

MOUNTAIN PASTORALISM 1500–2000: AN INTRODUCTION

Raquel Gil Montero, Jon Mathieu and Chetan Singh

Abstract

This special issue of *Nomadic Peoples* presents a collection of articles that give an idea of the continuities and changes of pastoralism in upland areas during the past five centuries. They are the result of a lengthy project on 'Mountain Pastoralism and Modernity' organized by historians from different continents. The following introduction aims to trace the framework of that enterprise. It takes up a few key concepts: mountain pastoralism, history, verticality, intensification and mobility. It then describes the project, outlines the current state of research in the continents concerned, and points to some results and prospects.

Keywords: pastoralism, mountain areas, history, intensification, modernity

Mountain pastoralism has seldom been approached from an intercontinental comparative perspective, and even more rarely so with a focus on historical development. In this special issue of *Nomadic Peoples*, we present a collection of articles which, taken together, can give an idea of the continuities and changes in upland environments during the past five centuries. They are the result of a project on 'Mountain Pastoralism and Modernity' organized by historians from different continents. The project involved quite a few scholars and, in 2008 and 2009, brought most of them together in a cycle of conferences in Latin America, Asia, and Europe. The following introduction aims to trace the framework of that enterprise. We first take up a few key concepts: mountain pastoralism, history, verticality, intensification and mobility. We then describe the project, outline the current state of research in the continents concerned, and point to some results and prospects.

Mountain Pastoralism

In the important work *The World of Pastoralism: Herding Systems in Comparative Perspective*, Galaty and Johnson (1990) distinguish several forms of pastoralism, according to environmental differences: plains, desert and tundra, mountain. They explain that: 'Pastoralism in mountain environments is characterized by a vertical stratification of resources by altitude. This permits herders to move animals from lowland cool-season to highland warm-season pastures in order to escape the extremes of temperature and precipitation that otherwise might harm their flocks. Most animal-keeping groups in mountain environments also engage in agriculture. These activities are mutually supportive. Simultaneous engagement in both

agricultural and pastoral activities is a time-honored device that reduces risk and increases the production from otherwise limited habitats' (1990: 299).

In their characterization of mountain pastoralism, Galaty and Johnson also point to its historical contexts and connections. Traditionally, pastoral movements were often linked to trade activities between different zones of upland regions, and between upland and lowland regions. Much of the mountain surplus production was marketed in the cities of adjoining lowland zones. Population growth and agricultural intensification in the lowlands often reduced the grazing grounds that were utilized seasonally by mountain pastoralists. This could force them to intensify animal production in the highlands where environmental conditions made intensification more difficult and time-consuming in general terms (1990: 299–300).

Mountain areas cover more than one fifth of the world's terrestrial surface, and 'mountain pastoralism' is a well-established category in pastoral studies, used and referred to by many scholars. For instance, thirty years ago, Goldschmidt considered the distinction between pastoralism in flat lands and mountain areas to be a central distinction in his 'general model for pastoral social systems'. Later Scholz, in his survey of pastoral nomadism in the Eurasian and African drylands, marked the spatial distribution of vertically (versus horizontally) migrating livestock-keepers, and discussed the domestication and keeping of yaks in Central Asia. Together with the llamas and alpacas in South America, the yaks are the most important and most well-known high-altitude animals used by pastoralists (Goldschmidt 1979: 16–18; Scholz 1995: 58–59, 68–73, map 1; Barfield 1993).

Khazanov, on the other hand, questions the value of environmental subdivisions in pastoralism, for plains and mountains alike. 'As a matter of fact, Kyrgyz mountain pastoralists in the Pamirs have much more in common with their pastoral Kazakh neighbors, who are typical steppe (plain) nomads, than with pastoralists in Tibet, not to mention in the Caucasus or in the Andes' (1994: XXXIV). This might well be the case, but cultural proximity to neighbours could also relativize most of the basic distinctions put forward by Khazanov himself (pastoral nomadism proper, semi-nomadic pastoralism, semi-sedentary pastoralism, distant-pastures husbandry, sedentary animal husbandry). And in our case, 'mountain pastoralism' is not primarily used to stress similarities: differences are just as interesting, or even more so, for historical purposes.

History

Khazanov belongs to that group of anthropologists who advocate and promote the study of history and criticizes the tendency of pastoral studies to deal with present-day phenomena only. He cites the paradoxal saying 'the past is never dead, it is not even past' (William Faulkner) and stresses that one cannot understand the contemporary problems, situations and attitudes of pastoralists without taking the past into account. This concerns different domains, and especially the cultural realm, which reflects and incorporates major historical events and trends

(Khazanov 1990: XXXIII; Kaufmann 2000: 11–12). Consequently, Khazanov has invested much energy in historical research: from the first studies about ancient pastoral groups in Sarmatia and Scythia to the discussion of the ‘origins of pastoral nomadism’ in his well-known book *Nomads and the Outside World* (1984/1994) and the differentiated essay *Nomads in the History of the Sedentary World* (2001), to mention just a couple of examples.

What we are proposing here is to take historical research one step further, that is, beyond the question of ‘origins’, beyond ancient developments and beyond the medieval apogee in the century of the Mongol Empire. These issues are privileged not only by Khazanov, but also by many authors writing about pastoralism in the past. Certainly, we should continue working hard on these important questions and periods, but we must also complete them by paying the same attention to the modern period, that is, after A.D 1500.

