

## THE INTERCONNECTION OF MOUNTAIN AND LOWLAND LANDSCAPES IN HISTORICAL PERSPECTIVE

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**Abstract:** Most historic landscape research takes place within individual countries or even regions. However, landscapes and regions have always been interconnected and we cannot understand any landscape without taking their connections into account. This is certainly the case with mountain landscapes, which were often framed as remote, isolated and self-supporting, but in reality were always connected to the outside world. Exchange with lowland regions existed in different forms: in transhumance systems, in specialised forms of agriculture and in specific products. Over the long run, the resilience of mountain landscapes was not connected to stability, but to creative adaptation to ever changing eternal conditions.

### Introduction

The theme of the 27<sup>th</sup> edition of the Permanent European Conference for the Study of the Rural Landscape was *Mountains, uplands, lowlands*. Within the conference, the Eucaland Network organised a special session on *New activities in historic mountain landscapes*. The present paper, meant as an introduction to that session, looks at the long-term perspective. In the author's opinion, most landscapes, and that is certainly true for mountain landscapes, have been framed too often, by people from elsewhere as well as by the inhabitants, as remote, isolated, self-supporting and as characterised by long-term continuity. As a result, modern developments related to globalisation, are often one-sidedly described as threats. In this paper, I want to show that these landscapes have always been connected to the outside world and often derived income from long-distance transport routes, for example. Not only in the present, but also in the past the lives and landscapes of people in the mountains have been connected to what happened elsewhere. When using a long-term perspective, it becomes clear how resilient these landscapes are. People and their landscapes have survived by the flexibility of the local and regional societies. The paper will look at different aspects of the long-term connectedness. One of these aspects is the movement of animals within mountainous regions as well as between mountains and lowlands, movements that are long-standing, but at the same time have a dynamic history. Another is the variety in agrarian production in different parts of the mountain landscapes. A third aspect is the existence of long-distance trade routes crossing the mountains.

Relations between mountains and lowlands existed on different scales. A classification into three different scales, as will be followed here, fits the aims of this paper but is very much simplified, as the three scales intermingle and the distances within each level vary immensely (Øye 2009).

Firstly, there is the local scale of biotopes within a village territory. Figure 1 distinguishes between 'traditional' and 'modernized' situations. In the modern period, the range of movement of the farmer is reduced, because of changes in agriculture (replacing hay by fodder and dairying by less labour-intensive meat production) and by the growth of non-agrarian activities such as tourism and second homes (Parish 2002). In general, the role of the high pastures in agriculture has diminished.

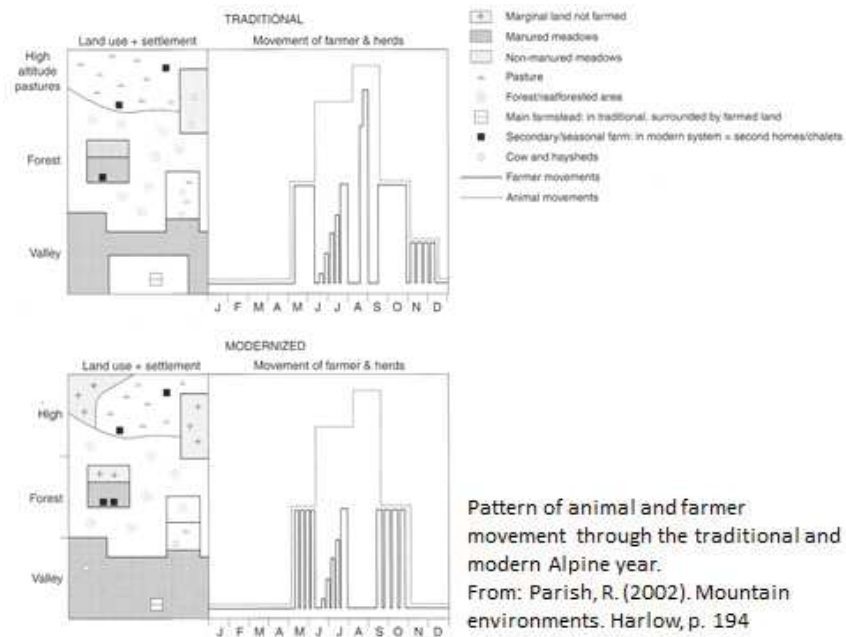


Figure 1. Pattern of animal and farmer movement through the traditional and modern Alpine year (Parish, 2002)

