

The Totality and the Partitions of the Mountain: A Systemic Geographic Reality

Emanuele Poli

Department of Humanities, University of Pavia and Cà Foscari, University of Venice; Faculty of Education, University of Bolzano

Abstract: Any geographical phenomenon always involves space and territoriality; this means that it can be studied by analyzing and evaluating its typological lines and trends to treat it and guide it to an optimal situation, collecting information about spatial and territorial context and its direct surroundings.

Thus, the study of quantity, size, shape, level, location, type and dynamic evolution of the phenomenon — in this case the high mountain and the extreme mountain — needs to be matched to the welcoming area — the Mountain — and the neighbouring areas — the non-mountain.

Key words: mountain, mountainous features, human impact, geographical reality

1. Introduction

Any geographical phenomenon always involves the space and almost always territoriality; this means that it can be studied, as doctors do while examining a patient, following a course of anamnesis and diagnosis (analysis), prognosis (evaluation of typological lines and trends), therapy and rehabilitation (care and guidance to an optimal situation), that's to say, following a procedure and a well-defined planning.

To achieve this, much information is needed to be understood: not only the phenomenon, but also (and especially) its spatial and territorial context and its direct surroundings.

Thus, the study of quantity, size, shape, level, location, type and dynamic evolution of the phenomenon — in this case the high mountain and the extreme mountain — needs to be matched to the welcoming area — the Mountain — and the neighbouring areas — the non-mountain.

It is easy to evaluate the importance of the Mountain and high mountain, and then the interest they have earned or that should generate.

2. High Mountain Geographical Features

It is important to remember that 10% of the world population lives in mountain areas; that about 50% of the world population depends on mountain resources (water, minerals, forest products, agriculture, livestock); that 27% of land area lies above 1000 m and that 11% is located above 2000 m.

But these data, demonstrating the complexity of the “phenomenon mountain”, lead us to proceed in order.

The high mountain, because of its own features of isolation and being recondite, has always proposed itself as an isolated, peripheral and marginal reality, that is unrelated to its surrounding geographical context (and this wrongly), so as not to grasp the connection between mountain facts and phenomena and the other parts of the territory ones.

High mountain, since ancient times, has been surrounded by an aura of sacredness and mystery that has isolated it not so much from the physical presence

Corresponding author: Emanuele Poli, Ph.D., Professor, research areas/interests: human geography, geography didactics, political and economic geography, physical geography, earth science. E-mail: emanuele.poli@unive.it.

of man (though occasional and temporary), but from his attention.

Things have changed since only a few decades, both as regards to the physical presence of man and as regards to his understanding and care of a reality that is part of the territory and that, indeed, is often the active element. Heroic hiking (challenge), scientific hiking (glaciologists, meteorologists, etc.), extreme tourism and natural park creation contributed to this.

How can elevation be defined as high mountain? Certainly not just because of the altitude, which although has great importance as it is an expression of the mountainous situation, but also, and above all, because of location, extent (dimension), geo-morphological conditions, level of development (cultural, economic and technological) of the Country hosting the elevation; each feature, in fact, that give an elevation harsh and inhospitable environmental conditions and therefore the condition of being mountain.

How the concept of mountainous situation is outdated by the concept of being Mountain? These areas, not only for their altitude, appear to be in need of specific interventions, consistent with their characterization and with what they really are: no abnormalities of the Mountain, but an integral part of it and of the entire territorial context that welcomes both of them.

With regard to the geographical position, it is well known that an elevation, even if high, but placed at low latitudes doesn't often turn out to be considered as high mountain, but rather, especially if the morphological conditions are favourable, the most preferred area by the population for their settlements and their economic activities; we have got many examples in Central and South America, where areas at high altitudes are habited; in North America or Europe, instead, they would be rightly defined as high mountain.

The size of the elevation, especially if connected to the altitude, is very important, as well; a single and not very extended elevation placed in an area with no

relevant height, even if it reaches a remarkable altitude, it does not present the problematic nature and the importance of an extended elevation, which doesn't present high altitudes.

With regard to geomorphological features, it is obvious to remember the importance of lithological composition and tectonic structures (tectonic pillars and faults, hard or soft rocks, steep slopes, valleys, water basins, debris layers, snow, presence of ice, lack of vegetation, presence or less of mountain passes, etc.), which, if harsh, make an elevation high mountain, especially when located at high latitude and when it has a great extent, even if not endowed with great altitude.

Not to mention the level and type of cultural, social, economic and technological development. In LEDC, areas, that are considered normal in MEDC, are high mountain and therefore isolated and hidden. In these countries, in fact, and in Europe the examples are many, an elevation, to be considered as high mountain, not only does it need to offer harsh physical conditions (altitude, morphology, size, isolation, location), but also "carelessness", that's to say the failure of management of the human communities that surround it.