There are several obvious reasons for this shift in focus: firstly, one can assume that historical developments nearer to the present time have a certain practical relevance to current opinions and decisions, whereas the focus on very remote periods or particular moments is often more of symbolic value in public discourse; secondly, long-term perspectives, a useful tool for different goals, depend on balanced research into different periods; thirdly, the sources for the modern period are, as a rule, much better than those for older periods, facilitating detailed analysis and reducing speculation. The case of the Andes is a perfect illustration: from the sixteenth century onwards, following Spanish rule, the evidence becomes a lot more explicit. The new kind of control by written documentation was tragic for indigenous groups, but promising for those who want to learn about them, and there is little reason to leave this research potential untapped (see the articles by Nielsen and Gil Montero in this issue).

Sometimes, in interdisciplinary discourse, the contribution of history is not conceived with sufficient profundity. It is therefore important to stress that historical research is not only adding empirical information to scholarly knowledge, it is also an indispensable contribution to ongoing methodological and theoretical discussions. Social science models are usually constructed on synchrony, that is, on a conceptual apparatus stressing functional relationships and lacking diachronic relationships. In reality, however, human societies are dynamic systems and are constantly reconfigured over time. Hence we have to consider diachronic causalities – the dependence on previous constellations – and include them in our theoretical thinking. Intensification processes, so important in agricultural and pastoral development, are hard to conceptualize without treating time as a central dimension. A general model centred on diachronic relationships is offered, for instance, by the idea of ‘path dependency’. According to this, a certain ‘accidental’ configuration of factors can have a considerable impact on development by predetermining directions of change, which will be abandoned only as a result of the pressure of special context conditions (Tissot and Veyrassat 2002). This idea helps us to give more complexity to the human-nature relationship and is a basic assumption for the articles collected in this volume.

Verticality

Many languages have special terms for altitudinal belts as a natural and cultural phenomenon, expressing the differences in the vertical structure of the landscape. A familiar example is the tripartite Spanish terminology, used from colonial times in Latin America (*tierras calientes, templadas, frias* – hot, moderate and cold zones). In the early modern period, and especially in the nineteenth and twentieth centuries, the study of verticality was taken up by different disciplines such as botany, geography and anthropology. We will highlight here selected authors whose work is of relevance when considering issues of mountain pastoralism.

In 1922, the geographer Philippe Arbos published a detailed doctoral thesis on pastoral life in the French Alps, started well before World War I and soon followed by a survey article on pastoral life in Europe (Arbos 1922 and 1923). His work was seminal to later studies in Europe mountain areas. Arbos distinguished the ‘three fundamental forms of pastoral life’, nomadism, transhumance and combined mountain agriculture: (1) nomadism is the form under which human groups accompany their herds in migration. It requires vast extents of land devoted to pastures, and by 1900 had almost vanished from the continent; (2) transhumance, in which the care of the animals was delegated to professional shepherds, remained much more important than nomadism and was most frequently practised in southern areas. It was centred on sheep and occupied often distant pastures in the mountains and plains for summer and winter grazing; (3) in the third system, called the ‘pastoral life of the mountain’ by Arbos, the movements take place within the mountains, between the lower and upper parts of the slopes, as a kind of local transhumance. This system, better known under the German term ‘*Alpwirtschaft*’ and other labels, was particularly important in the Alps. Here, the animals included cattle that lived on forage, not on grazing, during the winter season.

In Latin America, the ethno-historian John V. Murra became famous in the late 1960s with his model of ‘the vertical control of a maximum of ecological belts’ (*control vertical de un máximo de pisos ecológicos*). Originally the model concerned the Andes in a certain historical period, the fifteenth and sixteenth centuries, the time of transition from the Inca Empire to Spanish rule. Unlike the European model, the Latin American model did not centre on livestock-keeping, but on agricultural work conducted in the Andes on several altitudinal belts. Together with the pastoral life on high levels, this differentiated structure was a motive for complex transactions. The concept of the vertical control implied a subsistence economy and transactions other than market exchange. It had an ideological point, which accommodated indigenous identity politics and stimulated discussion and research to a great extent. Following Murra, and going beyond him, Andean studies later provided evidence for the diversity of vertical forms of production and exchange (Murra 2002; Orlove and Guillet 1985; Assadourian 2006; see also below).

From the 1970s onwards, anthropologists in the field of cultural ecology started to deal with comparative studies on traditional mountain economies on a global

scale. The globalization of research was backed by the politicization of environmental issues, leading to a certain worldwide mountain movement (Messerli and Ives 1997). Anthropologists now reviewed existent concepts such as '*Alpwirtschaft*' and 'vertical control' and created their own models, labelled 'mixed mountain agriculture' or 'montane production strategy', and later 'combined mountain agriculture' (Rhoades and Thompson 1975; Guillet 1983; Orlove and Guillet 1985; Ehlers and Kreutzmann 2000). However, attempts to stress similarities in vertical land use were not only complicated by cultural diversity, but also by climatic differences between tropical and non-tropical mountain ranges. The tropical mountains show pronounced daily variations in temperature and small seasonal variations. In Quito, the capital of Ecuador, lying almost under the equator, the seasonal thermic variation remains below one degree Celsius in average years. Whereas vertical mobility in non-tropical mountains can be correlated to the movements of temperature and snow cover, the driving forces in tropical mountains are to be found in other circumstances.

