

Migrations or Nomadism: How Glaciation Reveals Historical Models of Mobility

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The purpose of this paper forms part of a project to describe and analyse historically and anthropologically nomadic pastoralism. It is in this context that some thinking was required about mobility, its forms and scale, and more especially about the critique of predominant classical, even banal, ideas which assimilate nomadism to mobility. The issue provides an example of the ease with which there slips into scientific discourse an insufficiently critical use of concepts that carry important implications. It cannot be denied that this situation owes much to the influence of habits, perceptions and current language, of popular definitions of the 'nomad'. What might remain anecdotal assumes its full meaning when those concepts involve the basic economy of the problems at issue.

Indeed there is frequently confusion between nomadic pastoralism and migration, whose common features are movement and mobility. The presence of this feature is so fundamental that it may lead to an almost complete assimilation of the two modes of human activity. And it is the same kind of step that links the adjective 'nomadic' with any style of living, activity, even temporary, then any technology, that is or seems to contain a basic mobile dimension. As a precaution I enter an important reminder here: nomadism is inseparable from pastoralism, and any other use contains a metaphorical dimension that is not necessarily a manipulation if it is conscious, but that is ignored more often than not.

Of course that mobility is very important. But it is important for all societies in general and not solely or even specifically for nomadic pastoral ones. Nomadic pastoral societies, and central Asian and Mongolian nomadic society in particular, provide – even at a superficial glance provided it does not try to apply criteria taken from sedentary conditions – an illustration of the fact that movement and displacement, rather than being perceived as strictly speaking spatial events, must first be situated within the context formed by techniques and strategies that deal with ecological opportunities and constraints, modes and forms of social organization. Then

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it becomes easier to see how far mobility is involved as an expenditure of energy the balance of which has to be measured on several levels. Without leaving out its symbolic aspects these cannot be seen as primary, in a mystique of mobility that is practised for its own sake. Of course nomadic stock-rearers do not travel the distances that form their routes, which are sometimes surprisingly short, for the excitement of going away – this would be a sedentary person's assumption. Similarly they are not 'searching' for the resources needed for their herd's survival, which means their own. Their space depends on a wide-ranging vision, which is able to accept several temporal and spatial contexts that overlap and are superimposed, validating each other around an initial point formed by the relationship between irregularity of resources and the needs of a long-term biological and social sustainability, between unpredictability in the short term and mobilization of prior knowledge, between modes of perception and appropriation dictated by a requirement to disperse. Rather than being spatial, dispersal is above all a relationship between needs and resources that creates thresholds of pressure on the latter. This dispersal seems to be the motor common to several constitutive features basic to nomadic economies and societies: the hegemonic and even exclusive position of pastoralism in obtaining resources and the system of production; the society's division into small households tending to be restricted to the nuclear family and living off herds that are themselves limited in size and contain several species (non-specialized); formation of social groups less in lasting groupings of people than by the connection between both human and animal population control and establishment of centrifugal networks of relationships and alliances; finally, and perhaps especially where our theme is concerned, control of a lasting, stable territorial expanse where a strategy of seasonal alternation is conducted. It is in this area that nomadic mobility is specifically situated. The choices that govern it take into account, on the one hand, certain positive criteria (pasture quality, water resources, etc.), but follow especially a logic, again centrifugal, of reservation, exclusion from using grassland connected with the 'centre of gravity' which is formed of necessity by the winter pastures.

At the heart of this system, whose appearance of simplicity does not hide complexity and sophistication, the physical schema provides a reference point inscribed in the immediate surroundings, at the head of which is the yurt, in distant spaces both technical and social, and also within the system or systems of orientation. Even though this inscription in the physical reality of the landscapes plays a fundamental part by supplying quantitatively limited responses to the choices imposed by restrictive criteria for over-wintering, the 'territory', which is much more relational than topographical, is not primarily an expanse but a series of social networks. This is shown by the lexicological analysis of the word *nutug*, which is commonly translated as 'territory' but which it would be more appropriate rendered, but hard to suggest rendering, as 'the concrete reality of the network of relationships between humans'. This is also the image suggested by a cartographic tradition dating back to the 17th perhaps even the 16th century in which topographical representation is wholly replaced by one of relationships (the graphic similarity between these maps and family trees is remarkable).

