

# Cultures in Mountain Areas. Comparative Perspectives

## Introduction

**Tobias Boos – Free University of Bozen-Bolzano, Italy**

**Daniela Salvucci – Free University of Bozen-Bolzano, Italy**

The study of mountain areas has been, and still is, at the core of the discussion about the relations between nature and culture. Mountains appear to be natural worlds but are culturally inhabited by human populations. In the last decades, such a sharp distinction between nature and culture has been called into question within sociocultural sciences, human disciplines, and even biological sciences. Trends of the last three decades at least have pointed out the close interrelation between humans and nonhumans, thereby proposing an innovative understanding of culture as well as of ecology as more entangled settings, for instance, through the concepts of assemblages (Latour, 2005) and relational meshwork (Ingold, 2010), amongst others. Referring to the notion of environment as a bio-cultural-socio-historical field allows us to look at several interconnected aspects within cultures of mountain areas without taking for granted the naturalness of the mountains and, instead, critically deepening into the analysis of the historical process of production of popular images, scientific knowledge and ideological instrumentalisation, investigating sociocultural and demographic dynamics as well as every day and ritual practices embedded in mountain areas around the world. Comparison, indeed, on which strict ecological approaches were based, could be a valuable tool to understand better the complexity of mountain areas as biocultural environments produced and transformed by historical, political, and social processes that involve power relations and global asymmetries.

This volume proposes different themes and modes for comparison from such diverse disciplines as history and global history, human geography, sociocultural anthropology, and folklore studies, often in interdisciplinary and

Part of

Boos, T. & Salvucci, D. (Eds.). (2022). *Cultures in mountain areas : Comparative perspectives / Culture in aree di montagna : prospettive comparative / Kulturen in Gebirgsregionen : Vergleichende Perspektiven*. bu.press. <https://doi.org/10.13124/9788860461902>

1



even transdisciplinary ways. The chapters<sup>1</sup> focus on historical and political processes which link mountains, religion and religiosities, and on rituals which reproduce human-mountain relationships, but also on urbanisation processes and demographic dynamics of population change in mountain areas, historical forms of the domestic organisation and political territorialisation, cultural differences within both popular and academic images, thereby linking to the scientific and political construction of knowledge, borders, nations and ethnicity, and also to global convergences in academic paradigms and networks. They consider especially the Alpine region (Chapters 4, 5, 6, 7, 8, and 9), but also the Andean one (Chapters 2, 3 and 9) and the global level (Chapter 1). Overcoming reductionist ecological approaches through critical historical-political perspectives and reframing ecology and culture as biocultural environments, the collected chapters make a relevant contribution to contemporary mountain studies in search of comparative perspectives.

## 1. Comparisons in Mountain Studies

Since Alexander von Humboldt (1769–1859), who to the historian Mathieu (2011) is one of the founders of modern mountain studies, comparison has been an essential analytical technique to understand both natural processes and cultural ways of living together, inhabiting vertically ordered environments. Mathieu explains that comparing climatological information, such as precipitation, temperature and barometric measurements of the altitude and plants collected at different altitudes in mountain regions, made it possible for von Humboldt to identify regionally typical sequences of climatic and vegetation zones. From the subsequent comparison of various typical vegetation series in the mountains located in different climatic zones, he could

---

1 The chapters of this volume are based on the seminar lectures that the authors delivered in the seminar cycle “Cultures of mountain peoples in comparative perspectives”, which took place at the Free University of Bozen-Bolzano in 2021 both in presence and online (<https://mountaincultures.events.unibz.it>). The series of seminars was organised by the Faculty of Education of the Free University of Bozen-Bolzano (unibz) and the MFEA-The Malinowski Forum for Ethnography and Anthropology (Free University of Bozen-Bolzano), in collaboration with the Anthropological Association South Tyrol (EVAA) and the Museo degli Usi e Costumi della Gente Trentina. The Fondazione Cassa di Risparmio di Bolzano/Stiftung Südtiroler Sparkasse provided financial support.

find similarities and differences. In this way, on the one hand, the scholar designed a mountain-specific topology of vegetation and living conditions for later scientific work, linking the various mountain regions of the world. On the other hand, he created awareness among scientists that mountain regions worldwide provide specific living environments. Therefore, he paved the way to establish mountains as a particular research field.

