

giving way to granite and more gently rounded summits, falling on their northern slopes to low foothills and the vast sweep of the Anatolian Plateau. Rising directly out of these steppelands are the great volcanic cones from Emir and Hasan Dağ in the west, to Erciyas, Nemrut, Süphan and Ağrı Dağ in the east, thrown up by disturbances deep in the subduction zone where the African plate plunges beneath the Eurasian one. To the east, where the mountain chains begin to sweep around to a north-west-southeast direction, rises the limestone massif of the Jilo Mountains, a tangled maze of saw-toothed ridges and deep abysses. While a certain amount of shearing and slippage occurs along the Taurus section of the arc, in western Iran the tectonic plates meet head on, producing down-warping in Mesopotamia and the Persian Gulf and setting up a series of parallel ripples running from northwest to southeast, each a little higher than the previous one, culminating in the snow-capped peaks of the Zagros. Again the relatively open terrain of the higher altitudes, or thrust zone (Gilbert 1983), contrasts with the convoluted limestone ridges and deep, sunless gorges at the lower altitudes (Sunderland 1968).

The implications for human settlement of such a landscape have been considerable. From very early times until the present, population has been concentrated on the plateau or the coastal plain and Mesopotamia. Moreover the mountain chains have served as significant cultural barriers, though by no means impenetrable ones. In sharp contrast to the situation in Arabia and Central Asia, the major access routes through the ranges, by which trade and communications are carried on, also serve as the migration routes of nomads, bringing them into continual contact with sedentary society. It is the character of this interaction, as much as the great environmental and seasonal contrasts, which has influenced nomad social structures and settlement systems.

## 2

# ORIGINS AND DEFINITIONS

The weapon is his companion . . .  
Who knows no submission,  
Who eats uncooked flesh,  
Who has no house in his lifetime.

(from a Sumerian text, in Chiera 1924, p.20)

While the quest for the origins of nomadic pastoralism is not the central theme of this work, the issue must be raised if only because it has formed the focus of so much archaeological work. Yet the origins of nomadism may not be of quite the same significance as other origins – such as the origins of food production and of urban life. In the latter instances we are dealing with major systems transformations which require extremely complex explanations and models and which are part of a general trend towards organizational complexity and increased energy capture. The advent of nomadic pastoralism has its place in all this but if, as suggested earlier, it is peripheral to the main line of cultural evolution, then it may not require the same level of explanation. Perhaps nomadic pastoralism cannot be said to have had a precise origin, or perhaps it has had many origins in many places and at different times. If, as argued by some (Khazanov 1984; Gilbert 1983; and also in this work), nomadism is an unstable and fluctuating phenomenon involving a heavy commitment to pastoralism, then we would be far better off studying those sets of conditions under which it emerges or declines than in searching for origins or building causal models.

A good starting point would be to define the *necessary* conditions for the existence of nomadic pastoralism. These include the presence of suitable animal species, a suitable physical environment for the maintenance of these species and the appropriate technology and social relations for domestication and continuous herding. The period in cultural evolution at which all these conditions were fulfilled may be taken as the predicted baseline for the subsequent appearance and reappearance of nomadic pastoralism. Yet existing theories of nomadic origins have tended to concentrate around two periods. It has been argued, most frequently by social anthropologists and historians, that nomadism is a consequence of the specialization and integration of pastoralism and cultivation which was

only possible with the development of complex (i.e. urban) societies (Lees and Bates 1974; Khazanov 1984, etc.). Others, predominantly archaeologists (Hole 1978; Gilbert 1983), have pushed the search for nomadic origins far back into the neolithic.

## Historical evidence

Although accounts of ancient Near Eastern history often seem to assume the presence of a fluid, peripheral and mobile pastoral population, they are rarely explicit on this point. To the extent that recognizably nomadic groups appear at all it is generally within the context of the wider political designs of neighbouring states whose sources tend to stress administrative categories rather than economic or social ones. Apart from terms loosely translatable as Sandbewohner, Wilden, Zeltwöhnern, Wandern and Räubern (Vardiman 1977, p.22), there seems to be no ancient term which conveys the exact sense of 'nomad'. Even today, terms which initially conveyed the meaning 'nomad' have taken on an increasingly ethnic flavour. For instance, the term *Baluchi* was originally employed by settled populations to refer to all nomads, but as many nomads settled the term remained as an ethnic designation (Spooner 1969, p.150). The Turkish word *yörük* (wanderer) has also assumed a quasi-ethnic character. It is possible that a purely economic distinction between nomad and sedentary, pastoralist and cultivator, was not considered relevant in the past – at least to those who kept the records.

The earliest documentation of something resembling nomadism in the Near East concerns groups coming under the blanket term Amorites. These appear to have been a highly mobile, semitic-speaking population occupying the margins of the Fertile Crescent in the first half of the second millennium BC (Oppenheim 1977; Girshman 1964; Albright 1940, p.109) (see Fig. 2.1). They are described as keeping large herds of cattle, sheep, goats and asses (ibid., p.122) which confirms a pastoral emphasis, but not necessarily nomadism. Mural paintings from the 1,900 BC site of Beni Hasan portrayed a tribal chieftain named Absha with his retinue of kinsmen armed with throwing sticks and javelins and a baggage train of asses (Patai 1951, p.404). This could well be a nomadic group in migration, but there is no corresponding evidence for large flocks in attendance.

It has been suggested (Roux 1966, p.138) that the Amorites – or at least large sections of them – practised a form of sheep nomadism analogous to that pursued by modern Bedouin. Valuable insights into this period (circa 1,750 BC) have been obtained from archives discovered at Mari on the Upper Euphrates. Interpretations of these sources (Luke 1965; Rowton 1973, 1974) point to a small, vigorous kingdom deriving its income from river trade, intensive riverine agriculture and extensive pastoralism. Surrounding peoples, of an evidently tribal character – the Haneans, Suteans and Jamenites – appear to have been under varying degrees of political control. The Haneans, who seem to have formed the tribal power base for the ruling dynasty, displayed a 'semi-nomadic' pattern of residence in riverside villages, cultivating during the summer months and migrating into the steppe and northwards into the Khabur Valley during winter. The

other groups appear to have had more extensive migrations, taking them beyond the authority of the King of Mari for much of the year (Luke 1965). Extensive surveys and excavations in the Khabur Valley (Mallowan 1977; Oates 1976) have however failed to reveal any traces of pastoral campsites, though none were explicitly sought. Dramatic shifts in the zone of settlement within this area suggested to Oates (1976, p.235) that agriculture and large-scale settlement was only possible when state authority was able to resist nomad incursions. The period covered by the Mari archives was apparently a low point for settlement in the Khabur basin.