This architecture and its many variants may be read in several ways, either synchronic or historical. But a historical perspective cannot fail to include a fundamen-

tal break between, on the one hand, this nomadic mobility – which is a means or instrument for not changing place in order to establish acquisition of resources within the frame of territories that remain as constant as possible, and so ensure the longstanding interplay of networks of social relations, dispersed but providing the society's framework – and, on the other hand, the logic of migration. Changing pasture from season to season, and thus nomadic mobility, is basically a strategy for not leaving an expanse of territory whose resources, dangers, capacities, sites for shelter and access to water, etc., are known. It should be clear that, taking all these parameters together, moving about inevitably implies, in terms of biological survival and *a fortiori* in terms of social life, facing increase in the number and severity of many deficiencies. The idea that people migrate because 'life is better somewhere else', always supposing the search is successful, comes up against the fact that, at least initially, a migration occurs as a reaction to a phase of regression and that it paradoxically implies that phase's extension and even aggravation. Migration is imposed by the need to satisfy basic needs for a group or a people, whether this means building up or restoring that satisfaction. But the initial phases of the migration (and the proof of it is if the migration acquires a tangible historical significance in its subsequent continuation) are far from providing that satisfaction. It is because it does have the means to survive that a population goes off, and until it achieves a lasting solution the situation is generally at least as unfavourable. Nevertheless a lasting solution can only exceptionally come down to a simple transfer in space without developments and adaptations occurring (the fact that they are sought or suffered is only marginally important at this stage). However that may be, the conditions of migration once again are not specific to nomadic populations.

If we think of paleolithic migratory mobility, it is very much earlier than the mechanism of domestication, even if it may have acted as an initial move into this area. The problem of a 'choice' between nomads and sedentary people therefore seems totally anachronistic. We have here mechanisms and rhythms by which a species, the human race, implements its colonization strategies, which are comparable to those of every other plant or animal species (the picture that claims to reserve the practice of migration for the higher species is of course false: migrations are as much a feature of plant species, including trees, as of animal species at all levels and every stage of development). Currently it is remarkable that observation of climatic variations is accompanied by discovery of the migrations of plant species, as some Mediterranean species are in the process of migrating northwards, a fact that might cause significant changes in landscapes over historically short periods of time. And this is true for single-cell organisms, viruses or bacteria; the implementation mechanisms of all of them are not fundamentally different. The aim is the same as for humans: improving or ensuring the energy stock. When a species is faced with significant variations in sunshine, water, etc., whether this is an effect of the variable tilt of the earth's axis in relation to the plane of its orbit, or any other factor or combination of factors, it comes up against that kind of need. That is what happens especially in the case of one of the major effects of the variations in incline of the earth's axis: glaciation.

In the northern hemisphere ice ages do seem to be one of the great causes of migratory mobility for humans. It was the ice ages that played a direct part – com-

parable to, though the direct opposite of, what the effects of warming of the earth's climate may be in the near future – in the modes, forms and rhythms of modern human settlement. For paleolithic human beings apparently inconspicuous variations in parameters resulted in important consequences for the composition, availability and stability of complexes of resources. It was particularly the last great ice age, Würm II (which is conventionally assimilated in eastern Asia to the so-called Zyrianka ice age), between about –50,000 and –10,000, which made the complexes of resources change which were accessible to the human populations who were in the process of becoming modern peoples. The end of the paleolithic and the neolithic break occurred very much in that context and in the phase of emergence from an ice age. This forced people to search anew for resources in relation to flora and fauna which themselves were going through their own adaptations. Whether as regards hunted species or predators, humans were faced with a change in the landscape, in response to which one of the 'tools' and one of the forms of search for solutions was migration. Indeed several variants were possible, from adaptation on the spot to genuine migration, without a rational, deliberate choice being in fact imposed.

In this context glaciation played a dual and partially contradictory role that also triggered and promoted migratory mobility. By making resources scarcer it created the need to turn outwards and search anew. Besides possibly becoming scarce, hunted and hutable species' adaptation to arid or severe climatic conditions made eating them more costly in energy terms: large herbivores themselves became increasingly mobile, plants stepped up their protection against cold and possibly drought, for instance by covering their seeds with tougher husks, which meant that eating both required, as well as the parameters of catching or gathering, greater energy to get to the edible food material or make it available to group members. And this tended to unbalance the energy economy because acquiring and preparing food consumed more energy (if grinding or shelling is harder and so more tiring, it is more costly in energy for the same available consumable energy). Thus the need arose, particularly if the earlier phases encouraged a demographic expansion, to search more widely with the aim, not of radical difference as such, but the hard-won restoration of a positive, stable relationship between energy expended and energy consumed. In addition, in a context of a general drop in the thermometer because longer periods of the year saw low temperatures, living organisms consumed more energy overall in order to maintain their vital temperature.

