Harasiis altogether.

³During the first study group on the Social Implications of Population Displacement and Resettlement at Yarmouk University in 1991, the following definition of displacement was generally agreed upon and is used herein: "the process of collective dislocation and/or settlement of people away from their normal habitat by a superior force."

scene of struggle and group displacement as one tribe after another followed from the Arabian Nejd. The Hassana, the Sbaa', the Fed'aan, and finally the Ruwalla arrived and fought over resources recently acquired by other newcomers or more established local tribes like the Mawali and Haddidiin (Chatty, 1986).

On the southern end of the peninsula a similar struggle is also suggested by linguistic evidence, which shows that some of the present-day pastoral nomadic tribes in Oman moved or were pushed into their present territory by the presence of stronger tribal groups. The Harasiis tribe of central Oman are related linguistically to the Mahra, a larger and stronger tribe occupying the desert of southern Oman (Dhofar). Oral traditions put their origins somewhere in the Hadramaut of Yemen. Gradually over the centuries, they were displaced by the Mahra and pushed progressively northward into the extremely inhospitable and, until very recently, waterless desert plain known as the Jiddat-il-Harasiis.

There is another form of displacement which needs to be mentioned here, though the scope of this paper cannot do justice to the complexity of the issue. The interaction of pastoral nomadic tribes with central authority has historically also resulted in group displacement. Very simply put, when central authority was strong, pastoral nomadic tribes retreated from marginal frontier zones of agricultural settlement (Lewis, 1987; 1955). When central authority was weak, pastoral nomadic tribes were able to push through the zones of dry farming, causing further decline in agriculture as farmers fled and villagers stopped paying taxes to the government, making tribute payments instead to the tribes controlling their security (Volney, 1787).

The cycle of interaction between pastoral nomads and urban dwellers was first analyzed by Ibn Khaldun in the fifteenth century. His work emphasized the noble aspect of "primitive" communities and the *asabiya*, or blood tie, of the group. By virtue of their strong ties, these communities could, and throughout history did, overcome the decadent, "lazy" urban dwellers until they too became decadent and were overtaken by the next wave of nomadic tribes from the desert (Ibn Khaldun, 1958). Ibn Khaldun's work enjoyed a revival in the late eighteenth and early nineteenth centuries. The modern governments of the Middle East are living with his legacy. Throughout the twentieth century the perception of pastoral nomadic tribes as a threat to central authority has been most pervasive.

Historical Efforts at Sedentarization

Until very recently, governments of the twentieth century Middle Eastern states have sought to control pastoral nomadic tribes in the only way thought possible – by stopping them from moving out of the reach of the modern central authority. The desire for control, expressed as sedentarizing the nomadic tribes, has been variously justified by governments in the Middle East as a way of

transforming a backward, primitive, and troublesome people into modern, rational citizens.⁴ Numerous settlement projects have been set up in Saudi Arabia, Syria, Iraq, Jordan, Iran, and Egypt.⁵ They have, in the main, been discredited and abandoned because goals have not been reached. To transform someone who relies on livestock for subsistence into one who relies upon tilling the earth for survival is not a simple task.

Sedentarization as a policy has been generally abandoned. It is not that governments no longer wish to transform and control pastoral nomads, but more that the persistent failure of such schemes has forced policymakers to consider other options. Over the past few decades most governments have acted to remove land-use rights from the tribes. National governments are now the owners of the land, a fact that has led, over the last three decades, to a cycle of abuse of pasture aggravated by drought. The carrying capacity of the land has thereby been reduced, resulting in widespread range degeneration.⁶ To solve this problem many governments have turned to international aid agencies for advice. Today, most development projects attempt to return some responsibility to the pastoral nomads under the banner of "conservation of the environment" (Chatty *et al.*, 1991; Dyson-Hudson, 1991; Behnke, 1988). Pasture management rather than settlement is currently the focus of most governmental efforts to deal with pastoral populations.

Case Study: Oman

The situation of pastoral nomads in Oman is unique. Although these tribes faced group displacement in their historical struggles with each other to wrest control of sufficient resources for survival, they have never been subjected to a policy of sedentarization. Moreover, since the accession to power of Sultan Qaboos bin Saïid bin Taimur, there has been an official policy of finding a way to extend social services to the pastoral nomadic tribes *without* forcing them to settle and give up their traditional way of life.

In 1980, I was invited to organize a project under the auspices of the United Nations Development Program. This project first studied the needs and problems of the Harasiis pastoral nomadic tribe of Oman's central desert, and then drew up and implemented practical programs that would meet those needs. It

⁴Much has been written over the past four decades about the "nomad problem" and the need to settle or sedentarize them. Awad (1962, 1959), F.A.O. (1972), Yacoub (1969), and UNESOB (1970) are but a few studies characteristic of the genre.