Thus, for an integral geographer doesn't high mountain exist? This is not what we meant; nevertheless it is perhaps worth stating that the concept of high mountain evolves over time, as possibilities of reaching and managing it have changed (think for example about the scientific activities and excursions that are involved) and, especially, the ability and a willingness to consider it, as in fact it is an integral part of the whole, have changed.

It is to underline the need to conceive the high mountain not as an abnormal part of the Mountain, which in turn is often felt as an abnormal part of the territory, but as a peculiar area in which the features of being mountain are exasperated, so to require men a less superficial and irresponsible approach than what we do with the technical means we own.

It remains true, however, that there are areas where the elevation, the morphology, the geographical

situation and the presence of snow, glaciers and extreme temperatures, make them high mountains (for instance, the extreme altitudes of Himalayan areas), as they are incapable, for physical conditions, to host men permanently and to provide products they need to live. These territories, we need to remember, even extended, are never a continuum as they are isolated and separate parts (subareas) of wider growing territorial contexts, where the man (in valleys and passes), despite difficulties, permanently lives or passes. Such considerations further confirm that mountain exists, that can't be considered a part of the remaining detached and isolated parts of the territories, because it takes its origins in facts and phenomena that develop later towards other territories (and not only to bordering ones), and that visits are too numerous and often harmful, even for visitors themselves.

Once, the extreme parts of the mountain were inhabited, but adjacent areas were used for temporary shepherd settlements or as crossings by merchants; a continuum of humanization of the area existed from the valley floor to high mountain and it was more and more faint and weary, but always in harmonious balance for its size and type to the chances of reception, avoiding environment degradation.

Currently the various parts a mountain range can be divided schematically into — the valley floor, low and medium mountains, high mountain, extreme mountain — have lost the old relations of balanced symbiosis between them and with the neighbouring environment.

3. Human Positive and Negative Impacts

Not only in fact must the high mountain areas, which, as it has already been said, are different from each other, be considered as integral parts of the whole, but also they can be damaged by the excessive and reckless human presence. All mountain areas may in fact be impaired if they are under-utilized by men as far as their potential is concerned or used differently than their features.

The centre-periphery scheme does not seem to be therefore any longer the only one to the Mountain and in particular high mountain, because, now, the old periphery benefits from the extraordinary progress of the centre.

The general improvement in living standards and the incredible growth of consumption, have broken the isolation and “demarginalized” outlying regions, as well.

People and good increased mobility has created flows and bonds between Mountain and Plain that are no longer one-way and to the detriment of the former. Technological, economic and cultural growth, allowed then (to the State and Regions) important interventions in mountain areas and in the most disadvantaged ones, even though not always fully effective.

Thus it is possible to underline some general considerations: even high mountain, as in general the Mountain, in recent decades has been the subject of attention, but more as a spontaneous fact of expansion of strong plain areas, than as a conscious programmatic choice, made on the basis of general analysis of high mountains effective potentialities and on the Mountain as a whole.

Nevertheless, despite the fact that high mountain, or better, the entire Mountain, hasn't got any consciousness and willingness, yet, to be a single geographic region and therefore it doesn't plan its future, the relation with the “no mountain area” seems changed: a joint relationship, even between entities with different potential, organization and way of being; no longer a hierarchical relationship in which “no mountain areas” dominated the Mountain, and the last one dominated high mountain, often imposing an unusual role for a level and type below its potential.

Taking into consideration that high mountain is not only the extreme bare rocky peaks, snow-covered or covered with glaciers, but also large areas where the presence of pastures and forests is possible, we can't be exempt from considering that in the high mountain area some form of economy, quantitatively and

typologically proportionate to local situations, can be developed.

A major renovation and a substantial increase can be implemented in cattle and ovine breeding because of the increased demand for meat and cheese. Improvement of pastures, development of forage crops, mechanization, construction of stables and sheep pens, new breeding techniques seem quite able to reverse the decline and desertification or excessive load of the most remote mountain areas.

Considerable changes are essential to improve quality and extent of woods and forests. One area, the forestry sector, which is essential for the improvement of the territory, requires more investment of labour and capital than immediate benefits and therefore a massive intervention of the state and the regions is needed.

The forestry and breeding balance was hardly ever reached in the high mountain; there are still many rural societies that consider the mountain as a sacred and hidden place, which can't be contaminated.

The States therefore, in accordance with local communities, have to choose, with the least possible disruption, a development that is in the context of tradition and modernity!

To the pillars of the high mountains — forestry and breeding — tourism is to be added today; a certainly not insignificant activity for the survival function and the advancement of numerous local economies, but often disruptive as far as the physical environment is concerned. There are different causes of tourism development in the high mountain attributable to higher availability of time, money, equipment and desire of extreme activities.