Secondly, there is the regional scale, of transhumance. Such relations have already been described by Braudel as one of the constant systems in Mediterranean landscapes. The literature is overwhelmingly regional and local and focuses strongly on ‘traditional’ systems and on their (recent) disappearance. Less has however been written on the earlier history of transhumance and on the large variety in systems.

Historic settlement systems and transhumance have always shown a large variation. On the one hand, systems exist in which one settlement exploits the whole range of landscapes from the valley bottom to the high Alps. Elsewhere, the exploitation takes place from a central settlement together with a number of subsidiary, usual seasonal, settlements. And in yet other systems, permanent settlements exist on different levels in the mountain landscape, meaning specialisation and intensive exchange (Parish 2002).

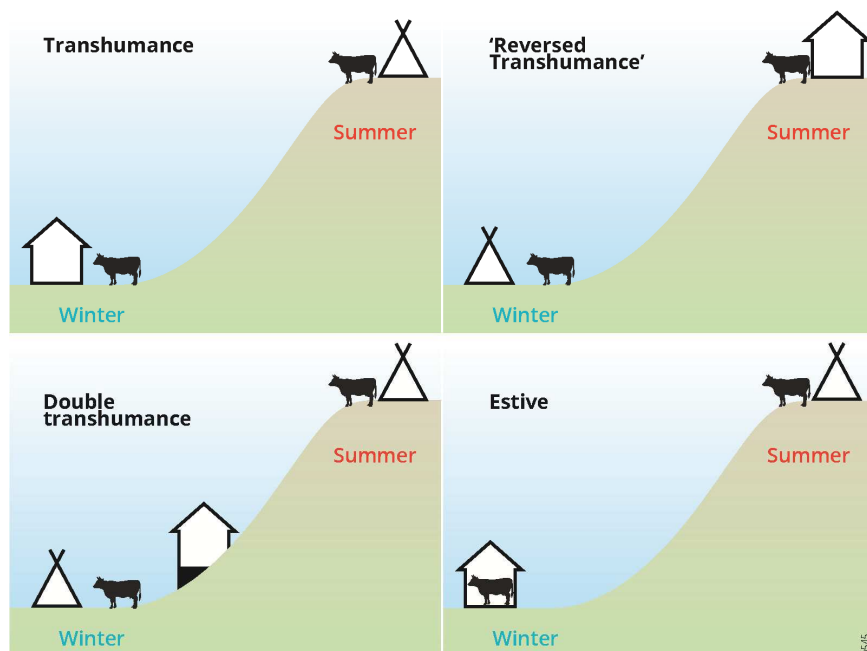


Figure 2. Different types of transhumance after De Vooy (1959)

The term transhumance is often used nowadays as an umbrella for what again used to be a whole range of systems. In the late 1950s, the Dutch geographer Adriaan de Voofs, wrote a series of articles on what we might call the fuzzification of geographical terminology and one of the themes was transhumance, partly based on his fieldwork in Greece (De Voofs 1959). In his opinion, it was important to distinguish between a number of different systems.

For De Voofs, the term transhumance stands for a situation in which the main settlements are located in the valleys, but part of the community and animals spend the summer in a seasonal settlement in the high mountains. There also existed an opposite system, 'reversed transhumance' (Figure 2), in which the main settlement was located on the mountain and the seasonal settlement, usually used in winter, was situated in the lowlands. A third version, 'double transhumance', was where the main settlements had an intermediate location and seasonal settlements existed in the high mountains as well as in the lowlands. The fourth type, called 'estive' was characterised by cattle that was kept inside during winter.

All types come from the wish to use different biotopes within a farming system. The common ground is that the high mountains provide good pastures and meadows in summer, but are too cold and harsh in winter. The lowlands, on the other hand, can accommodate animals during winter (inside the farms or outside in the fields), but are less hospitable for animals during summer, in some regions because of malaria (in Mediterranean lowlands), elsewhere because of intensive arable culture.