Intensification and Mobility

Nevertheless, forms of vertical interdependence and integration were evidenced almost everywhere. A geographical survey of 1966 – made in a sweeping manner, but based on global investigation – distinguished twenty-five economic 'structure-types' in upland regions. With the exception of two, they all showed types of vertical interdependence with a lower lying belt, be it through pastoral or agricultural links. The exceptions concerned isolated mountain groups living on hunting and gathering or on shifting cultivation (Hambloch 1966). This could be an indication that vertical integration was often a corollary to the intensification of land use. Using the slopes in regular short time intervals increased the probability that altitudinal belts were transformed into differentiated zones for planting and pastoral production. This in turn might well have been a condition for the development of vertically organized economies (see also Skeldon 1985: 242).

The three 'fundamental forms of pastoral life', distinguished by Arbos and many others, can also be considered in an intensification perspective. The difference lies above all between nomadism and transhumance on the one hand and combined mountain agriculture (*Alpwirtschaft*) on the other. The former relies on grazing all year long; the latter includes fodder production for stable-feeding in the cold season. This laborious system has not developed in many mountain areas, yet it shows with clarity, and sometimes even in a dramatic way, that historic mountain pastoralism could be conducted at different intensity levels (see the articles by Blatter and Mocarelli in this issue).

Intensity has been an important issue in pastoral studies. In general, of course, pastoralism was on the extensive side of land use patterns, and we maintain that it was often on the extensive side of labour use, too. Following Boserup, one can

suggest that land-consuming and labour-saving modes of production such as pastoralism had a special rationality up to the technological revolution in agriculture during the nineteenth and twentieth centuries. Whereas population growth required new methods of using the environment in land-saving ways, the increased output often did not match the amount of extra labour needed. Older, extensive ways of land use thus enjoyed higher labour productivity and remained in place as long as a territory's resources permitted (Boserup 1993 [1965] and 1981). These contrasting movements of land productivity and labour productivity could be an important reason for the long persistence of pastoral systems.¹

Pastoralism brought about mobility of animals and of humans, yet many authors stress that the extent of that mobility was highly variable (Dahl 2001: 11108; Salzman 2004: 5–6, 17–19). The abovementioned classification systems of Khazanov and Arbos point to decreasing mobility with increasing sedentarization and the introduction of stable-feeding. This is certainly true to some degree, yet there was never a one-to-one relationship. With regards to herd migration only (and not to moving residences), the mobility of transhumant livestock-keepers could exceed the mobility of nomads (Schlee 2005: 17–26). Even with combined mountain agriculture (*Alpwirtschaft*), usually a kind of local transhumance, mobility remained a complex issue: firstly, there were examples of long distances between the villages and their summer pastures, requiring travels of a few days; secondly, one could also consider the mobility opened up by trade in animals that required even longer journeys; and thirdly, mobility could increase, and not decrease, with the intensification of the mountain economy in certain valleys.²

Mountain Pastoralism and Modernity: A Project

During the past five centuries considered by our project, there has been a tremendous change almost everywhere on the planet, reaching even remote mountain areas. The estimated world population in 1500 was thirteen times smaller than the world population in 2000. In the first period, until about 1750, demographic growth remained relatively slow, whereas in the second period, when industrial technology spread and permeated more and more societies, the growth rate greatly accelerated. In the economic and political domain, the process was characterized both by extreme dis-equilibrium and inequality and by remarkable parallels between different continents. From about 1500, European seafaring and expansion multiplied the contacts. Let us mention the so-called 'Columbian Exchange': from the Americas a series of plants began to spread over the other parts of the earth, especially maize, potatoes and sweet potatoes; and from Eurasia a number of animals began to penetrate the 'New World', especially cattle, horses, donkeys, sheep and pigs. Another phenomenon changing the global face was urbanization, driven by population growth, and political and economic centralization. To a greater degree than other factors, it created disparities between

lowlands and highlands. In 2000, worldwide, there existed almost four hundred cities with more than one million inhabitants. Only 18 per cent of them were located higher than 500 metres above sea level, whereas the total terrestrial surface above that level encompasses 48 per cent; and only 9 per cent of the great cities exceeded 1,000 metres, with a terrestrial surface of 27 per cent (Crosby 1972; Braudel 1979; United Nations 2003; Richards 2005; Livi Bacci 2005).

The point of reference proposed for our project is ‘modernity’ – a difficult and problematic, yet in some ways important notion that has many aspects and interpretations to it. In history, the term is conventionally used for a time period (the ‘modern period’ from A.D. 1500). In the public mind, it is often used to refer to issues of economic development, and especially to technological innovation. Moreover, ‘modernity’ is a weapon in cultural struggles, since it implies hierarchy, be it synchronic (one society being superior to the other), or diachronic (the recent ‘modern’ period being superior to the past ‘traditional’ period). One author gives the following assessment: ‘The “modern” culture of the twentieth and twenty-first centuries has valued urban rather than rural life, education rather than experience, refinement rather than natural qualities, consumption rather than production, national rather than local identity, and leisure rather than labor. In the modernist vision, spread effectively and widely through schools and the mass media, rural producers, such as pastoralists out on the range with their animals, are deemed marginal and backward. With the cultural value of pastoralism so denigrated, young people are discouraged from taking it up, and without recruitment, pastoralism dies’ (Salzman 2004: 15–16).