Similarly the advent of dark ages has led historians and historical archaeologists to put forward nomad invasions as an explanation. This approach is epitomized in a volume entitled *Dark Ages and Nomads, 1000 BC* (Mellink (ed.) 1964) based largely on chronological arguments and exotic artworks. The theoretical poverty of this approach has led one reviewer (Barnett 1968) to remark: 'Yet a nagging doubt remains. Dark ages certainly, but nomads? Was the question precisely enough formulated, if at all?' A useful critique of this and other migrationist themes is contained in a review article by Adams *et al.* (1978).

Apart from lists of spoils, including large numbers of livestock taken on Assyrian or Hittite raiding expeditions, little is known of the subsistence base of the peoples inhabiting the Zagros and Taurus Mountains where most of the contemporary nomads appearing in this study are located. These people of the hills, the Gutians, Kassites, Hurrians, Mannai and Lullubi, make fleeting appearances in Mesopotamian and Anatolian history as marauders, founders of dynasties and victims of Assyrian razzias. Archaeological evidence from settled sites in the region confirms an emphasis on pastoral production (Levine and Cuyler-Young (eds.) 1977) but beyond that we cannot go.

People of known nomadic affinities, the Scythians, Cimmerians and Sarmatians, erupt fleetingly onto the scene. Historical references to them are common, and there are some indications of economic and domestic life. For instance Strabo describes the Sarmatians as '(partly) nomads and others tent-dwellers and farmers' (Khazanov 1984), while Herodotus (IV, p.105) reveals considerable variability in the extent of pastoralism practised by various Scythian tribes. But apart from a few arrowheads and isolated hoards (Phillips 1972; Mellink (ed.) 1964) all attempts to pin them down to recognizable assemblages or settlements have been inconclusive. They are still best known from the royal tombs to the north of our study area, although recent excavations in the Soviet Union have revealed what appear to be the remains of open campsites (Shilov, unpublished paper, World Archaeology Congress, 1986).

A form of Bedouin nomadism in the piedmont zone at the foot of the Taurus Mountains was documented in Roman times (Peters 1978) during which the north-south migratory cycle occasionally interfered with the major trade routes running east-west. This is in the same region as the kingdom of Mari, arguing for a continuity of pastoral and possibly nomadic tendencies from very early historical times.

Historical accounts during the Islamic Period (AD 1,000 to 1,900) provide secure evidence for a substantial nomadic presence in large areas of

the Near East, particularly during the Turkic and Mongol incursions during the eleventh, twelfth and thirteenth centuries AD (Cahen 1968; Minorsky 1978; Turan 1971; Sümer 1980). At the time of the initial Seljuk migrations into Iran and northern Mesopotamia there is some evidence of indigenous migratory pastoralism in the Zagros and Taurus foothills and conflict over the control of pasture between the new immigrants and original occupants (Lambton 1973; Bosworth 1973).

The question of the presence of ancient nomadic groups, however these are defined, in the mountain regions of the Near East is left unresolved by the available historical evidence. There is enough evidence to encourage further investigation and to point to archaeology as the principal medium of inquiry.

## Theories of nomadic pastoral origins

Lees and Bates (1974) propose a model according to which an initial pattern of mixed dry farming and subsistence pastoralism is gradually replaced by a more specialized form of cultivation based on canal irrigation. The new system supports an increased population and, as it is labour-intensive, problems occur in the scheduling of agricultural and pastoral activities. As a consequence pastoralism becomes confined to the more marginal steppe and mountain regions where seasonal migrations of greater amplitude become necessary, but is assured of a future through the demand for specialized pastoral products from the heavily populated areas. Increasingly asymmetric power relations develop between the distinct populations associated with each mode of subsistence and, by dint of their military capabilities, nomads are sometimes able to extend political control over settled communities while the latter tend to dominate the economic and cultural spheres.

A slightly different scheme involving nomadization by default has been put forward independently by Adams (1974), Wright (1977, p.388), Flannery (1972) and Spooner (1972, p.126). With the intensification of irrigation agriculture, those who were unable to cope successfully with the change might be tempted to fall back on their pastoral resources – either temporarily until new agricultural opportunities emerged or permanently as specialized pastoralism became a viable strategy. This model may be partly subsumed by that of Lees and Bates.

A further variant of the Lees and Bates hypothesis has been proposed by Irons (1975), and supported by Gilbert (1983), in which the growth of urban centres in the Zagros highlands created an increased demand for pastoral products, leading to a section of the population engaging in transhumant pastoralism and ultimately nomadism. Interestingly Gilbert (1983) argues that it is the reduction in the pastoral sector, relatively speaking, which has the effect of creating scarcity, raising the relative price of animal products and opening up a niche for nomadic entrepreneurs.

Some empirical support for these views comes from Hole's (1977) study of prehistoric sites in the Deh Luran Plain. He argues that an intrusive population of irrigation agriculturalists originating from northern Mesopotamia moved down the Assyrian Steppe in a steady wave of advance

(see Ammerman and Cavalli-Sforza 1973). By about 6,000 BC the indigenous mixed dry farming and herding subsistence pattern was displaced into areas unsuitable for irrigation:

Once the higher and more dependable yields of irrigation agriculture were recognized it would be a simple step to remove most of the herding to the margins of the plain and the significantly better pastures in the mountains. Such a physical separation would have benefitted farming and herding by keeping animals out of the fields and by allowing them to graze in cooler, lush pastures. It is notable how much larger the animals kept by nomads today are than those kept year round in Deh Luran.

(Hole 1977, p.14)

The increased productivity of irrigated land then led to a greater all-round dependency on cereal resources, not only by sedentary villagers but also by pastoralists who now began to concentrate on renewable products such as milk and wool as selection for these physiological capacities occurred. These products could then be exchanged for cereals to augment the small quantities of winter wheat grown by the pastoralists. The combination of pastoralism and limited dry farming is a subsistence strategy commonly employed by nomads today.