The scope is even wider, as transhumance not only takes place between mountains and lowlands, but can also function in a horizontal direction, between regions with different physical-geographical circumstances. When transhumance in most mountainous regions takes place on a local, village, scale (therefore the term 'lesser transhumance'), other systems such as the Spanish *mesta* and the Italian *dogana* were on a much larger geographical scale and, hence, were called 'greater transhumance'.

Even broader, we can look at a wider range of types of seasonal settlements, such as fishing settlements on the seashores or lakeshores, or mining settlements in the mountains. So apart from movements of animals, mountains as well as lowlands show not only permanent villages and towns, but also a wide range of seasonal and sometimes temporary settlements that were usually specialised and that therefore had intensive contacts with the permanent settlements.

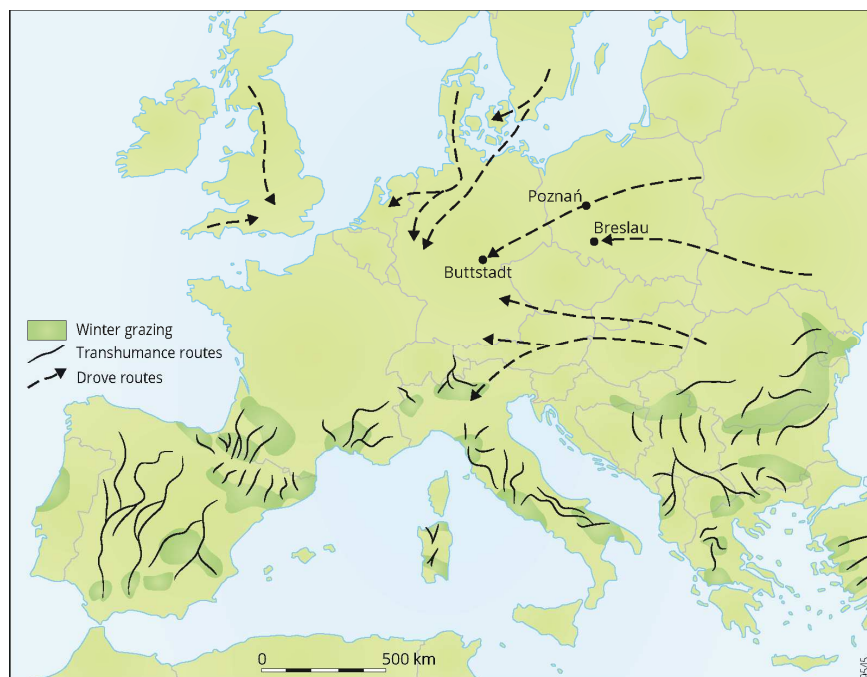


Figure 3. Transhumance and drove routes after Pounds (1990)

For the complete picture, also a third group of movements, the so-called drove-routes, has to be mentioned (Figure 3). These routes connected regions that exported animals to urban markets. Drove routes differ from transhumance systems in one essential point: they are one-way, at least for the animals involved. The products are different too: where the drove roads aim at delivering animals and, especially, meat, the products of transhumance are wool, cheese and other products that are, again seen from the perspective of the animal, renewable products.

Drove roads are part of long-distance exchange systems and have been, therefore, subject to large-scale and long-term demographic and economic dynamics. Already around 1600 a number of regions, often regions that were too far from inland shipping routes to compete on the markets for arable products, specialised on the raising of animals for meat (Becker 1998, Nitz 1993). Those animals than walked to the urban markets. Hungary exported cattle to Northern Italy and to Southern Germany (Zimányi 1993). From Denmark large herds of oxen walked, or were shipped, to Holland (Gijssbers 1999). Southern Sweden exported cattle southward during the late Middle Ages, but later turned northward when the growth of mining in Central Sweden caused a growing demand for meat there (Poulsen 1992, Gijssbers 1999, 2002). On the British Isles, large herds of animals walked from Scotland, Wales and Southwest-England to the densely populated Southeast-England. Here, the heydays were the eighteenth and early nineteenth centuries, after which railways and steamships took over (Hindle 1993).