For historical purposes, the notion of, and discourse about, modernity has a considerable comparative value, since it creates a focal point and causes scholars to think about groups and perceptions other than those immediately under study. The focal point is not arbitrary either, since one or other variant of ‘modernity’ was used, again and again, in the power struggles conducted by the protagonists about their identities and the right way to proceed. It is evident, then, that it cannot be ignored by historians. Yet it is equally evident that ‘modernity’ requires deconstruction. Burke points to the ironic fact that the term was already used in the Middle Ages. According to him, the trouble with modernity is that ‘it keeps changing.’ (1992: 137) One can hardly take it as a yardstick over the centuries, and it shows different faces in one and the same generation. Was pastoralism, up to the technological revolution, ‘modern’ because it enjoyed a high return on labour, compared to labour-consuming systems of agriculture? What about the ‘modern’ romantic views of pastoralists, which began to expand parallel, and in opposition to, the spread of ‘civilization’? In past centuries, many aggressive claims to modernity came from Western countries. It is therefore clear that its deconstruction includes a critique of colonial and post-colonial domination.

On an organizational level, the project on ‘mountain pastoralism and modernity’ evolved in different phases. When we started, late in 2006, we decided to restrict the exploration to three continents (Latin America, Asia and Europe) and we soon

discovered that it is not easy to find seasoned explorers for the history of pastoralism anywhere. The restriction was based on pragmatic considerations. Of course, it would have been intriguing to take examples from every continent and major region, but our resources were limited and we opted for quality rather than quantity. This also concerns the selection of case studies within the three continents where the historical interest of a study was given priority over geographical coverage. The first idea was to organize the project around a session at the *XVth World Economic History Congress*, held at Utrecht, the Netherlands, in August 2009. Given the problem of finding experts, we then opted for a cycle of pre-conferences that could broaden our knowledge about older studies and ongoing current research. For Latin America, Raquel Gil Montero organized two pre-conferences in Lima, Peru and in San Miguel de Tucumán, Argentina (August 2008); for Asia, Chetan Singh and Jon Mathieu arranged a third pre-conference in Kathmandu, Nepal (January 2009); and for Europe, Jon Mathieu summoned a fourth pre-conference in Lucerne, Switzerland (May 2009). Together with the concluding session in Utrecht, this cycle of meetings enabled us to be selective. Our aim was to gain a certain overview of the state of research in the field, and to encourage historians to present interesting case studies of transformation in mountain pastoralism.

State of Research

As already stated, mountain pastoralism has seldom been examined from a comparative perspective, and even more rarely so with a focus on historical development. Research on these vast and often remote upland pastures for the modern period is very scattered and unfortunately specific bibliographies are largely lacking. Nevertheless, there are many important studies of different places and phases. A few have already been mentioned. The following remarks give some more clues for the continents under study without the intention and possibility of being exhaustive.

Latin America

The subject of pastoralism in the Andes was taken up in the 1960s by Murra with an analysis of an important colonial document (*Revisita de Chucuito*) produced thirty years after the Spanish conquest (Murra 1964). However, Flores Ochoa (1967) and Nachtigal (1968) were the first researchers who talked about native herders in the Andes, and in the 1970s, following their studies, many other researchers worked on the Peruvian highlands and on different aspects of pastoral life. At the same time, two archeological models, which focused on pastoralists, reconsidered Murra's idea of the 'control vertical de un máximo de pisos ecológicos' (Nuñez and Dilehay 1979; Browman 1977). They also integrated other regions into the discussion, including the desert of Atacama and the Bolivian

plateau. Later investigations based on these regions and on the north of Argentina added new elements to the general discussion, since pastoralism was, and still is, highly relevant there (West 1981; Caro 1985; Lecoq 1988; Nielsen 1996; Goebel 1998; Gil Montero 2004). Currently, the literature on pastoralism can be considered rich and profuse, yet studies on the history of the herders remain scarce, and most studies are still focused on herders of camelids, the native domestic animals, and not on the introduction of Euroasian animals and their impact on native pastoralism. Recent bibliographical surveys are provided by Medinaceli (2005) and Sendón (2008).

Asia

In large parts of Asia, pastoralists have long exerted a remarkable influence on the course of history. Enduring movements of a civilizational scale and the political trajectories of vast empires have been affected by the activities of pastoral societies, such as in China or India. Not all pastoral people, however, have been closely linked to changing societal trends outside their immediate geographical location. In particular, mountain pastoralists – like the mountains themselves – have tended to remain peripheral and even isolated. Due to this marginalization, interest in mountain pastoralism has been rather slow in developing.

Barth's studies of Swat Kohistan (1956) and of the Basseri nomads of Persia (1961) can be considered seminal in the field. Reference might also be made to Barfield's research (1981) on the changes that nomads in Afghanistan were confronted with. Tapper's work (1979) on the nomads of northwestern Iran left a noticeable impression on the theoretical formulations of subsequent scholarship. In the Indian Himalaya, W.H. Newell's study of the Gaddis (1967) was integrated, like some other works on tribal groups, with the larger census operation. Thereafter, some other researchers (Bhasin 1986; Saberwal 1999) also focused on the Gaddis, who have come to be seen as typical migratory pastoralists of the western Himalaya. Similar studies were conducted in the 1980s and 1990s on the Gujjars, Bakwals and Bhotias of Jammu, Kashmir and Uttarakhand. Further east in Nepal, the Sherpas became the subject of early studies. Furer-Haimendorf (1964) provided an academic description of the agro-pastoralist practices of an indigenous Nepali tribe and later went on to study the inter-linkages between trade and pastoralism (1975) that are characteristic of societies of the higher and (sometimes) the mid-Himalayan region. This started a trend of scholarship that produced well researched monographs such as the studies of Fisher (1986) and Brower (1991). More recently, a special issue of *Nomadic Peoples* (2004) and a collection of articles (Rao and Casimir 2008) highlighted concerns related to South Asian pastoralists in general, including some situated in the highlands.