Schaffer (1972) also proposes a model of dual specialization for the Sistan region of eastern Iran. This developmental model begins with irrigation agriculture supporting village and incipient urban settlements along limited strips of alluvial land. With increased growth, the surplus population begins to occupy the arid periphery by exploiting thinly spread pastoral resources and adopting a mobile lifestyle. These ideas are reminiscent of the conclusions reached by Masson (1972) for the nearby region of Soviet Turkmenia. However Schaffer adds a further twist. Subsequent population increase is accommodated by agricultural intensification and urbanization which are both facilitated by the ready-made regional communication network established by the nomads. Nomads have even been credited with playing a vital role in the rise of civilization and state formation. During the Uruk period, according to Johnson (1973, p.159):

coordination of local production and seasonal exchange with herders may thus . . . have increased decision-making requirements to the point that an expanded decision-making organization [the incipient state] was necessary.

In a similar vein, Wright (1977, p.338) speculates:

Could an increase in the number of pastoralists appearing every winter in the lowlands put pressure on the regulatory institutions of the settled enclaves?

Ancient trade has long been linked with the activities of nomads. Ever since Perrot (1962) noticed that the distribution of traded goods in the neolithic Levant and Syria closely followed modern Bedouin migration routes, speculations along these lines have abounded. There is some historical evidence (Klengel 1977, p.164; Khazanov 1984, p.209) that pastoralists were already involved in the caravan trade of southwest Asia by the Middle and Late Bronze Age (second millennium BC) though chiefly

as guides and escorts but, as Khazanov (*ibid.*, p.211) points out, they 'neither created this trade nor did they determine its development and its fortune'. There are certainly contemporary examples of nomadic pastoralists-cum-traders (Ferdinand 1962), and most nomads have a keen interest in trade as consumers. But attempts by archaeologists to invoke nomads as active agents in the long-distance movement of commodities and dissemination of 'information' (Wright 1969; Schaffer 1972), or to detect the presence of ancient nomads by following the pattern of traded goods (Crawford 1978), are far from convincing. Underlying most of these nomad-trader schemes is the assumption of an underlying commerce in 'ideas' (e.g. Hole *et al.* 1969, p.354). However there is little in contemporary accounts to point to nomads as an ideal medium for such exchanges.

Attempts to identify nomadic cultures with certain material complexes have rarely been successful. The widespread dissemination of ceramic styles over the Sistan region, attributed to nomad entrepreneurs using the vessels as containers (Schaffer 1972), could easily be accounted for by other mechanisms. The rapid spread of black burnished pottery, together with other elements of the Early Transcaucasian Culture in the third millennium BC, has also been linked to nomadic migrations (Burney 1961; Whallon and Kantman 1969, p.130). However the Early Transcaucasian Culture is now known to contain a full range of settlement types from villages to cities and, while indicators of a mobile lifestyle are present, this is hardly a nomadic culture (see Chapter 11).

All of the above scenarios have much in common. All take a holistic or systems approach to the question of origins. All emphasize specialization and integration, with only Lees and Bates raising the question of asymmetries in power. Interestingly all seem to associate the appearance and enhancement of nomadic tendencies with the growth of sedentary populations and the expansion of urban centres. While it is certainly difficult to imagine nomadic pastoralists existing entirely independently of settled and urban communities, as Khazanov (1984) and many others have suggested, I believe that the above scenarios are to some extent based on a misunderstanding of how pastoral nomad and sedentary systems interact. This in turn may stem from the mistaken concern with the search for origins mentioned above.

If nomadism is to be understood as an alternative specialization which arises under certain economic and sociopolitical conditions rather than a discrete system which somehow evolved, then we would expect these conditions to follow from the above explanations. We would expect tendencies towards the consolidation of state power, economic integration and the spread of cultivation to be associated with an increase in nomadic activity and in the degree of specialization in pastoralism. While this may have been true of the initial *establishment* of nomadic systems in previously unoccupied marginal environments, such a correlation does not seem to hold for long-term interactions between the sedentary and nomadic sectors. In Chapters 4 and 5 I will attempt to outline why this is so, drawing on ethnohistorical sources as well as a host of ethnographic observations which, though synchronic in character, nevertheless suggest the presence of underlying diachronic tendencies.

## The time frame

It is intriguing that, while the models dealt with above apply to time periods ranging over four millennia, much the same systemic factors are mentioned in each case. In fact for Luristan and the middle Zagros Mountains nomadism appears to have had at least two origins, the first in the seventh millennium BC (Hole 1977; Goff 1966, 1981) and the second in the third millennium (Gilbert 1983). Moreover a third origin has been proposed for the region in the first millennium BC, involving the immigration of 'real' nomads from further north to replace existing semi-nomads (Khazanov 1984, p.7).

Much of this confusion arises from the difficulties of adequately defining nomadism as well as the nature of the data involved. Those authors who draw on archaeological and subsistence data tend to place the point of origin earlier, while those concerned with historical and ethnohistorical data prefer later dates. In particular many students of Central Asian nomadism tend to identify its origins with the first historical sources either from southwest Asia or China (Lattimore 1951; de Planhol 1959) and to see the origins of southwest Asian nomadism in terms of migration from Central Asian heartlands: 'In the first centuries of the last 1000 years BC the pastoralists and semi-nomads of the previous thousand years BC began to be replaced in certain cultural areas of western Asia by real nomads who were often migrants from other areas' (Khazanov 1984, p.7). Where 'real' nomads are defined in terms of complex sets of political and socioeconomic criteria, the problems of detection for the prehistorian are considerable. Evidence for developed pastoralism and seasonal habitation are insufficient to meet such definitions. In my view we should cease asking 'Were prehistoric mobile pastoralists *real* nomads?' in terms of ethnographically derived models, and instead begin to ask to what extent can we evaluate certain key dimensions in production, mobility and settlement in prehistoric pastoral and agro-pastoral cultures? The parallel development and interplay of cultivation and pastoralism (Reed 1959; Sherratt 1981) in the Near Eastern food-producing revolution suggest that these key dimensions were present from a very early date.