So it seems that these systems of drove roads were clearly influenced by the markets and therefore were subject to economic fluctuations, whereas the transhumance systems were part of local and regional agrarian systems and were therefore less dependent on market forces. But is this true?

Research into transhumance and drove systems has a long tradition in geography and, in some regions, in history, anthropology, ethnology and ecology. In geography this type of studies went out of fashion and very few geographers show an interest nowadays. On the other hand, there is a growing amount of work by landscape archaeologists, who try to unravel lost settlements in mountainous areas and are, better than others, equipped to distinguish between permanent, temporary and seasonal settlements (Collis et al. 2016). However, there is a strong necessity of new synthetic works. Figure 3 was derived from the *Historical geography of Europe* by Norman Pounds, published in 1990, and gives a picture of the dispersion of transhumance and drove systems that goes back to older – often much older – literature. Since that time, the map has not been improved and is still being republished (i.e. Emanuelsson 2009).

The map needs revision, not only because Scandinavia is lacking, but also because of new research that, although mostly regional or even local in scope, provided additional material for overviews, by adding evidence of former transhumance in North-western Europe (see for example Bunce et al. 2004). In the UK, the late Harold Fox wrote a fascinating book on the traces of medieval transhumance in England, particularly around Dartmoor in Southwest-England (Fox et al. 2012, Herring 2009). Also in Scotland and Wales transhumance existed, on some of the Scottish islands even until the early twentieth century (Adams 1976, Jones and Winnfre 2004). In Germany, research focuses on Southern Germany, where systems survived into the nineteenth century (Luick 2004).

But not just the geography but also the history is important. A new map of transhumance should distinguish between different periods. The drove systems as well as some transhumance systems, such as the Mesta in Spain, have been described as historical processes (see below). But the large majority of literature on transhumance describes the phenomenon as old-established and implicitly takes long-term stability for granted. Especially the study of the lesser transhumance is often characterised by more geography than history.

References to transhumance during the classical period are mainly given to suggest long-term continuity. Even a great historian as Fernand Braudel, described transhumance in France as “an ancient practice, as old as the world” (Braudel 1991). The website of the town of Madrid mentions a transhumance system that has been revived in 2010 on routes that go back to Neanderthal populations (http1).

### Transhumance as a historical phenomenon

Let's start with the greater transhumance. The Mesta in Spain consisted of a system of drove roads that was already established in the course of the thirteenth century, when the southern part of the Iberian Peninsula was still firmly under Muslim rule, but the political division seems to have had little influence on the movements. Rights of moving animals to use unenclosed land and wilderness must have existed before, but the Mesta seems to have brought the system of transhumance to a larger scale. Professional shepherds drove large flocks of sheep from the winter pastures in the south of Spain to the summer pastures in the north and to the mountains, over fixed routes (the so-called *cañadas*) that ran over distances varying from 250 to more than 700 kilometres. The sheep could roam over most uncultivated land and could also graze on the stubbles.

The sheep were mainly kept for their wool and particularly during the thirteenth century Spain became a large exporter of wool, mainly to England and Flanders. During the fifteenth and sixteenth centuries, the number of sheep fluctuated around 2.5 million. During that period, a comparable system, the *Dogana delle Mene della Pecore*, was introduced in Southern Italy by the (Spanish) kings of Naples. Both systems fluctuated with the demand for wool and the tidal movements of competition from arable. In Spain as well as in Italy a long period of decline was followed by the dissolution of the organisations during the nineteenth century (Klein 1920; Delano Smith 1979).

But also the lesser or local transhumance may not be seen as a timeless system that has existed for thousands of years. These systems also have a history. One type of fluctuations was the development of temporary into permanent settlements and back. Many permanent settlements carry names that refer to former seasonal settlements. We find such names all over Europe. Typical names for shielings were *hafod* in Wales and *seter* in Scandinavia but also in parts of northern England. Gunnerside in the Yorkshire Dales (Figure 4) is nowadays a substantial village, but the name was explained by the archaeologist Andrew Fleming (1999) as Gunnar's setr, or the shieling of a man, probably from Norwegian origin, named Gunnar.