⁵Saudi Arabian settlement projects, for example, date back to as early as 1912 with the Al-Artawiya and Al-Ghutghut Settlements (Ikhwan) that were both destroyed in 1929. In 1961, the Wadi al-Sarhan was set up only to fail and be abandoned in 1965. In 1964, the King Faisal Settlement Project at Haradh was set up. It also failed and was turned into an 8,000-acre fodder crop project (Abdulrahman, 1979; Fara, 1973).

⁶Many governments in the region view the pastoral nomads as culprits while in fact they are victims, having had to give up their control over land use decades before to the national governments.

also extended some basic social services to this remote and marginal population. Between 1981 and 1983, a basic anthropological study of the Harasiis tribe was undertaken. Among other programs, a mobile primary healthcare system was implemented and a boarding school opened at a watering point near the center of their recognized territory. Seventeen households were randomly selected for in-depth study. The data from these units are the basis of the analysis which follows.

Ecological Setting

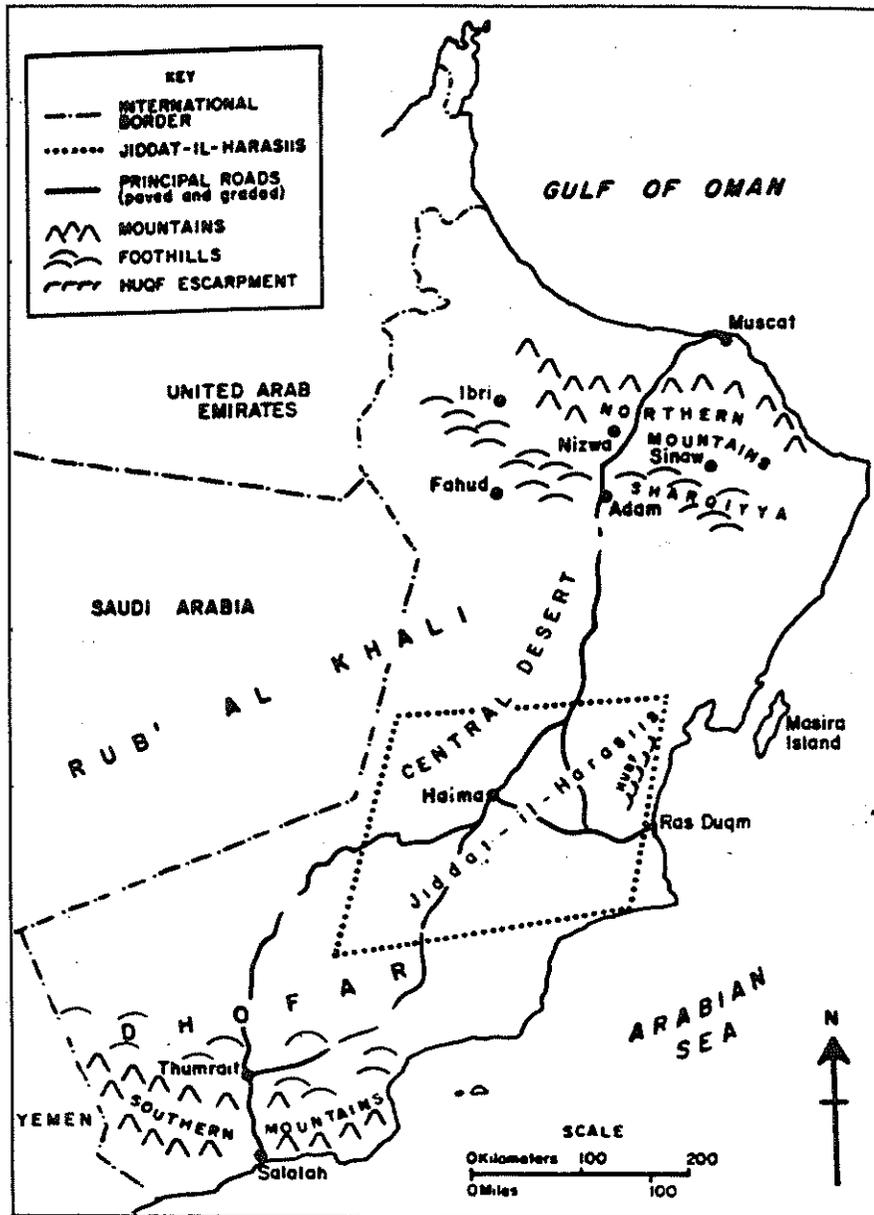
The Jiddat-il-Harasiis separates northern from southern Oman (*see* Map I). Its eastern boundary is the Huqf escarpment. To the north, the Jiddat gradually changes into the gravel fan of the northern mountains. To the northwest it comes up against the southern fringe of the Rub' al-Khali sand dunes. Its western boundary is marked by the plains heralding the southern mountains. Its most conspicuous features are the scattered depressions, called *haylat*, which vary in size from one to 25 hectares.