## Nomadic pastoralism defined

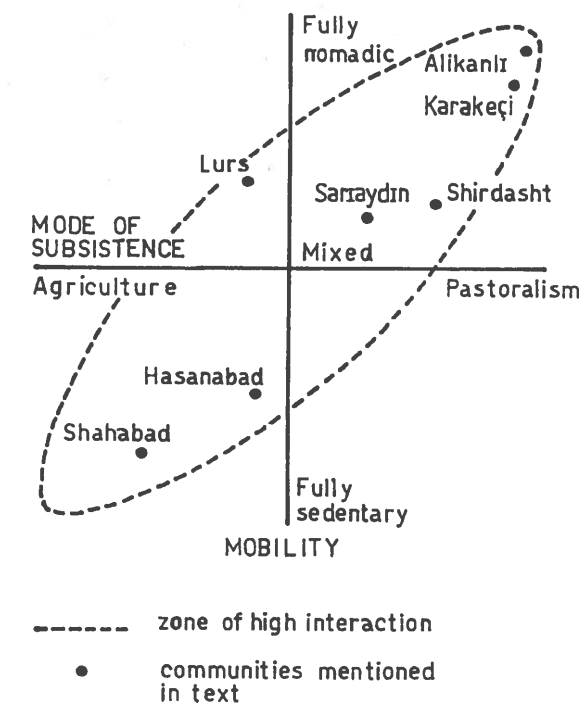
The time at which nomadism is perceived as originating depends on one's definition of nomadism. Any such definition must involve the key factors of pastoralism and mobility, and it is the weighting given to each of these and the way in which they are measured that give rise to the many different approaches. Khazanov (1984, p.7) defines nomadism as: 'a distinct form of food-producing economy in which extensive mobile pastoralism is the predominant activity and in which the majority of the population is drawn into periodic pastoral migrations'. His approach approximates that employed here in that he gives due weighting to 'the ratio of pastoralism and agriculture' (*ibid.*, p.9) rather than the extent of mobility *per se*.

However difficulties with the scheme employed by Khazanov arise when he attempts to circumscribe and classify nomadism. An exacting set of requirements needs to be met before any group is allowed as 'real nomads'. Pastoral specialists in mixed farming are not regarded as nomadic because this represents a division of labour *within* the same society while nomadism requires a division of labour *between* different societies (ibid., p.18). 'Pure' nomads are marked by a complete absence of agriculture, even in a supporting role, and are thereby confined to pockets in the Eurasian inner highlands and steppes, Arabia and the Sahara. Most of the peoples described as nomadic by Near Eastern ethnographers are classified as 'semi-nomadic pastoralists' characterized by extensive pastoralism in conjunction with supplementary agriculture (ibid., p.19). 'Semi-sedentary pastoralism' or herdsman husbandry is village-based, while *yaylag* pastoralism is a specialized mountain form of herdsman husbandry (ibid., p. 23). Forms of 'household husbandry' with or without intensive fodder feeding are fully integrated at the household level (ibid., p.24). However 'semi-nomads' are further classified into those who are specialized at the family level and those specialized at the 'sub-society' level (ibid., p.20). To my mind such complicated and rigid typologies could be easily replaced by a single dimension specifying the *level* – household, village, tribal section, region – at which specialization occurs. The search for a fully nomadic society should be abandoned in favour of an approach which recognizes nomadic tendencies manifested in varying degrees in a wide range of societies and communities.

Nomadic pastoralism is a dual concept comprising two logically independent dimensions – nomadism and pastoralism. Within each of these dimensions dualisms such as nomadic/sedentary, agricultural/pastoral, the desert and the sown, perpetrate gross distortions of our ability to understand the relationship between the two. Each dimension may be viewed as a continuum, and the relationship between them is best represented in terms of a probability space (see Fig. 2.1) in which groups or individuals are uniquely located with respect to each axis.

While the pastoral/agricultural and nomadic/sedentary dimensions must be distinguished conceptually, this need not imply that groups or individuals are necessarily randomly located within this probability space. In fact, as indicated by the location of the groups shown in Fig. 2.1, there appears to be a strong linear relationship between the two. The greater the degree of pastoralism, the stronger the tendency towards nomadism. The association between pastoralism and nomadism is recognized implicitly in the statements of some of my informants in Anatolia: 'We have only 20 goats so we stay around the village, but cross-eyed Ahmet has 100 sheep and goats so he goes each summer to Sultan Dağ. The more animals you have, the further you have to move.' I do not hesitate to discuss village pastoralism and nomadic pastoralism as part of a single phenomenon for, while the two represent very different solutions, they are nevertheless solutions in terms of the same system of constraints and opportunities. In tackling the problem of Near Eastern nomadism, the village herd may not be such a bad place to begin.

Fig. 2.1 Interaction between mobility and mode of subsistence. Schematic diagram showing a degree of correlation between the two variables. The approximate locations of a number of communities mentioned in the text are indicated with respect to both axes.



### Pastoralism

Pastoralists have been defined as 'those who are dependent chiefly on their herds of domestic stock for subsistence' (Krader 1959, p.499). This definition implies ownership and should also include an element of mutualism as the animals involved are also dependent on humans (Ingold 1980). Pastoralism is only one of the possible modes of exploiting herd animals – hunting and ranching are others (ibid., 1980) – characteristically involving protection of the herd and systematic consumption of its renewable products.

However while some (e.g. Bates 1971, p.112, 1972, p.52; Vincze 1980, p.392; Goldschmidt 1979, p.16; Ingold 1980, pp.2, 25) refer to pastoralism as a 'mode of production', I prefer, in view of the particular connotations given the term by Marxist theory, to substitute the term 'mode of subsistence'. By 'mode of subsistence' is meant: 'some configuration of productive forces and relations permitting the exploitation of natural resources and reproduction of the social groups involved' (Cribb 1984b, p.4). It does not extend to the relations of production above the reproduction of the community itself, and does not involve the 'mode of appropriating surplus labour' so essential to a Marxist analysis (see Hindness and Hirst 1975; Friedman 1974; Godelier 1977; Parsons (ed.) 1978). Thus a

pastoral mode of subsistence may coexist with an agricultural mode of subsistence – perhaps involving the same social group or specialized sectors within a single community – under a wider mode of production. By the same token it would be possible to consider two forms of pastoralism operating under different modes of production – for example, pastoralism during the Seljuk period and that of the twentieth century – as part of a single mode of subsistence. There are certainly plenty of examples of adjacent nomads and peasants, or of pastoralists and cultivators within the same village (Sweet 1975), employing different tools and techniques, distributing land and animals according to different systems of allocation, yet who are integrated into a wider regional economy and subject to appropriation by the same ruling class whether a landed, pastoral or urban elite (see Lambton 1953; Rosenfeld 1965; W. Swidler 1972).