All these contributing factors lead to what might be called the “temporary repopulation” of high mountain.

Once again, apart from rare exceptional areas where populations have been able to manage their territories limiting and selecting tourist growth, it can be said that the mountain has undergone external influences, acting as a “land of conquest”. Mountain tourism should therefore have a further development; it will be not

only skiing and hiking oriented, but thanks to the activation of “natural parks”, offers and in the composition of tourists have become diverse, better distributed in the territories and throughout the year.

With absolute certainty, it can be said that in the Mountain lot can still be done, especially if, taking the general dynamics of the economic and social context, the inhabitants themselves will be managers of their land, with programmed plans that do not follow temporary urges.

It is therefore clear that the Mountain — the one you must write with a capital M — turns out to be a homogeneous geographical reality; a complex one which, although divided into many different parts — the mountains — must be felt, understood and managed as a single entity (that is a geographic region) where the coherence of actions to make a “functional unit” and not just a combination of the many mountains where mutually contradictory choices are implemented and likely to disrupt the unity of the whole.

Interpreting the Mountain as a homogenous systemic reality, even if divided into diversified geographical areas by the variety and quantitative components shouldn't be too difficult. Yet, we are not implementing policies and joint actions for the Mountain, preferring specific interventions on individual mountains and per sector; we tend to consider mountains, perhaps for a lack of financial and cultural means, economically depressed and subject to depopulation.

Most of the high mountain territories without specific typicality or not showing them as not appropriate to the reality of the times, in order to improve their precarious conditions, are oriented to activities that are not suitable, as a proliferation and imitation of those carried out in Mountain and Plain “strong areas”.

It can thus be said that, in many extreme mountain areas, the geographical reality that has been formed depends, rather than on their inherent features, on the typological peculiarities and expansive force of the

territories “outside”, that in many ways have “colonized” them, cancelling their identity and autonomy and, therefore, the opportunity to express their unique potential that would allow an interactive relationship and synergy with other parts of the Mountain and territories with the “external” ones.

Not only do changes that have occurred in the Mountain for 50 years depend on endogenous causes, but also consistently on external factors.

The governments of various States appear to have begun to consider the Mountain as a systemic reality that interacts with other systemic realities still connected to it, having understood that benefits of the Plain depend on benefits of the Mountain and vice versa. Laws and financial and technical interventions are implemented in this direction and so the Mountain, once considered a “problematic area”, is understood today as a “resource area”.

There are “harsh” mountain areas where, for both the remoteness from the territories with a more evident economic vitality, and for the conditions of areal and altitude “excessiveness” and the morpholithological roughness, accessibility and permanence are difficult: these are the extreme areas.

These mountain areas, weaker as well because of their dimensional situations, have been completely abandoned and neglected or accepted “a little of everything” policy.

Such choices have trivialized the types of places, and because of that many mountains have remained extreme “problem areas”, without using the potential (sometimes hidden, but still existing) of individual places and then without giving life to those innovations that lead to a rational management.

However, the mountain areas in such conditions are fewer and fewer; it is to believe that now the entire Mountain can truly become a “resource”, since, as this is its consideration, it welcomes harmonic planned interventions.

The events of the last few decades have marked the Mountain, and its inhabitants, much more than the past

centuries of slow transformation have, unifying as far as possible strategies. It is no longer true that the high Mountain can only be a composite reality, made up of different and disaggregated units, where developments in different fields (economic, social, behavioural/organizational, political) are implemented, even though delayed and substantially at a lower level.

It isn't a relationship of imitative dependency, anymore, but a symbiotic integrative one, where entities of a single large system — the Mountain (as composite, but unified reality) — compensate each other's needs.

The balance of costs and benefits can then become completely positive for the Mountain.

Technological progress has occurred in communications (roads and telecommunication) and it has allowed to break the isolation, resulting in new possibilities for any mountain area in the world.

Among the high mountain regions and their territorial neighbourhood, movements of goods and people occurred and that generated flows that created stronger and stronger bonds, although in the context of complementarity with increasing mutual integration and developments.

The analysis of the Mountain overall situation leads to optimism about its future evolution. What is certain is that so far it has been uneven and that there are still depressed areas! But here we need to remind that no place is useless and absolutely without potential; at least it has the function of being a mean and completion. The areas are depressed, because they were inactive or because they were burdened by activities contrasting with each other and/or with the potential of the place.