The climate of the Jiddat displays the extremes associated with most deserts. The proximity to the Arabian Sea mitigates some of its intensity. Rains tend to fall in late winter and spring, but have been known in summer as well. Between March and October a heavy early-morning fog bank frequently blankets the desert floor. The vegetation cover of the Jiddat is determined as much by the mean annual rainfall of 50 millimeters as by the amount of water available from the fogs. For a desert, the density of trees is remarkable; the most widespread tree is the *Acacia tortilis*.

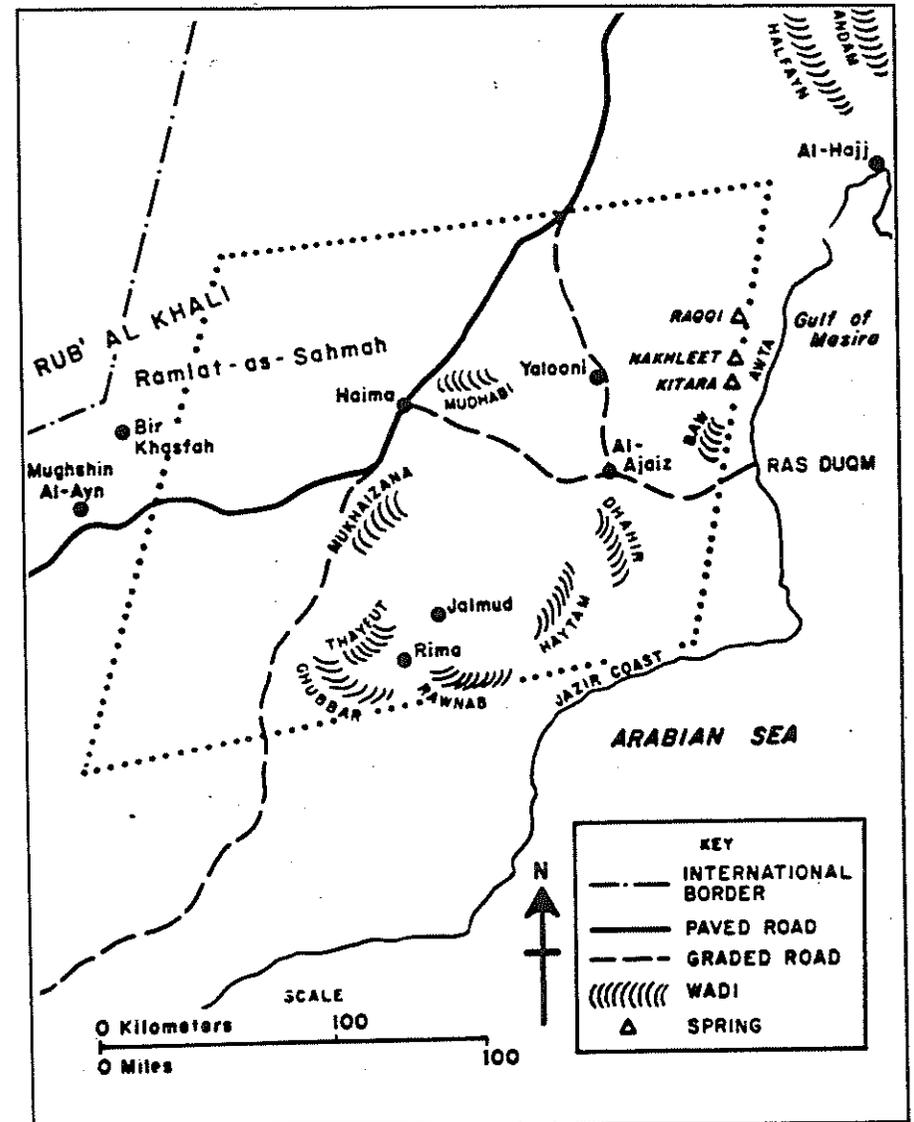
The well-developed vegetation of the Jiddat is the habitat of the Harasiis tribe. These pastoralists appear to have been originally a Dhofari tribe. Their language, Harsuusi, is a distinct south Arabian language related to Mahri, the language spoken by the Mahra tribe adjacent to them along their southwest border. Over the past few hundred years the Harasiis have gradually pushed, or more probably been pushed, northward and eastward into the Jiddat-il-Harasiis by their stronger neighbors, the Mahra (*see* Map II). The Mahra have in turn been displaced by an even stronger tribe, the Beit Kathir. As the Harasiis moved into the various wadis which mark the natural geographic boundaries of the Jiddat floor where some relief from the unbroken and hostile plain can be found, they have come up against other stronger pastoral groups.