There are also a number of valuable studies (both older and newer) covering regions not mentioned so far (Scholz 2002 [1973]; Thargyal 2007). However, most of this research in Asia has addressed contemporary issues and consists of studies carried out by anthropologists, sociologists, geographers and development experts.

A historical perspective remains disturbingly absent in our understanding of how pastoral peoples and agrarian society have interacted to create sociopolitical systems in the mountains. This is a gap in our knowledge that still needs to be redressed.

Europe

Serious research into European mountain pastoralism started in the early twentieth century and can roughly be divided into three periods. The first period was marked by geographers such as Arbós (1922 and 1923, mentioned above) and Frödin (1940–41, a successor of Arbós). Since pastoralism in Spain had been partially anchored in a powerful organization since the thirteenth century, it was also appealing to institutional historians (Klein 1920). The second period is represented by Braudel's famous book on the Mediterranean during the sixteenth century (1966). It stressed that the sea was surrounded by mountain ranges and that there were 'two faces' of the region, one characterized by transhumance and the other by nomadism. Braudel could already use a multitude of geographical studies and pointed to the difficulty of reconstructing a complete picture of the past. Of particular interest was his insistence on the time dimension and different temporalities of historical development. In the third period, research on pastoralism, like research in general, tended to assume collective forms. One can numerate various conferences held in several countries about pastoral life, both past and present (Institut d'études 1984; Carlen and Imboden 1994; Arbeitsgemeinschaft Alpenländer 2001; Viazza and Woolf 2001; Laffont 2006). Detailed monographs on the history of European pastoralism, on the other hand, are still in short supply (Viallet 1993; Brunnbauer 2004).

Some Results and Prospects

A collection of revised conference papers – like the one presented in this issue of *Nomadic Peoples* – cannot cover a subject matter systematically and should not be expected to speak with one voice. The interest of the genre lies in the fact that it can propose variations on a leitmotif and bring scholarly traditions together. It is open to different readings. Here we point to a reading related to the regions selected and a second reading related to general statements about mountain pastoralism.

The Latin American articles unmistakably bring out the long-term existence and importance of pastoralism in the Andes, which has been somewhat obscured in previous discussions focused on agricultural verticality. The articles also shift the attention from the central parts of the mountain range, the (former) centre of the Inca Empire, to the southern parts, which have been considered more peripheral by Andean studies. The long-term existence of pastoralists in the region does not imply immutability. With the advent of large-scale mining under colonial rule, they expanded their transport and trade activities in an unprecedented way. The spacious and gigantic mountain systems in Asia were, and still are, the home of the world's

largest upland pastoral and nomadic populations. Nevertheless, what clearly emerges in the Asian articles is their decline and suppression, provoked by economic transformations and perhaps even more so by changing political circumstances and attitudes. From colonial domination to independence, the states continued to interfere with pastoralists through warfare, internal power struggles and development programmes in the name of modernity. The European articles, on the other hand, place more focus on economic change. For long periods the change concerned the transition to more intensive ways of livestock-keeping, as illustrated by the shift from sheep to cattle raising, by massive fodder production and by cheese making in the Alps. All these developments were related to early urbanization in the lowlands. Still, with the advent of the agro industry in the twentieth century, the laborious systems went into crisis, perhaps most dramatically in the Spanish case.

As for general conclusions about mountain pastoralism, one can relate the collected articles to the description by Galaty and Johnson mentioned earlier (1990: 299–300). On the *economic and ecological* side, their account has many echoes in our historical explorations: intensification processes and problems of intensification in upland areas; the importance of trade and transportation; links to urban growth in adjoining lowland zones. Of course, one can point to variants such as the astonishing mining towns in the Andean uplands or the fact that the herders did not move their animals from ‘lowland cool-season to highland warm-season pastures’ everywhere on the planet; in tropical mountain systems, seasonal thermic variation is insignificant, so the movements were driven by other forces. On the *political and cultural* side, the articles presented here depart from the description of Galaty and Johnson, which does not include such variables. Yet it is made clear by our collection that politics could be extremely relevant to the development of pastoralism, not only in the surroundings of power centres, but also in remote mountain areas. The same applies to cultural attitudes, which can emerge in many forms, from idealisation to denigration, and from discourse and theory to practical intervention. As put forward by one author, modernization theory was, and still is, a kind of unifying force, reassembling the most diverse political actors in their attempts to change pastoralists from the outside (see the paper by Kreutzmann).

This issue of *Nomadic Peoples* is based on many valuable contributions from earlier scholars, yet it has also some flavour of pioneerism, as mountain pastoralism has rarely been treated in a perspective that is both decisively historical and intercontinental. Broadening research in time and in space seems to be a promising way to develop new insights. Of course, such a collection of articles can only stimulate and open a debate, not conclude it. We are told by geographers that mountain areas cover up to 36 million square kilometres worldwide (the United States encompasses 10 million square kilometres). And as historians we know that archives, and other institutions, keep a wealth of records on upland pastoralism, which remain largely unexplored. Since these vast, sparsely populated and fascinating territories were not at the centre of record-keeping in many cases, the discovery of historical evidence is very challenging and rewarding. The evidence

should allow us to bring in, and valorize, the surviving voices of pastoralists throughout the centuries. Pastoralism was not an expanding way of life in the modern period, but a declining one in many regions. This reality makes the endeavour all the more important.