Groups (or individuals) may therefore be ranked along an agricultural–pastoral continuum according to different criteria such as the overall level of pastoral production or the extent to which their livelihood is met through pastoral as opposed to other modes of subsistence. Small numbers of livestock may be kept by cultivators without necessarily bringing into play all the elements of a pastoral mode of subsistence. However increasing emphasis on pastoral production, accompanied by a rise in the number of animals herded, will require specialized forms of animal management and changes in household organization. The full expression of such a tendency towards pastoral accumulation will ultimately involve a household in the kinds of logistics and social networks characterized as ‘nomadic’.

### Nomadism

While nomadism need not imply a lack of patterned movement or fixed migration cycle as suggested by some (Gulliver 1958), neither does it exactly connote a ‘fixed round of movement . . . a cyclical or rhythmic movement’ as suggested by Krader (1959, p.499). The presence of a regular, seasonal cycle of movement – universally attested to in the Near East and also Central Asia (see Vainshtein 1980, pp.96–7) – should be regarded as a *necessary* but by no means a *sufficient* condition for the full expression of nomadism. Viewed in the short term it is understandable why so much weight has been placed on the seasonal cycle and regular migration tracks. Such regularities loom large within the scope of the ethnographic time frame. Yet in study after study there emerge instances of departures from regular migration routes or situations in which access to these routes is only tenuously maintained (e.g. Bates 1972; Irons 1975). While the political ramifications of such events have been discussed (Bates 1972), the implications for patterns of mobility have not been explored. Viewed over the long term it becomes clear that small perturbations in seasonal migration tracks could eventually build into wholesale shifts in the distribution of migratory groups. It is this latter tendency which I would regard as being characteristically ‘nomadic’.

A useful distinction might be drawn between forms of *tied* or *tethered* nomadism (Ingold 1987, p.184), fixed to a well-worn migration track, and *untied* nomadism, in which shifts into new migration tracks are frequent.

Again, however, it is not difficult to see, over an extended time frame, how the former condition might be transformed into the latter.

Much of the confusion in definitions of nomadism may be traced to the use and abuse of the term ‘transhumance’. It has been variously used to describe the exploitation of seasonal pastures within the same valley system by village flocks under the care of shepherds (Monteil 1959, p.579; Krader 1959, p.500), the migration of whole village communities with their flocks for a season (Johnson 1969, p.18; Swidler 1973, p.32) and the seasonal movement of nomadic pastoralists (Stauffer 1965, p.290; Stenning 1957, pp.58–9; Tapper 1974, 1979c). It has frequently been employed – implicitly and sometimes explicitly – to describe an intermediate state between sedentism and nomadism.

Again the difference between the terms nomadism and transhumance is logical rather than categorical – the two operate on entirely different scales. I would suggest that the term ‘transhumance’ be confined to a form of livestock management making use of seasonal variations in the availability of pasture. As such it may be either vertical or horizontal, and could include all three of the patterns referred to above. Given this definition, typologies according to which groups are categorized as sedentary, nomadic or transhumant (e.g. Swidler 1973; Krader 1959) become meaningless. ‘Alpenwirtschaft’ is a form of transhumance (Müller 1938; Vincze 1980) but has nothing to do with nomadism. The transhumance of village flocks may or may not involve an element of nomadism, depending on whether the population moves with the herds. The degree of human involvement is therefore one vital index of the presence of nomadism. The other is the degree of potential mobility of the transhumance track itself. Only where a transhumance pattern involves substantial numbers of people engaged in tending and exploiting the herd for subsistence, and is potentially subject to lateral shifts into new zones at either end of the cycle, are we dealing with the upper end of the sedentary–nomadic continuum.

Like ‘transhumance’, ‘semi-nomadism’ is a much abused term. For example it has been used by Patai (1951, p.405) to cover forms of pastoralism based on sheep and goats, as opposed to ‘pure’ nomads herding camels (Middle East) or horses (Central Asia), and by Bacon (1954) to denote pastoralists who import grain. Both usages confuse the separate dimensions of pastoralism and nomadism.

Nomadism then reduces to the organization of migratory communities, and nomadic pastoralism focuses on those communities whose migrations are organized around the transhumant migration of livestock (see Spooner 1972, p.130). At the local level, and viewed over a short time scale, transhumance emerges as the salient characteristic of nomadic groups. It is only at the regional level and over an extended time scale that the full implications of nomadism, as distinct from transhumance, emerge with full clarity. And it is at just such a temporal and regional scale that archaeology, as opposed to social anthropology, is best equipped to approach the problem of nomadism.

As recognized some time ago by Dyson-Hudson (1972), nomadism cannot be reduced to a back-and-forth movement according to the seasons. Annual removal to widely dispersed seasonal encampments is of

less interest in itself than the possibility of frequent changes in residential association which it opens up. This constant circulation and instability in the composition of residence groups has long attracted social anthropologists, although until very recently (Tapper 1979a) the reasons for this attraction were not explicitly discussed. It is this very quality which likewise affects the physical formation of nomad campsites and settlement systems and affects the character and texture of the archaeological traces into which they are transformed. It may lie at the very heart of the problem of detection and recognition of nomad sites.

Four features of nomadism are therefore pertinent to this inquiry:

- (1) The presence of transhumant migrations of livestock accompanied by human communities – vertical or horizontal, long or short distance.
- (2) The possibility of fluidity in the formation of residential associations, including some turnover in group membership and both seasonal and long-term changes in the size of co-resident communities.
- (3) A high degree of household autonomy at the operational level of herding logistics and camp group formation.
- (4) The maintenance of a flexible system of rights of access to territory in accordance with frequent changes in residence and wholesale shifts in the pattern of migration tracks and demands on grazing land.

More than the overt pattern of geographical movement, the overall organization of a community needs to be stressed. Essentially nomadism involves the regular migration of a community *together with much of its productive base* within a single ecological niche. This may occur between different environmental zones or within a single zone. According to this definition neither hunter-gatherers nor shifting cultivators are nomadic. The former may be highly mobile, but exploit a variety of resources and niches which constitute the productive base. The latter may well exploit a single niche – perhaps through swiddening – but again they do not move their productive base into the new location.

## Hunter-gatherers and nomads compared

In view of the potential for confusion between the archaeological traces of hunter-gatherers and pastoral nomads it is necessary to spell out the differences between their respective productive strategies and corresponding territorial systems. As Khazanov (1984, p.15) has pointed out, the 'nomadism' involved in a system based on food procurement is quite different from that of a food-producing system. There are important differences not only in the motives which govern the pattern of movement but also in the pattern of movement itself and, above all, in the principles of site generation which apply to each.