To the east along the Jazir coast and the Awta they have come into conflict over water rights with the Jeneba, a populous and widely spread tribe with important contacts among the settled communities and in the present-day government. Disputes over these mutually shared areas have not generally been settled in favor of the Harasiis, and their access to the watered Awta has gradually diminished. Their relations with the Wahiba to the north in the Wadi Halfayn have been more positive. It is now not uncommon to find Harasiis families in areas traditionally considered Wahiba territory, and vice-versa, when ecological

MAP I



MAP II



conditions make such movement necessary. To the northeast is the Duru tribe. Although there were some disputes with the Duru over territory several decades earlier, these no longer mar relations.

Traditional economy is based on the raising of camels and goats by natural graze and browse for the production of milk rather than meat. At the core of the Harasiis way of life is migration, which is determined by a combination of seasonal and ecological variables in the location of pasture and graze. Survival of both herds and herders makes movement from deficit to surplus areas vital. As with any pastoral group, the Harasiis seek to control a territory that contains sufficient resources to sustain communal life. They tend to live in the *haylat*, or wadis, where trees are commonly found for shelter and where graze and browse for their animals is more plentiful.

The Harasiis tribe organizes itself into seven lineages or subgroups called *beit* (pl. *buyut*). These lineages are divided into two factions, headed by the Beit Aksit and the Beit Mutaira; leadership of the tribe as a whole lies with the Beit Aksit. Each lineage generally recognizes or appoints two spokesmen who act on its behalf. These men, called *rashiid* (pl. *rushada*'), represent their lineage in discussions and meetings concerning the welfare of tribal members. The pivotal position among these *rushada*'s is that of the sheikh. Though traditionally he enjoyed a vast field of privileges, today the sheikh's most important duty is the regular representation of the tribe at the Government Tribal Administrative Center at Haima.

Traditional Subsistence Pattern

The Harasiis tribe is made up of approximately 2,500 people, of which close to 2,000 are found on the Jiddat-il-Harasiis at any one time. Households are generally extended family units, the average family being composed of nine members. At the core is the nuclear family of husband, wife, and children. Generally two or three adult relatives make up the rest of the household. On average, it keeps a hundred goats and a few sheep. These are the responsibility of the women and older girls. The typical household also has 25 camels, of which five or six heavily pregnant or lactating ones are usually kept near the homestead. The remainder of the camels are left *mafhook*, i.e., free to graze in the open desert. Their whereabouts are carefully monitored and an elaborate camel information exchange system operates among all the tribesmen. When they meet, tribesmen first exchange news about the condition of the pastures, then the whereabouts of various *mafhook* camels, and finally news and topics of interest to various family members. Homesteads are usually moved a significant distance three or four times a year. A serious husbandman, though, will shift his homestead a few kilometers every few weeks to ensure that the family herd of goats and sheep does not destroy what graze and browse exists around the campsite.

The Harasiis herds were bred and selectively culled for their milk-giving capacity as well as for their hardiness in the face of extreme aridity. Goats were

once exclusively white, short-haired Somali goats which could withstand long periods without water and still yield abundant milk (1 to 3 kilograms per day per goat). Camels were also bred for their milk-yielding capabilities, and careful genealogical records were memorized. Camels and goats were grouped as "daughters" of highly appreciated strains. Both the camels and goats were well-adapted to the traditional migration pattern of the Harasiis tribe. The relatively cool winters were spent on the Jiddat floor itself, where water was nonexistent. The summers were spent in the Awta, where the herds had some access to the brackish spring water of the region.⁷

Both the existence of sedentary communities in adjacent areas and access to their agricultural products are basic to the organization of all pastoral communities. Interdependent relations have long bound the Harasiis tribe to the sedentary communities along the Sharqiya foothills. Harasiis men often trekked as many as 15 days camelback to reach these agricultural centers, surviving on a diet of dried fish and dates. They often herded their goats for auction in the village marketplace, and carried with them palm frond mats, bowls, and baskets for sale, as well as pots, trays, and other metal items for repair at the local coppersmith. For generations this relationship bound the Harasiis in an economic partnership to the villages of the Sharqiya foothills – particularly Adam and Sinaw. The cash economy of the village was reinforced by the continual influx of animals from the desert. Money paid out for the purchases of animals was rapidly recouped in the sale of foodstuffs, luxury items, and manufactured foods to the pastoralists. The relationship with the villages reinforced not a cash, but a subsistence economy for the Harasiis. The long treks to the village marketplace were motivated by the short supply of basic necessities in the pastoral household.

Petroleum Exploitation and Political Displacement

In 1955 an exploratory party of the national oil company, Petroleum Development, Oman (PDO), landed at Ras Duqm and then made its way from the southern coast of Oman across the Jiddat-il-Harasiis and into the Central Desert of Oman to Fahud. Contact was then made with local leaders of the Duru tribe, who agreed to allow PDO to prospect for petroleum in their tribal territory. Soon thereafter, the oil company needed to establish a system of labor recruitment and supervision. Though tribal leaders were accustomed to acting as mediators on behalf of their tribesmen, the oil company requirements were novel. Minor leaders took to claiming exclusive rights to furnish labor for the oil company, and jealousies divided the tribal political structure. Eventually the oil company needs took precedence and traditional Duru tribal hierarchies were put aside for more accommodating individual associations.