Notes

1. In this approach, the supply systems for animal and vegetable food are not put into a fixed sequence; rather they have intensification potentials of their own and are linked to some extent through population density; yet pastoralism remains on the extensive side (Boserup 1981: 15–28). For the relative high return on pastoral labour, see also Galaty and Johnson (1990: 2, 16–17, 26, 30); however, their indicator for labour productivity (number of animals per person in agriculture) is problematic, since it is heavily influenced by the percentage of livestock-keeping in agriculture.
2. A case in point is Val d'Anniviers in alpine Switzerland, which became famous among researchers around 1900; its mobile economy was considered nomad and archaic, yet there are many indications that this 'primitive' system was in fact chiefly a product of the modern period (Mathieu 1992: 127).

References

Arbeitsgemeinschaft Alpenländer ed. 2001. *Alpwirtschaftliche Nutzungsformen. Historikertagung in Bellinzona 1996*. [in German, Alpicultural Forms of Land Use. Historical Conference in Bellinzona 1996] Verlagsanstalt Athesia, Bozen/Bolzano.

Arbos, Ph. 1922. *La vie pastorale dans les Alpes Françaises. Étude de géographie humaine*. Colin, Paris.

——— 1923. 'The Geography of Pastoral Life Illustrated with European Examples', *Geographical Review* 13(4): 559–74.

Assadourian, C.S. 2006. 'Agriculture and land tenure'. In *The Cambridge Economic History of Latin America, vol. 1: The Colonial Era and the Short Nineteenth Century*. Cambridge University Press, Cambridge, pp. 275–314.

Barfield, T.J. 1981. *The Central Asian Arabs of Afghanistan. Pastoral Nomadism in Transition*. University of Texas Press, Austin.

——— 1993. *The Nomadic Alternative*. Prentice Hall, Englewood Cliffs, New Jersey.

Barth, F. 1956. *Indus and Swat Kohistan. An Ethnographical Study*. Forenede Trykkerier, Oslo.

——— 1961. *Nomads of Persia. The Basseri Tribe of Khamseh Confederacy*. Oslo University Press, Oslo.

Bhasin, V. 1986. *Himalayan Ecology. Transhumance and Social Organization: Gaddis of Himachal Pradesh*. Kamla-Raj Enterprises, Delhi.

Boserup, E. 1981. *Population and Technology*. Basil Blackwell, Oxford.

——— 1993. *The Conditions of Agricultural Growth. The Economics of Agrarian Change under Population Pressure*. Earthscan, London (first edition 1965).

Braudel, F. 1966. *La Méditerranée et le monde méditerranéen à l'époque de Philippe II* [in French, The Mediterranean and the Mediterranean World at the Time of Philip II], 2 vols. Colin, Paris.

——— 1979. *Civilisation matérielle, économie et capitalisme, XVe-XVIIIe siècle* [in French, Material Civilization, Economics and Capitalism, Fifteenth–Eighteenth Centuries]. 3 vols. Colin, Paris.

Brower, B. 1991. *The Sherpas of Khumbu: People, Livestock and Landscape*. Oxford University Press, Delhi.

Browman, D. 1977. ‘Tiwanku expansion and Altiplano Economic Patterns’, in *VII Congreso de Arqueología de Chile*. Talca.

Brunnbauer, U. 2004. *Gebirgsgesellschaften auf dem Balkan. Wirtschaft und Familienstrukturen im Rhodopengebirge (19./20. Jahrhundert)* [in German, Mountain Societies in the Balkans. Economy and Family Structures in the Rhodope Mountains, Nineteenth/Twentieth Centuries]. Böhlau, Vienna.

Burke, P. 1992. *History and Social Theory*. Polity Press, Cambridge.

Carlen, L. and G. Imboden, eds. 1994. *Alpe – Alm. Zur Kulturgeschichte des Alpwesens in der Neuzeit* [in German, Alps. On the Cultural History of the Alp-Economy in the Modern Era]. Rotten-Verlag, Brig.

Caro, D. 1985. “‘Those Who Divide Us’: Resistance and Change among Pastoral Ayllus in Ulla Ulla, Bolivia”. Dissertation, John Hopkins University, Baltimore, Maryland.

Crosby, A.W. 1972. *The Columbian Exchange. Biological and Cultural Consequences of 1492*. Greenwood Press, Westport.

Dahl, G. 2001. ‘Pastoralism in Anthropology’. In *International Encyclopedia of the Social and Behavioral Sciences*. Elsevier, Amsterdam, vol. 16, pp. 11108–11111.

Ehlers, E. and H. Kreutzmann, eds. 2000. *High Mountain Pastoralism in Northern Pakistan*. Franz Steiner Verlag, Stuttgart.

Fisher, J.F. 1986. *Trans-Himalayan Traders. Economy, Society and Culture in Northwest Nepal*. Motilal Banarsi Dass, Delhi.

Flores Ochoa, J.A. 1967. *Pastores de Paratía. Una introducción a su estudio* [in Spanish, Shepherds of Paratía. An Introduction]. Instituto Indigenista Interamericano, Mexico.

Frödin, J. 1940–41. *Zentraleuropas Alpwirtschaft*. 2 vols. Aschehoug, Oslo.

Furer-Haimendorf, C. von. 1964. *The Sherpas of Nepal*. University of California Press, Berkeley.

——— 1975. *Himalayan Traders*, John Murray, London.

Galaty, J.G. and D.L. Johnson, eds. 1990. *The World of Pastoralism. Herding Systems in Comparative Perspective*. The Guilford Press, New York.