The implementation of a practice, often referred to, returns, but it is always rejected. We need a complete analysis of the individual components of the existing; an assessment of the real potential and predispositions of the place; a planned choice with a subsequent verification of pros and cons it can generate on the territory and its components. There is a need, finally, to entrust the fate of the high mountains to “experts” that

are able to consider these territories not as an addition and a periphery of the Mountain or the Plain, but as a part of the “great totality”, where each component must be developed without force and deviancy, according to their potential, so as to achieve autonomy and, at the same time, an equal relationship with the other functional interchange.

In the Mountain, which, once again, needs to be considered as a unified entity and therefore as a whole, and will be the subject of a true unified plan, there are still areas that have insignificantly developed their socio-economic and organizational-structural reality and other ones, instead, that have evolved becoming typical.

The banality and the typicality of places have depended on various factors that may be identified in the type of features: specific or generic (altimetry and snow or “a little of everything” for example), or quantitatively substantial or modest, expressed or not expressed, managed by the local population or by outsiders.

It is so evident that in the Mountain, now universally recognized as a resource area, there are still transitional situations and places in between that need careful programmatic actions in order not to be marginal territories. They are no longer marginal seat of negative localism, but they align to the evolution of other parts of the Mountain, becoming themselves driving forces of development.

To do this they should not fear actions that innovate the existing physical environment and human realities; artificial choices, which can change the previous evolutionary model, don't have to be feared. Artificial interventions should, however, be avoided, as they can contrast the balance of and between environments so painstakingly achieved.

4. Conclusion

Today economists talk about “total quality”, a cross goal that can only be reached if there is a global and integrated vision of the different areas and activities.

The Mountain must be planned and perceived as a company where its parts — high mountain, as well — are branches of it, or better, the local units. The concept of total quality can thus be related to the organization and production size of the whole; only through the quality of the mental attitudes and behaviours, places and activities they accommodate can achieve total quality.

A cultural, strategic, organizational and managerial revolution is needed, so as to be realized thanks to a continuity of management and attitudes. Enhancing, for example, joint development and implementation projects, new real and tangible innovations will be created, and they will be able to vitalize both absolute features of all the territorial components of the Mountain and those derived (relative) from its surroundings and the wider spatial context that embrace them.

But above all what is needed to the Mountain of all the world is to be considered with a coherent and dynamic vision, enabling the implementation of a single project evolution, adapting itself to the dynamics of the whole system, and at the same time to abide the local diversity, reviewing and revising the choices when facing complexity.

References

- [1] A. A. V. V., Mountain environment, *Geojournal* (1992) 5-138.
- [2] R. Almagià I paesi più elevati dell'Appennino, “Le vie d'Italia”, *Rivista Mensile del T.C.I.*, 1921.
- [3] R. Bernardi, S. Salgaro and C. Smiraglia, L'evoluzione della Montagna italiana fra tradizione e modernità Bologna, Pàtron, 1994.
- [4] E. Bettini (a cura di), Atti della conferenza Nazionale della montagna, Roma, CNEL, 1996.
- [5] B. Bonnet, La politica della montagna nella prospettiva dello sviluppo durevole, *Montagna oggi* 6 (1995) 9-13.
- [6] C. Brusa, Arge-Alp e regione Lombardia: il dibattito sulla politica del territorio, *Boll. Soc. Geogr. Ital.* (1992) 453-465.
- [7] B. Cori, Man and the mountains in the Mediterranean, in: Scaramellini G., *Sustainable Development of Mountain Communities*, Milano, Guerini e Associati, 1995, pp. 13-15.

- [8] G. de Vecchis, Da problema a risorsa: sostenibilità della montagna italiana, Roma, Kappa, 1996.
- [9] A. Gnisci, L'immagine della montagna nella letteratura, "Atti del Convegno La Montagna: percezioni, letture, interpretazioni", Rieti, 1995, pp. 11-22.
- [10] V. Merlo and R. Zaccherini (A CURA DI), Montagna 2000, Rapporto al Consiglio nazionale delle ricerche, Istituto Nazionale di Sociologia, Milano, Franco Angeli, 1992.
- [11] D. Ruocco (a cura di), Le Alpi, Barriera naturale, individualità umana, frontiera politica, Bologna, Pàron, 1990.
- [12] G. Scaramellini, Sustainable development of mountain communities: An agenda for research, in: Scaramellini G., *Sustainable development of Mountain Communities*, Milano, Guerini e Associati, 1995, pp. 17-25.
- [13] A. Segre and E. Dansero, Politiche per l'ambiente. Dalla natura al territorio, Torino, Utet, 1996.
- [14] G. Staluppi, L'uomo e la montagna in Italia, *Studi e ricerche di geografia* (1980) 195-207.
- [15] P. Vitte, La montagne italienne, *Annales de Géographie* (1992) 68-83.
- [16] M. Zunica, Il territorio montano e collinare, avvia ad una lettura integrate, Roma, Multigrafica, 1983.