The Harasiis tribe was to face a very similar political upheaval. In 1958, the oil company began to prepare a new drilling location in the middle of the

⁷Until 1955, when the oil company opened a water well at Al-Ajaiz, there was not one well or spring on the entire surface of the Jiddat-il-Harasiis – an area of 40,000 square kilometers.

Jiddat-il-Harasiis at Haima. After consultation with the Sultan, Saiid bin Taimur, PDO appointed a minor tribal head, Salim bin Huweila, as its labor supervisor.⁸ After repeated strikes, arguments, and other labor-related disturbances, both Salim and the traditional tribal leader, Sheikh Shergi, were sent to Salalah to confer with the Sultan. Six months later, when the unrest had died down, they returned to the Jiddat. Over the next ten years, PDO played one man off against the other. When Salim became too demanding or too difficult, they would turn to Sheikh Shergi. When Shergi made requests they considered outrageous – generally for water – they would ask the Sultan to allow them to return to dealing with Salim. A decade of interference by the oil company and the government came to a close in 1972 when Salim bin Huweila died of cancer and Sheikh Shergi was reinstated as the official leader. But, by this time, the Harasiis loss of confidence in their authority figures was irreversible (see Chatty, 1983). The offspring of Salim and Sheri continued to vie with each other for the attention of the oil company, its subsidiaries, and various ministries of the government. Dissent marred all political activity. The tribe was never again able to present a united front when negotiating with the government. Disputes over labor recruitment, and hence territorial rights, were taken out of the hands of tribal leaders to become an internal government affair.

Petroleum Exploitation and Economic Development

Economically, the Harasiis tribe fared far better. From the moment in 1955 when oil exploration teams came ashore at Duqm, a new universe opened. Exploration teams and seismic crews in the search for oil ranged widely over the Jiddat-il-Harasiis and other areas within their concession. These units hired guards, drivers, and unskilled laborers from among the Harasiis on short-term contracts, and they were continuously on the move. Permanent oil camps were constructed, mainly outside the borders of the Jiddat. These also attracted the attention of the Harasiis, sometimes out of a desire for work and sometimes simply because of the unpredictability and excitement of oil exploration. Eventually, rigs were set up and actual petroleum extraction occurred. By 1990, the Jiddat-il-Harasiis was accommodating two permanent PDO camps, two semipermanent camps, and dozens of working fields. These installations were all linked together by well-graded roads and pipelines that connected the fields to the terminal at Mina al-Fahal in the greater capital area.

Tremendous infrastructural changes accompanied this oil boom. Graded roads replaced camel-goat tracks. In 1981 a paved highway was opened, running through the center of the Jiddat and connecting the north and south of Oman for the first time. The 5-to-15 day journey across the desert by camel became a thing of the past. In 1974, the first Harasiis-owned half-ton truck appeared on the Jiddat. Within five years nearly every Harasiis household

⁸Except for a handful of Omani administrative and clerical staff members, company employees were expatriates.

had one truck, if not more. In a survey conducted between 1981 and 1983, only one household head out of twenty did not own a vehicle (Chatty, 1984). Journeys to town centers were no longer measured in days, but in hours: six to Nizwa, eight to Muscat, seven to Salalah.

These roads cut Harasiis travel time by half. Their use meant that the Harasiis could transport water, feed supplements, and other household goods more rapidly, especially if the household was close to the road. Pipelines, on the other hand, created barriers since they could only be crossed at special intervals. Movement by truck had to be carefully considered to take into account both roads and pipelines. The oil camps and their immediate surroundings were avoided, even if there was good graze⁹ around a camp. Only the *mafhook* camels would be likely to make use of it. Women and the herds of goats would not come into close proximity with these oil company installations. Hence, the movement of people and herds no longer responded mainly to ecological conditions. Important considerations had to be given to the presence of the oil camps, road networks, and pipelines.

Access to water has always been of profound importance to the Harasiis tribe. Prior to 1955, water was only available to them from the heavily mineralized springs of the Awta. Thus, the practice of collecting water from the heavy morning fog was universal and water consumption was kept to a minimum. Blankets were spread under trees so that they could then be shaken out or wrung and the water collected in bowls. The traditional Harasiis goat, the short-haired white animal, needed no water in winter and very little in summer. After 1955, two water sources were opened on the Jiddat. These were the wells of Haima and Al-Ajaiz, which the oil exploration teams drilled and, upon the request of the government and Harasiis tribal representation, left in operation after they moved on.¹⁰

During the 1960s, Harasiis household heads began to introduce black, long-haired Omani goats into their existing herds in an effort to diversify their economy. These goats were far more marketable than the traditional white-haired Harasiis goats, since their meat was appreciated in the northern Omani market. They were, however, less suited to the aridity of the Jiddat and required greater quantities of water.