Figure 4. Gunnerside (Yorkshire, Northern England) probably started as a ‘shieling’ that was only inhabited during summer. ©Colin Grice (Wikimedia Commons; http 4).

Although some of such shielings had already developed into permanent settlements during the 10<sup>th</sup> or 11<sup>th</sup> century, the majority of such developments took place during the expansion period of the High Middle Ages. During the late-medieval demographic and economic crisis, the opposite development could take place, when permanent settlements on high altitudes were deserted and arable and intensive grasslands gave way to forests and rough grazings. It is highly probable that many former permanent settlements on high altitudes were turned into seasonal settlements, although the archaeological evidence for such developments is still scarce.

Such developments already make clear that external influences have been important. As the English historian Chris Wickham stated: Pastoralism is not an indication for underdevelopment but rather the opposite: specialization of economic activity predicated on a certain amount of exchange (Horden and Purcell 2000). Also interesting in this perspective are the different chronologies for each mountain range. A few words on the Alps and Pyrenees.

In the Pyrenees, hunting and gathering remained important during prehistory. During the Roman period, agriculture, including arable as well as pasture, grew, but after the Roman period most arable disappeared again. The use of the high pastures started during the period of population pressure of the High Middle Ages, but these pastures were partly deserted again during the following crisis period, to recover during the fifteenth century. Population pressure during the nineteenth century brought the growth of potatoes and an intensification of animal husbandry with a growing number of sheep and goats. During summer they grazed on the slopes, during winter on the stubbles in the lowlands. During the 20<sup>th</sup> century the main products became meat and dairy products, and the products of the arable were mainly used as fodder. The poorest soils and many high pastures were deserted. Nowadays, tourism and energy (electricity) become more important (Parish 2002).

The landscape history of the Alps shows more or less the same chronology, but agriculture seems to have started earlier here: the use of high summer pastures started already around the eighth century. The Alps show a strong contrast between the northern and southern slopes, with the southern slopes having a stronger focus on arable and an intensive seasonal use of the high pastures. On the northern slopes the conditions for arable were more difficult and from the eighteenth century potatoes partly replaced grain. Here, animal husbandry developed early as the core business of agriculture. The problematic production of fodder on the arable made it necessary to sell part of the animals during the autumn. Animals that grew up in the mountains were hardened by the difficult circumstances and were therefore quite popular among lowland farmers. So here, we see a combination of transhumance with the one-way travel system that was earlier described as a characteristic of the drove roads.

As in the Pyrenees, settlement in the Alps expanded during the High Middle Ages. The high pastures grew at the cost of forests. The late medieval crisis saw a retreat of settlement and a further growth of the emphasis on animal husbandry. Even during the crisis period the number of specialised dairy farms high in the East Alpine mountains, the so-called *Schwaighöfe*, grew (Becker 1978, Pawson and Egli 2001, Meyer 1990, Pacher 1993). During the late Middle Ages the production of butter expanded and the techniques of production of hard cheese, such as the cheese from the Gruyère region near Fribourg, were developed. The production of such cheeses expanded during the Early Modern period, when they became an important export product for the Swiss Alpine regions. This specialisation was only possible by exchange with the grain-producing open field regions in the lowlands of Switzerland, an exchange that was organised from the towns in these lowlands (Aerni 1990).

It is important to realise that the mountain regions of Europe have rarely, if ever, been isolated and self-supporting. Neither have they ever been purely agrarian regions. Until the

late nineteenth century development of geology, mining of minerals was strongly concentrated in mountainous regions, as hillside surfaces were the only places where mineral resources were visible.

Another resource was wood. The large medieval reclamations left mountainous regions as the largest remaining forests. For transport these regions were at an advantage, as wood could drift downstream in streams and, from there, rivers that transported the wood very conveniently to the large towns near the coast. In many mountain regions, facilities were built, such as artificial streams and wooden runways, to bring wood to the streams (Brönnimann 1997). In all parts of Europe, large amounts of wood could be seen drifting the rivers, bound together in rafts. During the seventeenth century, for example, the northern Black Forest was heavily exploited for the demand for wood in Holland (Van Prooije 1990). Another well-developed route was between the Alps and Venice (Appuhn 2009).