Enough is now known about the territorial behaviour of existing and recent hunter-gatherers (Lee and DeVore (eds.) 1968, 1976; Lee 1972; Woodburn 1968, 1972; Binford 1978b, 1980, 1983; Yellen 1977; Gould 1980) to permit some broad generalizations. In spite of major differences in technological complexity and range of movement (Binford 1979), the underlying themes that emerge are consistent. The texture of a hunter-gatherer territorial system is dominated by seasonal base camps centred on water resources and located so as to provide access to major resources.

To these must be added special purpose sites such as ceremonial sites, kill-sites and hunting-blinds. Rights in territory are acquired mainly through descent or marriage, though the actual composition of residential groups fluctuates according to seasonal resource density following lines of kinship and affiliation to estate owners. Some archaeologists, such as Foley (1981) in East Africa and Hiscock (1984) in Australia, see such territorial systems in terms of relative densities of item distributions over a continuous surface with *nodes* of high density rather than as a series of discrete sites. With the exception of base camps for the exploitation of abundant (e.g. marine) resources or scarce resources (e.g. dry season camps around waterholes), changes of residence are frequent and usually take place over short distances, attuned to the progression of a constantly changing resource-use schedule.

While violent conflict is by no means absent from hunter-gatherer life, and while it may well arise from considerations of territory, the element of territorial aggrandizement appears to be absent. This is not to say that displacement of some groups by others does not occur, but it may be difficult to determine just what constitutes a 'group'.

As Ingold (1987) has recently suggested, the fundamental difference between hunter-gatherers and nomads is that, whereas in the former case the relations of production are tied to territories or significant sites, nomadic productive relations are largely independent of place, being vested in mobile pastoral capital. While it is not true to say that nomadic pastoralists lack a concept of territory, their territorial system is geared to the *acquisition* of pasture rather than establishing vital symbolic links between the community and a particular locale.

Accordingly, the logistics of nomadic and hunter-gatherer migration differ fundamentally. While the hunter-gatherer, whether forager or collector (Binford 1980), schedules his movements with regard to *consumption*, the pastoral nomad is tied to a schedule of pastoral *production* which is in turn dependent upon the consumption patterns of pastoral stock. Whereas the hunter-gatherer exploitation strategy is an eclectic one which incorporates a wide range of available and preferred plant and animal species, that of the pastoralist is driven by a single overriding preoccupation – the search for pasture for his flocks. This means that the hunter-gatherer's territorial system is far more complex than that of the pastoralist – attuned as it is to the competing demands of a wide range of resources. While the hunter-gatherer will be familiar with the entire spectrum of resources and features in his landscape, the pastoralist will be acquainted with only a narrow band comprising the pastoral niche itself. In this sense he is more like an agriculturalist except that, instead of an intensively farmed plot of land, his range consists of a continuous strip of real estate over much of which he may lay only temporary claim. The pastoral nomad's mode of migration is therefore direct and certain. This is not to say that nomads are not logistically organized or incapable of following 'embedded' strategies (Binford 1978a) nor that forms of 'multi-resource' nomadism (Salzman 1971, 1972) are impossible – only that the search for pasture provides the main impetus. Given the possibilities of modern technology, the advent of a nomad commuting between campsites by truck or motorbike represents no special paradox (Bates 1980; Chatty 1980).

The fundamental differences from which many other contrasting features flow are these:

- (1) Hunter-gatherer migration is centred on procurement and consumption, while pastoral migration is motivated by production which is in turn tied to the consumption patterns of livestock.
- (2) Whereas the territorial system of the hunter-gatherer is based on moving himself towards his resources, or moving resources to people, for purposes of consumption, that of the nomad involves moving an entire infrastructure of production and consumption – including accommodation and staple foods – with little regard to the regional availability of micro-resources apart from the basics of water and firewood.
- (3) Whereas hunter-gatherers characteristically move in order to *vary* their procurement strategy to exploit a wide variety of different resources in different places and different seasons, nomadic pastoralists move in order to exploit the *same* basic resource – pasture – in different seasons. In a sense the main motivation behind pastoral migration is to maintain access to a single environmental niche by following its seasonal relocation from one geographical location to another.
- (4) For hunter-gatherers the activities of procurement and consumption are spatially and temporarily associated (i.e. consumption follows close on procurement, usually at the same place or nearby, except where long-term storage is available). For nomadic pastoralists the activities of pastoral production and human consumption are continuous and largely *independent* of each other (see Hesse 1984).
- (5) Hunter-gatherer migrations follow a complex spatial pattern covering the greater part of a well-defined territory or range, while nomad migrations are simpler, following a migration track which may cover only a small part of a number of territories.
- (6) Hunter-gatherer movement tends to be governed by the principle of risk-minimization, whereas the migration of pastoralists is motivated as much by a desire to *optimize* conditions for pastoral production as to minimize risks for the herd.
- (7) Along with the less complex territorial system of nomadic pastoralists, we would expect their archaeological remains to be more spatially constrained and to exhibit less functional variability than in the case of hunter-gatherer sites. The model of a base camp surrounded by special purpose sites connected to different procurement strategies holds little relevance for the archaeological study of nomadic pastoralists.
- (8) Finally, whereas hunter-gatherer territorial patterns and migratory behaviour tend to be fairly stable and localized, those of nomadic pastoralists incline towards marked instability and dramatic shifts in migration tracks (Stenning 1957; Ingold 1987). Displacements of large residential and political units by others are extremely common. This stems from the fact that territorial aggrandisement is a key feature of nomad life. This non-seasonal component in nomadic migration, arising from the very forces of production central to specialized pastoralism, marks the nomadic system as inherently expansionist. To fully understand the pattern of nomadic migration requires a large tapestry indeed.

# 3

## NOMAD PASTORAL ECONOMY

It should be known that differences of condition among people are the result of the different ways in which they make their living . . . Some people live by agriculture, the cultivation of vegetables and grains; others by animal husbandry, the use of sheep, cattle, goats . . . Those who live by . . . animal husbandry cannot avoid the call of the desert.