Altered Migration Patterns

Up until the late 1970s, the Harasiis tribe contact with the oil company and the associated oil exploitation activities resulted only in some small-scale spatial dislocation. Instead of moving away from or out of easy range of the oil camps and associated facilities (as would have been expected) many families began to

⁹This was a rare phenomenon. 1992 was the first year since 1977 when one could speak of "generalized" good graze in the Jiddat.

¹⁰These wells were open to all for use without prior consent by the owner since the oil company/government was considered to be the owner.

modify their migration patterns to take into account the possibility of getting a few barrels of water from an oil company installation. Whereas before 1955 the Jiddat-il-Harasiis would have been devoid of all human habitation during the summer months, gradually more and more families began to remain near one of the water wells left open by the oil exploration teams. Households tended to remain within a reasonable driving distance (2–3 hours maximum) from a camp where either employment existed or water could be obtained. The earlier, ecologically-based migrations of households still operated, but only when very good pastures existed in some part of the desert, or when drought conditions were so extreme that the family and household herds could not be sustained on available trucked water.

Relations between individual tribesmen and oil camp employees, including both unskilled workers from the Indian subcontinent and European managers, were very checkered. European expatriates tended to be generous in response to requests for water, food, spare parts, tire puncture repair, and simple medications. Other expatriate workers, however, generally ignored these requests, claiming that they had no authority to make any decisions. The Harasiis tolerated the hiring of other tribesmen within the oil camps in the Jiddat-il-Harasiis, but only as long as they perceived that their quota was fairly represented.

Altered Herd Management

During the early period of oil exploration a number of local tribesmen were hired as guides, drivers, guards, and manual laborers. They quickly adapted to the routine – if not always the discipline – of the company. Soon their salaries became an increasingly important factor in the economic interplay between desert and village. In many cases a man's salary began to replace animal revenue as the main source of purchasing power. For the first few years after wage labor with the oil company was established, household herds of goats and some sheep began to grow in numbers. Fewer animals were being sold as the necessity to do so was diminished by the fact that ready cash was now available. The growth in herd size seems to have continued unchecked until the late 1970s when a combination of drought, disease, and poor herd management came into play.

The new oil employment did not require men to migrate since most of the jobs were located within the borders of the Jiddat. The nature of the employment, however, often required the adult male household head to be away from the family unit for weeks at a time, as the commuting distance generally exceeded three hours one way. During such absences, another male relative would often take over the vacant economic role and see to it that the household was provided with sufficient water, milk, and other necessities. Even unrelated households camping in the same *haylat* tended to help each other when a household head was absent. Terms of employment were favorable, and men did have long stretches at home. Two weeks on duty, followed by one week off, was a fairly standard practice. If a family decided to move the household, it would

either delay such a move until the head of the family had his regular week off or a swap of duty would be arranged. Though changed to keep pace with new factors in the environment, traditional patterns were not breaking down. For example, milking of camels was strictly a male preserve. Today, when the male head of the family is away at his job, a relative or close family friend will always endeavor to milk the household camels for the family's use. Only when no man is available will a woman do the milking herself.

As long as employment was more the exception than the rule, overall animal husbandry practices continued much as they had before. But once employment and wage labor became the norm, herd management practices had to change. By the early 1980s, most Harasiis households had an adult male working either in the oil industry or a government-associated project. My survey of Harasiis households showed that 82 percent of the sampled households had some form of income beyond the sale of animals. Furthermore, households where men were employed full-time had, on the average, 35 percent fewer camels and 25 percent fewer goats than did households with no outside salary. These same "employed" households revealed a surprisingly low incidence of sales of livestock, perhaps because the demands of fulltime employment makes it difficult to undertake the distance between producer and market – easily a 1,000 kilometer round trip.

Reduced sales of livestock are generally associated with accelerated graze depletion, over-grazing, and other conditions deleterious to the range land. The association of factors in the Jiddat-il-Harasiis, however, appears to be different. Employment here has resulted in lower stock numbers, meaning less pressure on pasture and browse. This reduction in stock could be due to a number of factors. First, employment in the oil industry and other government-associated jobs removes the men from the household for weeks at a stretch. Although the men do keep a distant eye on the herd, many management decisions have to be put off, altered, or reconsidered in the light of their work shift obligations. Entertaining work-related guests and other visitors has increased. In the mid-to-late 1970s, two or three ritually slaughtered goats a month was considered reasonable. By the mid-1980s, the estimates were doubled. Second, women are left to run the household and look after the herds of goats and sheep, as well as care for the needs of the family, young and old. And although women do drive trucks, they are unable to regularly put aside the amount of time necessary to go for water. The average family in 1983 required 14 drums of water per week in winter and 21 in summer.¹¹ Using half-ton pickup trucks that carry four drums at a time – each with a capacity to hold 209 liters – one adult could easily drive 500 kilometers or approximately 20 hours per week, for water alone. Herd size in this situation seems to be quite directly related to the amount of water that the household can reasonably afford to procure. This is, nevertheless, a vast improvement over the situation prior to the early 1970s when water require-

¹¹By 1992, the requirements for water had increased 50 percent. Nearly 20 drums of water per week were required in winter and close to 30 in summer.

ments were kept to an absolute minimum and milk from the herds provided the basic liquid requirements. At that point, a dozen goatskin bags filled with water and transported by camel would last a family for several weeks.