But also long-distance roads have crossed the mountains since prehistory (Smaedecke 2009). The local population facilitated transport by acting as guides and by offering man and animal power as well as facilities for overnight stay. As there were not many possible crossings of the high mountains, the roads show a strong continuity. The five biggest towns in present-day Switzerland all have Roman roots, which illustrates this continuity (Aerni 1990). Of course there have been shifts in the course of time. In the thirteenth century the town of Milan invested heavily in a shorter route to the north over the St Gotthard pass. From around 1530 the bishop of Salzburg improved the road over the Tauern to attract a larger share of the traffic from Venice to the north (Braudel 1975). The general picture of mountain regions that not only divided but also connected, remained intact.

Returning to transhumance: the way that connected the mountains to the lowlands meant that the farmers were influenced by developments in both. In the Mediterranean, particularly the lowlands were subject to periods of reclamation and abandonment, changing the opportunities for winter grazing. In periods in which the use of the lowlands was intensified, the possibilities for transhumance diminished. On the other hand, in periods of crisis, when the arable disappeared from many Mediterranean lowlands, pastoralists took over (Tabak 2008, Tauger 2011).

Also the numbers of transhumant animals rose or declined with the demand for animal products in the towns. In periods of high demand for wool, for example, farmers in the mountains could profit by expanding their flocks. In practice, however, this was undercut by another tendency, namely for urban capitalists to invest in flocks themselves, at the cost of the mountain farmers (Blanks 1995). In time, agriculture on the high pastures has changed by new products, such as the export of cheese and young animals that was already mentioned, and by technical improvements. Many pastures and meadows in the high mountains show traces of terracing (Perko et al. 2017) and, sometimes more difficult to find, of water meadows (Leibundgut and Vonderstrass 2016). These must have meant an increase of production, although the chronology is still unclear in most cases.

### **Stability and change**

Often a division between traditional and modernized landscapes is presented, related to the idea that fast transitions of landscapes since the 19<sup>th</sup> century contrast with slow and unproblematic processes of change in earlier periods. However, the real world is much more complex. Landscapes have a long history of transformations and the history of the landscape is not only more complicated, but also much more interesting than a gradual and linear development to a kind of nineteenth-century climax. On the other hand, there are also surprising continuities (Renes 2015).



Figure 5. Historical route of the Mesta near Segovia. ©Luis Fernández García L. Fdez, 2005; <http3>.

Particularly in the uplands, many traces of former transhumance can still be found, including the pastures themselves, but also many shielings and huts. Some found new uses as second homes, particularly in Scandinavia, or as tourist accommodation, particularly in the Alps. Also some of the old routes are preserved and attract increasingly attention as heritage routes (Figure 5). Part of this heritage are also the many stories about life on the routes and on the summer pastures.

But the complex histories also have wider implications. In the present globalised agricultural system, many landscapes have become marginal. In these landscapes, agriculture and rural society are threatened. For some ecologists, this is a window of opportunity for the creation of new wilderness, in which there is no room for agriculture and only for a very small human presence.

However, in other regions local societies are searching for new economic models to find a future for agrarian landscapes. Landscapes do not develop in a linear way and still offer surprises, such as the Italian valleys that were almost deserted and are now reoccupied.

A vision on the long-term development of landscapes shows how local societies have survived, and sometimes recovered from crises, by adapting to ever changing socio-economic contexts and circumstances. During these processes, the landscape structures have changed, but in many cases also survive or, formulated differently, show a large resilience. This may give a better fundament for thinking about new futures for old landscapes.

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http2: <https://www.wikiwand.com/en/Mesta> [8-10-2018]

http3: <https://commons.wikimedia.org/wiki/File:Cannada-real-vera-de-la-sierra.jpg> [8-10-2018]

http4: <https://www.geograph.org.uk/photo/100906> [8-10-2018]