(ibn Khaldun, AD 1332–1406, *The Muqaddimah*)

### Nomadism and the integration of pastoralism and agriculture

There has been much discussion concerning the differences between pastoralism and agriculture, the desert and the sown (Nelson 1973), with much stress being laid on either the complementarity of pastoral and agricultural products or the conflicts generated through competition for resources. Much of this misses the point. Pastoralism and agriculture differ not only in the things produced but more fundamentally in the nature of the productive process itself. While both modes of subsistence in a Near Eastern context are subject to large fluctuations in productivity (Adams 1974), the manner in which each system responds to these fluctuations is quite different.

#### The organization of pastoral and agricultural production

Whereas fluctuations in the level of agricultural production tend to be buffered and absorbed by the stable structure of a sedentary community, similar fluctuations in pastoral production are amplified throughout the organization of a pastoral community. The essential difference stems from the fact that, whereas farming productivity is influenced directly by environmental factors such as a temperature, amount and timing of rainfall or overexploitation of soil, pastoral productivity is affected via the mediation of herd animals. As already indicated, pastoral success tends to result in an increase rather than a slackening of labour requirements, not so much in herding itself but in extractive activities such as milking, processing and shearing. Conversely failure and decline of pastoral capital will lead to reduced labour requirements in both herding and the processing of pastoral products. The nature of the contrast is indicated schematically in Fig. 3.1. Given a sequence of favourable years and disaster years the two

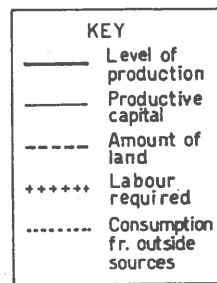
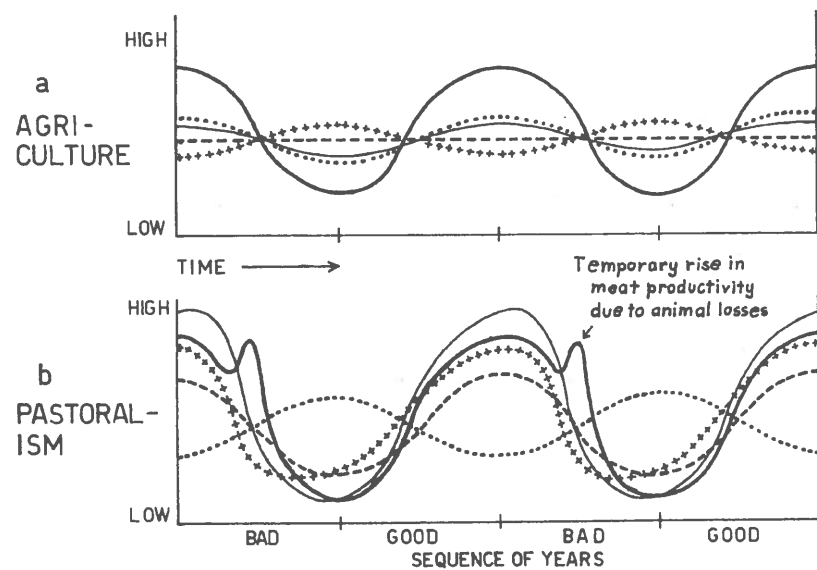


Fig. 3.1 Internal dynamics of the pastoral and agricultural modes of subsistence in response to favourable and unfavourable conditions. (a) An agricultural mode of subsistence tends to minimize fluctuations in productive factors. (b) Pastoralism tends to enhance the extremes in variability. Moreover the extremes tend to run together in a strong boom and bust cycle.



systems respond as follows. As capital losses drive down productivity, the pastoralist will require less pasture land while the farmer's land holdings and requirements need not be diminished. At the same time labour requirements are greatly reduced for the pastoralist, but will remain at much the same level for the cultivator. By the same token, during a sequence of favourable years, existing levels of agricultural land and capital investment (e.g. plough animals, equipment) will tend to hold down production. For the pastoralist, all the factors of production will work together to initiate an upward spiral in productivity (see Cribb 1984c).

In summary, the agricultural system emerges as a stable one which tends to absorb fluctuations in productivity through the relative constancy of land, labour and capital requirements. The pastoral system, by contrast, emerges as a highly unstable one in which requirements of land and labour tend to closely follow fluctuations in the level of capital holdings. Under favourable conditions the rapid build-up of productive capital will lead land and labour requirements upwards, while a succession of reverses will result in the under-use of pasture and the off-loading of herding labour into seasonal work. The pastoral mode of subsistence therefore tends to oscillate between upward spirals of accumulation and a vicious circle of decline (Spooner 1972, 1973). These cycles of engagement and disengagement of the factors of production are linked to highly flexible institutions for the distribution of grazing rights, the circulation of livestock and the concentration or dispersal of labour resources through impermanent residence associations (Cribb 1984c). It is this that has led some to describe pastoralism as 'fluid, marginal, transitional and unstable' (Spooner 1972, p.130). The terms 'marginal' and 'transitional' are quite inappropriate, and 'instability' should be confined to the cycle of production itself, not the social forms which help to absorb this.

No assumptions should be made about the complementarity of the two modes of subsistence – they do not necessarily coexist in order to ensure a

balanced diet or to even out ecological imbalances as has been argued by some participants in the domestication debate (e.g. Flannery 1972). Nor is there much support for the view that pastoralism is a form of resource-banking against the uncertainty of agricultural production (Hole and Flannery 1962; Adams 1974). On the contrary, the evidence strongly suggests that pastoralists and cultivators suffer simultaneously from environmental calamities, though political instability tends to favour the pastoralist. For instance livestock numbers in the Zagros village community studied by Watson (1979) were much reduced at the same time as a sequence of crop failures had brought great hardship to the villagers. Moreover the forms of scheduling required by the two systems likewise complement at some points and contradict at others. Each represents a distinct set of options with its own rules, potentialities and constraints. Of course one or the other or both, in various measures, may be pursued by the same group or individual – the variety of agro-pastoral and specialized agricultural or pastoral systems in the Near East is limited only by the range of available environments and market niches.