By the mid-1980s, homesteads among the Harasiis had acquired a veneer of substance unlike earlier units which often consisted of nothing more than a few blankets thrown over a tree or bush for shade and a few reclaimed petroleum barrels scattered about as storage units for food supplies and other sundries. Depending on the size and maturity of the unit, most homesteads consisted of one or two mesh-wire portable frames of generally 4 by 4 meters. Commercial blankets and tarpaulin covered these structures, creating the shade or shelter necessary for the season. Generally a shelter for young kids and for the pregnant and lactating camels was also part of the homestead. These units would be made up of discarded wood, wire-mesh, or any other surplus material at hand. Two half-ton four-wheel-drive vehicles were also common: one for the women and children to drive while supervising the small livestock, and the other for the household head's needs as he moved across the Jiddat for work, water, and feed supplements.

With the introduction of the truck in the Jiddat-il-Harasiis in the mid-to-late 1970s, it would not have been unusual if animal sales had increased to meet the new costs of operating a vehicle. While many household heads did sell a few camels to make the initial investment in a vehicle, most men relied on their wages – when they had jobs – to meet the costs of operating a truck. The average running costs in 1983 (petrol, replacement of tires, and other spare parts) were close to 100 Omani Rial (R.O.) a month.¹² The average monthly wage for an oil installation guard on the Jiddat-il-Harasiis was then 120 R.O.

Today, most families still maintain herds for subsistence, to provide the family with milk and an occasional goat dinner. Wage labor pays for the maintenance and upkeep of the motor vehicle, which, ironically, is becoming increasingly necessary in order to hold down a job. The management of the herd to provide surplus income is common among households where fulltime employment has not been sought.

Most problematic for the Harasiis has been the day-to-day care of camels. While women have always owned and looked after the herds of goat and sheep, they have had little to do with the camel herds, which are owned by the men. Until the mid-1980s, men relied on a network of sons, brothers, and sometimes cousins to look after the herds of camels; a herd of 100 camels belonging to four brothers was not unusual. The kinsmen would take turns looking after the camels, bringing water and feed to them when necessary and moving them from one general pasture area to another.

By the mid-1980s, however, the camels left in the homestead had become a problem. As more men were engaged in one job or another or were busy looking after large combined herds of camels, fewer men were available to help the women at the homesteads. By this time, a number of households had a few

¹²One Omani Rial is roughly equal to three U.S. dollars.

specially reared and hand-fed racing camels in addition to those pregnant and lactating. Camel racing has always been a popular sport but it has also become particularly lucrative for a lucky few – as representatives of wealthy Gulf Arabs regularly comb the desert tribal areas for promising racing camels. By 1992, 50,000 R.O. (U.S.\$150,000) was considered a fair price for a promising racing camel.

Care, watering, and feeding of the special camels, however, has become an expensive proposition. Household heads working full time have found it necessary to import Indian laborers to look after their camel herds while away on the job. These workers, regarded as a necessary evil, provide no significant status for a family that is forced to employ "foreigners." Concern for the well-being of their women and girls, often left alone for weeks with the foreign hired help, has muted general enthusiasm for this development. As well, although the wages are low,¹³ the expenditure is more than many can afford in relation to other costs for the family.

By the late 1980s, many Harasiis households had come to rely on wage labor to run their vehicles and pay for other expenses like feed concentrates and hired Indian workers, their herds still viewed as the subsistence base for the family. The limited effort that was made two decades earlier to improve the marketability of their animals – the introduction of the black, long-haired goat – has not been sustained.