Gil Montero, R., 2004. *Caravaneros y trashumantes en los Andes Meridionales. Población y familia indígena en la puna de Jujuy 1770-1870* [in Spanish, Caravaneers and transhumants in the Southern Andes. Indian population and family in the Puna of Jujuy 1770-1870]. Instituto de Estudios Peruanos, Lima.

Goebel, B., 1998, “‘Salir de viaje’: Producción pastoril e intercambio económico en el noroeste argentino”. In *50 años de Estudios Americanistas en la Universidad de Bonn. Nuevas contribuciones, etnohistoria, etnolingüística y etnografía en las Américas*, [in Spanish, Pastoral Production and Economic Interchange in Northwestern Argentina, in : 50 Years American Studies at the University of Bonn]. eds. Arellano, C. et al. Saurwein, Estudios Americanistas de Bonn.

Goldschmidt, W. 1979. 'A General Model for Pastoral Social Systems'. In *Pastoral Production and Society. Proceedings of the International Meeting on Nomadic Pastoralism, 1976*. Cambridge University Press, Cambridge, pp. 15–27.

Guillet, D.W. 1983. 'Toward a Cultural Ecology of Mountains: The Central Andes and the Himalaya Compared', *Current Anthropology* 24(5): 561–74.

Hambloch, H. 1966. *Der Höhengrenzsaum der Ökumene. Anthropogeographische Grenzen in dreidimensionaler Sicht* [in German, The Altitudinal Limit in the Ecumene. Anthropo-Geographical Limits in a Three-Dimensional View]. Selbstverlag des Instituts für Geographie, Münster.

Institut d'études du Massif central. ed. 1984. *L'élevage et la vie pastorale dans les montagnes de l'Europe au Moyen âge et à l'époque moderne. Actes du colloque international* [in French, Animal Husbandry and Pastoral Life in the European Mountains from the Middle Ages to the Modern Era]. Institut d'études, Clermont-Ferrand.

Kaufmann, J.C. 2000. 'Anthropology: An Interview with Anatoly M. Khazanov', *Nomadic Peoples* NS 4(1): 5–22.

Khazanov, A.M. 1994. *Nomads and the Outside World*, second edition. University of Wisconsin Press, Madison (first edition 1984).

——— 2001. 'Nomads in the History of the Sedentary World'. In *Nomads in the Sedentary World*, eds. Khazanov, A.M. and Wink, A. Curzon Press, Richmond, pp. 1–23.

Klein, J. 1920. *The Mesta. A Study in Spanish Economic History, 1273–1836*. Harvard University Press, Cambridge, MA.

Laffont, P.-Y. ed. 2006. *Transhumance et estivage en Occident des origines aux enjeux actuels* [in French, Transhumance and Summer Pasturing in the West, from the Origins to the Present]. Presses Universitaires du Mirail, Toulouse.

Lecoq, R. 1988. 'Una ruta de la sal en el sud boliviano. Informe de viaje de trueque anual de una caravana de llamas' [in Spanish, A Salt Route in Southern Bolivia. Travel Report of a Llama Caravan], *Revista del Museo Nacional de Etnografía y Folklore*. MUSEF No. 12. La Paz.

Livi Bacci, M. 2005. *Storia minima della popolazione del mondo* [in Italian, A Brief History of World Population]. Il Mulino, Bologna.

Mathieu, J. 1992. *Eine Agrargeschichte der inneren Alpen. Graubünden, Tessin, Wallis 1500–1800* [in German, Agrarian History of the Inner Alps. Grisons, Ticino, Valais 1500–1800]. Chronos, Zurich.

Medinaceli, X. 2005. 'Los pastores andinos: una propuesta de lectura de su historia' [in Spanish, The Andean Herders : a Proposal of Historical Interpretation], *Bulletin de l'Institut Français d'Études Andines* 34(3): 463–74.

Messerli, B. and J.D. Ives. eds. 1997. *Mountains of the World. A Global Priority*. The Parthenon Publishing Group, New York.

Murra, J.V. 1964. 'Rebaños y pastores en la economía del Tawantinsuyu'. In Murra, *El mundo andino. Población, medio ambiente y economía* [in Spanish, Herds and Herders in the Economy of the Tawantinsuyu]. Instituto de Estudios Peruanos, Lima, pp. 308–27.

——— 2002. *El mundo andino. Población, medio ambiente y economía* [in Spanish, The Andean World. Population, Environment and Economy]. Instituto de Estudios Peruanos, Lima.

Nachtigal, H. 1968. 'Ofrendas de llama en la vida ceremonial de los pastores de la puna de Moquegua, Perú y de la puna de Atacama, Argentina y consideraciones históricas'.

culturales sobre la ganadería indígena' [in Spanish, Llama Offerings in the Ritual Life of the Herders of Moquegua, Peru and of the Puna de Atacama, Argentina, and Remarks on the Cultural History of Indigenous Animal Husbandry], *Allpanchis No. 8*. Cuzco.

Newell, W.H. 1967. *A Study of Gaddi Scheduled Tribe and Affiliated Castes, Census of India, 1961*, Himachal Pradesh, Vol. XX, Part V-B, Special Publication, Government Press, Simla.

Nielsen, E.A. 1996. 'Competencia territorial y riqueza pastoril en una comunidad del sur de los Andes Centrales (Dpto. Potosí, Bolivia)' [in Spanish, Territorial Competence and Pastoral Wealth in a Southern Community of the Central Andes], *Zooarqueología de camélidos 2*: 53–74.