Von Humboldt's method of comparison indeed covers the meaning of the verb *to compare* nicely, as the definition of the Merriam Webster online dictionary shows, declaring that to compare means "to examine the character or qualities in order to discover resemblances or differences" and "to view in relation to". Hence, comparison was von Humboldt's way of thinking to uncover the interdependence of elements, relations, processes, and dynamics, which make up our animated planet for him. Further, from the point of view of von Humboldt, comparison can be made at different spatial scales, from micro-entities such as a specific mountain slope, through meso-units such as a mountain (e. g. Chimborazo, Mont Blanc) or mountain regions (e. g. Atlas, Alps, Andes, Himalaya) towards global perspectives. It also applies to social, political, and cultural scales, from small groups of people to nations and the world society, as well as to historical temporal scales, from short situations to epochs, which can frame and guide comparison.

Familiarity (*Verwandtschaft*) between phenomena "in specific regards" (*Hinsicht*), says Carl Troll (1941/1984, p. 163), another central scholar in the formation of comparative mountain studies, is necessary to design a way of comparison to find meaningful similarities and differences and to discover relations. The "in specific regards" formulation means that comparison is always oriented by specific thematic frames. Almost everything can be compared regarding selected circumstances and elements; a selection is made, in the case of the academic field, by the scholar designing the comparison. Therefore, comparing is to a great extent subjective and social, depending on the scholar's scientific and sometimes political sensibility.

Especially in geography, many academics followed von Humboldt and Troll in comparative methods and studied the co-evolution and interdependence of natural and sociocultural dynamics in mountain areas. Von Humboldt's view of mountains, as a particular geomorphological form and a habitat in which society and natural environments intermingle, has been evol-

ing into different ecological approaches which focus on the human-environment-interdependence. In geography, this line of comparative research agenda was founded by Carl Troll (1899–1975), who named it *geoecology*.<sup>2</sup> In socio-cultural anthropology, Troll's ideas have inspired the concept of *verticality*. Ethnohistorian and anthropologist John Murra proposed this concept in the 1960s, and since then it was used to study the historical continuity of Andean ecological models of inhabiting mountains. In the 1970s and 1980s, both Troll's and Murra's concepts were included and discussed within the comparative frame of *mountain anthropology* (Brush, 1976; Orlove & Guillet, 1985; Rhoades & Thompson, 1975) through the paradigm and method of *cultural ecology*, originally elaborated by anthropologist Julian Steward in the 1950s.

Geoecology and cultural ecology, this latter with its further development as ecological anthropology (Orlove, 1980) and more recently as environmental anthropology (Orr et al., 2015), as Viazzo and Zanini point out in Chapter 4, have been intersecting in many ways. Since the 1990s, both these ecological approaches have converged toward the interdisciplinary and transdisciplinary field of mountain studies, also labelled as *montology*.<sup>3</sup>

Notwithstanding, as early as in the 1960s, ecological approaches in both human geography and sociocultural anthropology have been challenged by disputes on the risk of ecological reductionism and the necessity of considering historical and political processes as well as economic and cultural hierarchies and power relations at global level, which shape and transform local bio-sociocultural environments in mountain areas. In Chapter 2, Arnold

---

2 The term *geoecology* could lead to some confusion in English-speaking geography. It is Troll's translation of the concept *Landschaftsökologie* which he first formulated in German and is translated as landscape ecology. In today's geography, both terms exist and are sometimes used as synonyms, but in most cases, they have different meanings. While landscape ecology investigates the human-environment-relations in specific areas, geoecology is used chiefly in physical geography to refer exclusively to bio-physical elements and dynamics of ecosystems, forming a sub-branch of landscape ecology. Although landscape ecology would be the more literal translation, in our introduction, we use the term geoecology for the investigation of human-environment-relations in mountain areas because Troll himself translated his *Landschaftsökologie* in the context of mountain studies in the late 60s as geoecology. For additional readings on the role of Troll in developing mountain geoecology, see Ives 2012.

3 Although the use of the term *montology* has been controversial (for instance, Veteto, 2009) and likely less successful than expected, in recent years a new attempt has been made to promote it (Sarmiento, 2020) as a possible catalyst to combine natural and cultural sciences of mountain environments, and to encourage applied and participative research by involving local people and political actors.

uses the concept of biocultural system referring to current anthropological theories, such as Ingold's anthropology of life and Viveiros de Castro's perspectivism.