The perceptible effect of adaptation remains marginal at the level of physical anthropology. It contributes most to restricting exchanges between the organism and the natural environment, giving rise to superficial secondary characteristics. It is probably different for the development of models of consumption and skills associated with changes in the composition and specific characteristics of accessible resources.

However that may be, migration seems above all to be the response to a constraint, one of the answers to the need to bring into alignment the relationship between human populations, resources and energy balance with the demands of conservation and sustainability of the species. This constraint is not, however, a single one-sided factor that makes migration a simple expression of a population's inability to maintain the viability of that relationship in its original settlement area.

Simultaneously and paradoxically, which is very important for the history of settlement in northern and north-eastern Asia, glaciation raised basic obstacles to populations' mobility, because of the long and frequent freezing of streams and marshes. Those spaces, which were barriers to both penetration and settlement itself in warmer temperatures, thus became places or vectors favourable to migration. This opening out, which facilitated mobility, rapidly helped create and disseminate a continental culture covering wide expanses of space in a relatively short period of time. The idea of the biographical dimension of migration, which is not a phenomenon of slow dissemination nor a simple, uniform transfer from one end to the other of a linear route, is fundamental. This does not mean that every migration occurs within a limited period of time, a generation, but that the main episodes, the crucial leaps, are the work of specific groups, themselves acting over a limited time-span. This dimension effectively helps to form a cultural stock of knowledge, psychic sedimentation and mental transfers within a population or between groups who come into contact about routes, stopping-off points and the character of both resources and obstacles. This relative speed and its effects thus combine to build up mental schemas and cultural models to be found much later in cultures that are sometimes apparently very remote from one another. These phenomena have an important part to play in the development of sedentary cultures, which are also the source of the nomadic cultures that share those roots.

The second significant phenomenon in this mechanism that is partially connected with glaciations has to do with the fact that we do not have here a uniform, linear, exponential movement. In fact, relatively short phases follow one another, showing considerable variations from one to another and causing series of leaps as well as alternations between movement and stability, the definition of isolated steps in which cultures are constructed and identities are defined. Glaciation itself does not seem to be a uniform, continuous phenomenon. The same is true of the migrations associated with it. The image of a migration taking place in a single linear movement is mistaken. The movement is a succession of attempts by trial and error, of retreats followed by fresh attempts, inseparable from acquiring previous knowledge and experiences that each new episode adds to. These human developments and their climatic conditions are thus multiple overlapping curves defining in a complex fashion the substrate of specific cultures and identities. And so the individualization of these cultures is built up according to the links they create, maintain or break with other partners, relaunching new phases of dissemination and mobility. It should be emphasized that this backdrop was put in place in large part before there occurred the major development of domestication and even more the emergence of pastoralism. It is therefore interesting to note that part of the substrate of the nomadic pastoral cultures of eastern Eurasia, and the Mongolian in particular, contains elements going back to those cultures of migration. But it is probably even more important to note that this substrate enters into the formation of those cultures only through a fundamental break, which we may see as a basic result of the spread of human settlement at the end of the ice ages, but in no way continuous between what paleolithic mobility was during the Würm ice age, with its dual element of demanding constraints and facilitation, and the invention and development of strategies of nomadic pastoralism, whose main logic is precisely rooted in the need for access at

a particular moment, and in the fact of halting the migratory movements and opposing their return through the lasting appropriation of expanses of territory, complexes of resources identified within a restricted space.

As far as nomadic pastoral mobility is concerned, it occurs in a context that separates it radically from migratory movement, in a model of dispersal that is an alternative to sedentary settlement. Definite predominance of pastoral production, use of seasonal alternations, and specifically nomadic mobility constitute a strategy that stabilizes resources and populations and whose basic foundation is appropriation of a territorial base that is established as durably as possible. Just like sedentary settlement, and following it, nomadic pastoralism puts an end to migratory mobility. Its own mobility is not in any way a return to that mobility. In any case to have to go back to migration, for both sedentary farmers and nomadic stock-rearers alike, marks the outer limit, even the failure of their particular strategy, an outcome often dramatically illustrated by cataclysmic events in today's world.

Thus it seems that a single idea of mobility is inappropriate to describe the two fundamentally independent phenomena represented by transcontinental migration, arising partly from the effects of the ice age and nomadic pastoralism.

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