Pastoral and agricultural production may be integrated at a number of levels, the most basic being that of the household itself. This generally occurs where cultivation is dominant and limited numbers of livestock are kept. Although some nomadic pastoralists also practise cultivation, this is usually seasonal only and of a very primitive kind. The two modes of subsistence are often more effectively integrated at the community level and this may occur in two ways. One is to split the community into specialist sections. Tapper (1977) describes an arrangement among Pash-tuns in Afghanistan whereby some families remain in the village to attend to cultivation while others – not necessarily the same ones each year – specialize in pastoralism throughout any given year and migrate in summer to distant mountain pasture. Coon (1965, p.213) describes something similar in the Atlas Mountains of Morocco. Some Qashqā'i *beyleh* (minimal camp groups) split into two sections in summer, one of which remains to grow crops and fodder in winter quarters while the other moves with the flocks to summer pastures (Marsden 1976, p.15). The second kind of arrangement is for the entire community to alternate between pastoral and agricultural pursuits in the course of a single annual cycle. This is a common pattern throughout the mountain regions of the Near East (see Chapter 9; also see Watson 1979, ch.8; Edmonds 1957; Edelberg 1966–7; W. Swidler 1972, 1973) and not simply a stage on the way to sedentarization. It has been widely reported among Kurdish groups in the nineteenth and early twentieth centuries (Millingen 1870; Geary 1878; Maunsell 1901; Sykes 1908; Dickson 1910; Hay 1921).

Partition into agricultural and pastoral sectors subjects one part of the community to pressure towards nomadization. It is interesting that this may last for no more than a year and that the 'nomadic' and 'sedentary' sectors of the community are actually interchangeable!

### Integration at higher levels

The integration of pastoralism and cultivation at higher levels allows nomadic tendencies to be more fully realized than is the case with any of the above examples. The presence of nomadic and sedentary sections of

the same tribe (see Sykes 1908) reflects a high degree of specialization and interdependence within a single political and territorial unit. Such 'integrated' tribes (Rowton 1974) have often been confused with a nomadic tribe in the process of sedentarization (i.e. a transient form) but do in fact represent a persistent pattern, leading Rowton to suggest that 'it is in the integrated tribe that the symbiosis between nomad and sedentary finds its fullest expression' (1974, p.8). Many tribes of the Bakhtiari, Khamseh and Qashqā'i confederacies in Iran, and the larger Kurdish tribes of eastern Turkey, are organized along these lines. Division into nomadic and sedentary sections is a persistent theme in a catalogue of Kurdish tribes drawn up at the turn of the century (Sykes 1908), although the precise levels of segmentation involved are somewhat unclear.

Still higher levels of integration are possible. The terms 'dimorphic chieftdom' and 'dimorphic state' (Rowton 1973) have been used to describe a political system where a chiefly family or dynasty installed in a town or city holds sway over a mixed population of tribal nomads (forming its power base), and non-tribal peasantry (forming its productive base). While Rowton (1973, 1974) presents cogent arguments and evidence to support the presence of such structures in the recent and ancient historical past (see also Rosenfeld 1965; Cole 1973; Woods 1976), ethnographic examples are understandably rare. Nevertheless the manner in which such an entity might evolve is readily discernible in the situation of the tribal *khans* of Iran:

The power of the *khans* derives from two sources: on the one hand, from the tribe of which they are the leaders, and, on the other hand, from the land which they own. In their capacity as landowners they collect their share of the produce of the land or their rents and dues as other landowners, while in their capacity as tribal leaders they collect certain levies from their followers.

(Lambton 1953, p.283)

While much exchange between nomads and the sedentary sector occurs locally, and is directed primarily at the reproduction of household units (Oberling 1974, p.18; Swift 1977), a large pastoral surplus can be an important component of regional and even national economies. For example the Qashqā'i supply Fars Province in Iran with the bulk of its mutton, leather and milk products in addition to carpets and other textiles (Oberling 1974, pp.16–17). The extent of the nomad contribution to the Iranian economy was underlined during the period of enforced sedentarization under Reza Shah during the 1930s which resulted in severe shortages of meat and milk throughout the country which could not be made up by sedentary pastoralism (Stauffer 1965, p.285; Katouzian 1978, p.366). Historical sources suggest that exchanges at this level are not a recent phenomenon. During the first part of the nineteenth century the Lurs, Bakhtiari and Qashqā'i were supplying urban centres in western Iran with meat, milk products and textiles during the summer months (Rawlinson 1839, p.104; de Bode 1845, p.90).

A number of generalizations, vital to what follows, may be drawn on the basis of the above discussion:

- (1) The articulation of the agricultural and pastoral modes of subsistence does not necessarily occur in a complementary fashion. The two

modes represent separate options in the pursuit of productive strategies which are responsive to both market pressures and conditions of political stability.

- (2) Some support is lent to the suggestion (Lees and Bates 1974) that the origins of nomadism (i.e. the nomadic tribe) are to be sought at a time when specialization in pastoral and agricultural production became a possibility. This does not preclude the possibility of a degree of nomadism at lower levels of integration (household, village) prior to such specialization.
- (3) There are indications that optimal conditions for the efficient deployment and accumulation of livestock are to be found where pastoralism is specialized above the level of the community.
- (4) The emergence of nomadic features seems to relate to the level at which pastoral and agricultural production are integrated into a functional economic and ecological unit. Only at the supra-community level, where specialized agriculture and pastoralism are pursued separately by different communities within the same tribal unit or in a tribal-peasant combination, are both conditions of nomadism fulfilled – an entire community in constant association with transhumant herds and one which is free to cut its ties with a particular locality or transhumance track.
- (5) Finally, the process of nomadization itself may be conceived of in terms of the integration of pastoral and agricultural subsistence modes at progressively higher levels in the sociopolitical and residence hierarchy. By the same token, sedentarization occurs when the two modes of subsistence are combined at progressively lower levels within this hierarchy.

## Factors of production: the pastoral herd

Large-scale pastoralism involves an essentially unstable interaction between three basic elements – herds, people and pasture (Sweet 1974; Swidler 1973, p.31; Swift 1977, p.461). These three elements may be considered at a number of analytical levels, but for the time being we are concerned with the physical properties of pasture land, the species-specific characteristics of the animals herded and the labour processes involved.

### Pasture

Statements to the effect that nomads create their own desert and steppelands wherever they move may hold a degree of truth. Historically the distribution of steppelands in the Near East and Eurasia appears to have fluctuated according to the balance of power between states and empires based on sedentary agriculture and those whose power base resided in shifting populations of herders and mixed farmers (Hyames 1972, pp.173–9). Pasture is never 'natural', in the sense of being in a pristine condition. While pastoralists may make little conscious attempt at pasture improvement or modification, continuous grazing exerts selective pressure on the distribution of plant species. Overexploitation of pasture often results in a