Furthermore, besides the ecological approaches, different imaginative, historical, and political studies have been making significant contributions to present-day mountain studies by claiming a critical view on the ways academic models, typologies and classifications in mountain studies can feed back into social and political debates as well as in everyday life, also in rather unsuspected ways. Science seems to be in numerous cases a political endeavour. Mathieu (2011), as well as Debarbieux and Rudaz (2010/2015), show that in mountain studies academics could follow political agendas. Boos also underlines this aspect in Chapter 7 concerning geography, and Kuhn in Chapter 8 about folklore studies, which later would be renamed European ethnology. Studies on mountain areas, therefore, have to be placed in their historical and political contexts of production as Mathieu in Chapter 1, Viazzo and Zanini in Chapter 4, Albera in Chapter 5 and Salvucci in Chapter 9 propose, also highlighting the connection between popular images and scientific theories, as Kezich does in Chapter 6.

Discussing publications in mountain studies, mostly from human geography and sociocultural anthropology, as these two disciplines have vigorously debated the opportunity to combine ecological approaches and historical political ones, as well as referring to publications from cultural history, in this introduction, we like to present selected practices of comparison, which we consider emblematic for these research fields. We also present examples of critical mountain literature to reflect on how comparisons can feedback academic thinking and society. In the closing section of the introduction, we will outline the book's structure.

## 2. Ecological Approaches and Critical Perspectives

In geographical mountain studies, the geocological approach, developed by Troll in the 1940s (Uhlig & Haffner, 1984), is still today a well-established research frame (Byers et al., 2013). Articles describing the development of the academic field of geocological mountain studies (Ives, 2012; Messerli, 2012)

indicate that the long-lasting success of this research perspective results from its capacity to incorporate and create consciousness on emerging socio-political questions, such as sustainable territorial development, and to tackle problems related to climate change, as well as to design models which can serve governments to inform territorial planning. From its beginnings, the most crucial institution promoting and developing geocology as a distinguished research perspective in mountain studies has been the commission of the High-Mountain Geocology of the International Geographical Union (IGU), founded by Troll in 1968.<sup>4</sup> Today this commission is headed by the geographer Sarmiento and bears the name Mountain Studies, which indicates its evolution into a relatively comprehensive study embracing human and natural sciences (Ives, 2012; Sarmiento, 2020).

According to the historian Mathieu (2011), this organisation's institutional and academic centrality stems from its political activities and academic excellence. On the one hand, it has introduced important scientific concepts in academic discussions: such as the verticality of vegetation zones and sociocultural organisations as a central feature of mountain areas (Ives, 2012; Mathieu, 2011; Messerli, 2012; Sarmiento, 2020). On the other hand, the commission successfully inserted its ideas on sustainable mountain development in the world program on sustainable development "Agenda 21" at the United Nations Conference on Environment and Development. Its protagonists, such as Messerli, Ives, Price, and later Sarmiento,<sup>5</sup> have been highly active in establishing academic and political networks from the local to a global level, following still today Troll's ideas on geocology to achieve sustainable development.<sup>6</sup>

---

4 Troll was the president of IGU (1960–1964, its vice-president 1956–1960 and 1964–1968), and from 1968 to 1972, he was president of the mentioned commission.

5 Ives succeeded Troll as president of the commission of High-Mountain Geocology and was, together with Messerli and others, one of the leading designers of the Mountain Chapter (Chapter 13) of the world program for sustainable development Agenda 21 proclaimed after the Conference on Environment and Development held in Rio de Janeiro in 1992 (see for a more detailed description Mathieu, 2011). Messerli and Ives edited the volume *Mountains of the World* (1997), contributing to the scientific program of the Mountain Chapter. The chapters of this edited volume today are frequently quoted, and the volume is an essential reference in sustainable mountain studies.

6 For a more detailed description of the commission's institutional evolution and involvement in founding journals, forums and networks in mountain studies, see Ives et al. (1997),

Troll was a physical geographer interested mainly in climatology and botany. However, he also paid attention to the interrelation of climate and vegetation with social and cultural practices and ways of living, as the diary of his excursion to the Andes in 1926 and 1927 (Troll, 1985), as well as some of his articles (Troll, 1958, 1975<sup>7</sup>), reveal. Because of his academic inclination, his comparison style is strongly influenced by the natural sciences. He elaborated a typology of vegetation zones in the mountains based on measurable climatic and botanical indicators which he subsequently developed further into a typical vertical succession series of vegetation belts in mountain regions of different climatic zones (Troll, 1941/1984). Additionally, Troll developed models of typical social agricultural patterns in different altitude zones on the physical basis of this vertical sequence of vegetation zones and descriptions of settlements and agricultural systems. Through the commission of High-Mountain Geoecology, Troll's naturalistic comparative perspective was coupled with the political goal to preserve the mountain environment, which is seen as an essential natural resource for humanity.