Nomadic Peoples: Whither South Asian Pastoralism? 2004. 8: 2, December.

Nuñez, L. and T. Dillehay. 1979. *Movilidad giratoria, armonía social y desarrollo en los Andes meridionales: patrones de tráfico e interacción económica* [in Spanish, Gyrating Mobility, Social Harmony and Development in the Southern Andes: Traffic Patterns and Economical Interaction], Chile. Universidad del Norte, Antofagasta.

Orlove, B.S. and D.W. Guillet. 1985. 'Theoretical and Methodological Considerations on the Study of Mountain Peoples: Reflections on the Idea of Subsistence Type and the Role of History in Human Ecology', *Mountain Research and Development 5*(1): 3–18.

Rao, A. and M.J. Casimir. eds. 2008. *Nomadism in South Asia*, Oxford University Press, New Delhi.

Rhoades, R.E. and S.I. Thompson. 1975. 'Adaptive Strategies in Alpine Environments: Beyond Ecological Particularism', *American Ethnologist 2*(3): 535–51.

Richards, J.F. 2005. *The Unending Frontier. An Environmental History of the Early Modern World*. University of California Press, Berkeley.

Saberwal, V. 1999. *Pastoral Politics. Shepherds, Bureaucrats, and Conservation in the Western Himalaya*. Oxford University Press, New Delhi.

Salzman, P.C. 2004. *Pastoralists. Equality, Hierarchy, and the State*. Westview, Boulder.

Schlee, G. 2005. 'Forms of Pastoralism'. In *Shifts and Drifts in Nomad-Sedentary Relations*, eds. Leder, S. and Streck, B. Dr. Ludwig Reichert Verlag, Wiesbaden, pp. 17–53.

Scholz, F. 1995. *Nomadismus. Theorie und Wandel einer sozio-ökonomischern Kulturweise*. Franz Steiner Verlag, Stuttgart. Now also in English: *Nomadism: A Socioecological Mode of Culture; Theory, Phenotypes, Change, Decline*. International Institute for the Study of Nomadic Civilizations, Ulaanbaatar (2008).

— 2002. *Nomadism and Colonialism: A Hundred Years of Baluchistan, 1872–1972*. Oxford University Press, Oxford (original German version published 1973).

Sendón, P.F. 2008. 'Organización social de las poblaciones pastoriles de los Andes del sur peruano: hacia un balance comparativo de un aspecto omitido'. In *Perú: el problema agrario en debate* [in Spanish, Social Organization of Herder Populations in the Andes of South Bolivia: Towards a Comparative Balance Sheet of a Neglected Aspect], eds. Damonte, G. et al., SEPIA XII. Lima, Seminario Permanente de Investigación Agraria, pp. 327–74.

Skeldon, R. 1985. 'Population Pressure, Mobility, and Socio-Economic Change in Mountainous Environments: Regions of Refuge in Comparative Perspective', *Mountain Research and Development 5*(3): 233–50.

Tapper, R. 1979. *Pasture and Politics: Economies and Ritual among Shahsevan Nomads of Northwestern Iran*. Academic Press, London/ New York.

Thargyal, R. 2007. *Nomads in Eastern Tibet: Social Organization and Economy of a Pastoral Estate in the Kingdom of Dege*, ed. Huber, T. Brill, Leiden.

Tissot, L. and B. Veyrassat. eds. 2002. *Technological Trajectories, Markets, Institutions. Industrialized Countries, 19th-20th Centuries; From Context Dependency to Path Dependency*. Peter Lang, Bern.

United Nations 2003. *Urban Agglomerations 2001*. United Nations, New York.

Viallet, H. 1993. *Les alpages et la vie d'une communauté montagnarde: Beaufort du Moyen Age au XVIIIe siècle*. Académie Salésienne, Annecy.

Viazzo, P.P. and S. Woolf. eds. 2001. *L'alpeggio e il mercato* [in Italian, Alpine Husbandry and the Market Economy]. Grafo, Brescia.

West, T. 1981. 'Sufriendo nos vamos: From a Sustinenec to a Market Economy in an Aymara Community of Bolivia'. Dissertation, New School for Social Research, New York.

Raquel Gil Montero is a full time researcher at the Instituto Superior de Estudios Sociales (Consejo Nacional de Investigaciones Científicas y Técnicas – Universidad Nacional de Tucumán), Argentina. History Doctor (Universidad Nacional de Córdoba, Argentina). Specialist on Indigenous population history (Southern Andes), particularly Andean herders. Address: Instituto Superior de Estudios Sociales, CONICET – UNT, San Lorenzo 429, 4000 San Miguel de Tucuman – Argentina. Email: raquelgilmontero@gmail.com

Jon Mathieu is Professor of History at the University of Lucerne and at the Swiss Federal Institute of Technology, Zurich, and founding director of the Institute of Alpine History at the University of Lugano (Switzerland). His research interests are mainly directed to the history of mountain areas. Address: Historisches Seminar, Universität Luzern, Kasernenplatz 3, CH-6003 Luzern, Schweiz (Switzerland). Email: jon.mathieu@bluewin.ch

Chetan Singh is Professor of History at Himachal Pradesh University, Shimla. He has been a Fellow of the Indian Institute of Advanced Study, Shimla and was also Editor of the Institute's research journal *Studies in Humanities and Social Sciences*. He has published above all about 17th century India and about Himalayan history. Address: Department of History, Himachal Pradesh University, Shimla – 171005, India. Email: profcsingh@gmail.com