Out-Migration for Employment

The Harasiis' growing dependency on some cash income has come at a time when the labor market in the local area is becoming exhausted. Until the mid-1980s, labor requirements for PDO had slowly grown as more and more exploratory work, permanent oil infrastructure, and oil industry development was carried out. By the mid-1980s, labor requirements began to level off and in some cases drop; at the same time, the oil company and its subcontractors began to increase dependence on skilled and semiskilled labor from abroad, mainly from the Philippines. This policy of importing cheaper labor from abroad is particularly troublesome in the Jiddat-il-Harasiis, where increasing numbers of men are searching desperately for paid employment in order to support their vehicles, their herds, and their families. Most are illiterate and are further stigmatized by a badge of "unreliability" which is popularly applied to pastoral nomads. It is the uncommon Harasiis man who manages to break out of these cultural barriers to achieve permanent employment status with the oil company. Increasingly over the past few years, a steady trickle of household heads has migrated to the Gulf states in search of employment to support their pastoral nomadic households on the Jiddat-il-Harasiis. Some have found jobs

¹³Whereas Omani labor laws guarantee nationals certain rights in terms of salaries, work hours, and holidays, similar rights do not automatically apply to the "unskilled workers," almost exclusively expatriates from the Indian subcontinent, who care for the camels. These foreign laborers earn as little as 40 R.O. per month.

and now make the 500-mile commute back to their homes in the Jiddat three or four times a year. Others, however, have begun to consider moving their families permanently to the Gulf states where, they are told, considerable financial inducements are being offered to pastoralists like themselves to emigrate (free housing, free vehicle, herd supplements, free land). In 1989, one Harasiis family left the Jiddat for Abu Dhabi after waiting in vain on the perimeter of Haima for four years to receive either some housing assistance or welfare help from the government. Others were expected to follow in their wake.

Most pastoral communities regularly experience an out-movement of households. A mechanism that has been well-documented in a number of studies (Lewis, 1987; Chatty, 1986; Barth, 1964), it serves to help maintain the delicate balance that pastoral communities need to keep between their animal and human population sizes and the amount of pasture available. What is disturbing in the Jiddat-il-Harasiis, however, is the extent of the disaffection present in the late 1980s and early 1990s. The first group of young Harasiis men is shortly to graduate from the primary and secondary school established at Haima in 1981, having acquired the minimum educational level for consideration as a skilled worker as set by PDO in the early 1980s.

There are, as yet, no plans to recruit these boys into a training program for permanent employment in the oil company or other government-associated organizations. The requests for employment through the offices of the local government representative (Wali) at Haima have soared in the last few years. Nearly every second request is for employment whereas earlier in the decade it was for water distribution or subsidized animal feed. Many household heads fear that their sons, now in the Haima boarding school, will soon emigrate to the United Arab Emirates or elsewhere for work, as has already happened among other pastoral tribes in Oman. For example, among the Duru and the Wahiba tribes, out-migration for work is very pronounced; nearly 50 percent of these pastoral households have a male adult working in the United Arab Emirates (Chatty, 1989). For the Harasiis tribe, and for the country in general, it would be a great sadness if its first literate generation was forced to emigrate out of the country to find work. It would be an unnecessary tragedy if this trend were to continue to its logical conclusion, complete displacement and permanent emigration for entire households.

Conclusion

The Harasiis tribe has had some contact with the petroleum industry and its modern technology for nearly 35 years. Initially that contact had little direct impact on the pastoral household other than to modify its migratory patterns in order to take advantage of possible access to water, food scraps for their herds, and, later, petrol for their vehicles. This changed dramatically once motorized transport became widespread in the Jiddat. In order to support their new "beast

of burden," most household heads had to hold down regular employment. Until the late 1980s, that employment was generally with the oil company or one of its subcontractors. Most of the men acquired unskilled and, by and large, temporary jobs. They accepted that without any education they could not expect more. In order to keep these jobs they had to modify their herd management practices. Earlier efforts to develop a more marketable goat were put aside in order to maintain the herds as the subsistence base for their families. For a few household heads who were able to break through the cultural biases and hold down permanent and better-paid work, herd management often meant that they had to import Indian laborers to look after the larger domestic animals and to help maintain the family during their long absences from the homestead. It is only now, as jobs available to the Harasiis are becoming less and less available, that part of the population is beginning to consider emigration, not just of male household heads but of entire families, as a solution to their problems. It is a stage that need not be inevitable on a large scale if local labor policy, particularly in the oil industry, is reevaluated. Some out-migration is to be considered normal in any pastoral community. What is neither normal, nor acceptable for the well-being of the desert-based community is large-scale emigration of the young and best-educated. It is not yet too late for the oil company and its subcontractors to reconsider their present policy of importing expatriate skilled labor, but also semiskilled and unskilled laborers into the Jiddat-il-Harasiis. Although the imported labor is less costly in the short-term (lower wages, reduced time off, and shorter annual holiday), the long-term benefit to the country is questionable. A regular, annual intake of the 15 to 20 Harasiis graduates of the local school at Haima into a petroleum company staff training program would go a long way toward countering a large-scale emigration out of the area for work. In the long run it would also mean that Oman would take one step further in depending on its own resources and manpower. The salaries paid to local employees would be reinvested back into the country, unlike those paid to foreign laborers; the dislocations of petroleum exploitation would be reduced. Pastoral nomadism in the Jiddat-il-Harasiis would continue to change and adapt but without the serious social, demographic, and economic consequences of full-scale permanent emigration.

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