The lack of contributions from cultural and social geography to geoecological studies was bemoaned already in the 1980s (Uhlig & Haffner, 1984) and still in the 2000s (Funnell & Price, 2003). However, social and cultural geography investigations in mountain studies have been carried out since the 1960s (Lichtenberger, 1965, 1979). They multiplied in the 1980s and 1990s (Price, 1981; Grötzbach & Rinschede, eds., 1984; Allan et al., eds., 1988; Uhlig, 1984; Grötzbach & Stadel, 1997) until today (Bender & Karnitscheider, 2012; Bätzing, 2015; Dematteis & Corrado, 2021; Haller & Borsdorf, 2021).

Population development and urbanisation (Bätzing et al., 1996; Bätzing, 2015; Dematteis, 2018; Dematteis & Corrado, 2021), agricultural systems (Uhlig, 1984; Bätzing, 2015), tourism (Lichtenberger, 1979; Price et al., 1997) and migration (Moss, 2006; Perlik, 2011; Bender & Karnitscheider, 2012; outside geography, see Membretti et al., eds., 2017; Graf, 2021) are the main themes of geographic comparative mountain studies. They rely on quantitative data, descriptions, and qualitative information. These academic topics intersect

---

Price (2004), Ives (2012), Messerli (2012) and Sarmiento (2020) and for an accurate historical evaluation of its development in its political and historical context see Mathieu (2011) and Debarbieux (2018).

7 An English translation of this article was published in the edited volume *Human Impact on Mountains* by Allan et al., 1988.

and are frequently meant to inform local and global political strategies for sustainable territorial development and planning. Although today there seems to be plenty of research by human geographers in mountain studies, Funnell and Price (2003, p. 187) indicate that the geoecological comparative approach is still characterised by a “drive for ‘indicators’”, which is a valuation recently confirmed by Sarmiento (2020). Indeed, to include a more culturally sensitive epistemology in mountain studies, the idea came up among geoecologists to develop a new comprehensive research field which they dubbed *montology* (Sarmiento, 2020). Montology, a term Sarmiento (2020) assumes that first emerged at the Cambridge Mountain Conference in 1977 and was subsequently used by Ives, Messerli and Rhoades (1997) to name their vision of a new transdisciplinary mountain studies, has been also used as a successor of geoecology. According to Sarmiento (2020), its goal is to complement sustainable development through regenerative development and planning, fostering educational programs based on a montological perspective. Despite these good intentions, montology seems to be still producing manifestos, waiting to be formulated more coherently epistemologically and to be applied in consistent empirical research. Nevertheless, the direct derivative connection of this field with both geoecology and cultural ecology gives it the potentiality to preserve the worthwhile legacy of the ecological approaches at the same time opening to and gaining insight from critical, historical, and sociocultural approaches.

Political geography (Debarbieux & Rudaz, 2010/2015; Debarbieux, 2018), historical perspectives (Albera, 2011; Viazzo, 1989; Mathieu, 2011, in press), imaginative geography (della Dora, 2016), and sociocultural anthropology of mountain areas, as the chapters of this volume demonstrate, can indeed make meaningful contributions to an interdisciplinary and even transdisciplinary field of mountain studies. All these approaches can help to add critical insights and to contextualise the production of scientific knowledge on mountain areas. They can also contribute to reframing the ecological approaches, which would be by no means dismissed, but critically recovered along with the notion of culture, for instance through the idea of biocultural environments.

As an example of the critical perspective, in Chapter 1, Jon Mathieu compares different historical productions of cultural understandings of sacred



mountains through a contextualisation of Western global studies on the topic, focusing mainly on the work by Bernbaum (1990), who was influenced by the “greening” of religion and the ecological turn in the U.S. during the 1970s and 1980s. Mathieu highlights how diverse conceptions of sacredness and sacred mountains have emerged historically in connection to political-religious hierarchies and to the consolidation of theocracies, in both Christianity and Tibetan Buddhism, for instance. Sacred mountains, therefore, link to nation-building processes, colonialism, and postcolonial indigenous politics. Moreover, the author underlines the role that world heritage international organisations, such as UNESCO, as well as organisations promoting ecological sustainability, have been playing in the last decades in the global production of sacred mountains. These institutions have produced new alliances, but also conflicts, between ecologists and indigenous people as well as they have encouraged new gender-role negotiations about ritual activities, pilgrimages, and tourism.

Not only sacredness but also mountains are historically produced (Mathieu, in press). Cultural history (Mathieu, 2011), political (Debarbieux & Rudaz, 2008, 2010/2015), and imaginative geographies (della Dora, 2016) show that what people name *mountain* dramatically differs according to topological, historical, cultural, and political contexts. Diaries, poetic portraits, paintings, pictures, and cartographic maps on mountain areas are not only produced in specific historical contexts but also produce imaginations in academic communities and among populations living in and outside mountainous regions, entailing emotional and cultural values. How people perceive and conceive mountains depends mainly on such imaginations imbued with power relations. From this imaginative geographic perspective, mountains can be understood as a social construction (della Dora, 2016). Furthermore, Debarbieux and Rudaz (2010/2015) and Debarbieux (2018) show that the meaning of mountains is also formed by academic typologies and models related to academic personal and institutional political networks, as well as by the forms of territorialisation introduced for administrative reasons by colonial and national governments. Consequently, critical mountain studies consider the political and historical context in which the study of mountains and comparison are embedded, as well as how academic models, typification and classifications influence the way of inhabiting mountain regions.

According to Debarbieux (2018), for instance, the imagination of the existence of a particular mountain people sharing a collective identity is the outcome of different steps of identity building in which academics are deeply involved. He shows that this territorialised identity formation of mountain people is often driven by a political struggle over the right to exploit material and immaterial resources of mountain areas and about desirable ways of living and the development of national societies. In this negotiated identity-building process, the lines of argumentation are frequently based on scientific models and typologies, which feed back into everyday life. Thereby, Debarbieux confirms the philosophical claim of Latour (1991/1993) that science co-constructs the objects and phenomena it is studying.

Reflecting on the possible social construction of bird-like peoples living in the mountains, Giovanni Kezich makes us reckon, in Chapter 6, to which extent anthropological studies, such as Cole and Wolf's book *The Hidden Frontier* (1974), either contribute or can serve as an antidote to biological frameworks in the construction of territorialised collective identities. Drawing on examples of widespread stereotypes dividing Germanic-speaking people from those of Romanic languages in the Alps, he makes us aware that both possibilities (contribution and antidote) can be the case. Studies dedicated to the construction of social categories and identities, such as Kezich's Chapter, can uncover power asymmetries between involved groups, making academics reflect on their position in these dynamics of building active political identities.

In a similar critical way as Debarbieux and Kezich, in Chapter 8, Konrad Kuhn is concerned with ethnological knowledge production. He shows, for instance, how the folklorist Karl Ilg (1913–2000) became a crucial figure in the construction of the Walser as a particular ethnic community. His analysis demonstrates that academic knowledge production is often embedded in solid political agendas that integrate scholars into scientific and political networks. Furthermore, in Chapter 7, Tobias Boos suggests that the historical political context profoundly influences academic studies. In the case of the long-lasting South Tyrolean border dispute, he shows how geography and folklore studies, among other sciences, served the Italian, Austrian, and German governments to sustain their nationalistic ideologies from the 19<sup>th</sup> century to the aftermath of the Second World War. Based on a contrastive comparison between "German" and "Italian" networks of academics and or-

ganisations funded often by nationalistic institutions, scholars contributed to ethnise behaviour patterns, agricultural techniques, arts etc. In this manner, academics supported the transformation of the dispute over the political border between Austria and Italy into a ramified system of social and cultural boundaries, which is still today profoundly influencing daily life. Zinn (2017), for instance, shows how political discourses and “essentialised identities” in South Tyrol also influence the daily life of immigrants in particular ways.

Daniela Salvucci, in Chapter 9 considers how the paradigm of cultural ecology within anthropological mountain studies developed since the ‘60s and suggests that ideas of how people organised agricultural activities in a vertically structured environment did circulate among scholars studying the Andes and the Alps thanks to the personal academic networks of scholars, who communicated with each other. Academic knowledge production, therefore, seems to be characterised by the circulation of models and modes of comparison through academic networks also at a global level.

The chapters by Kuhn, Boos, and Salvucci, therefore, present the development of academic models based on comparison as a political matter within specific historical contexts. Moreover, these comparisons are performative as they shape and even constitute the phenomena that academics study. Therefore, it seems necessary to be critical of how scholars construct the world, paying attention to the political intentions of comparison and the power of academic networks.

### 3. Mountain Areas as Biocultural Environments

Within comparative anthropological mountain studies, the ecological approach refers to the cultural ecology method promoted by Julian Steward in the 1940s and 1950s (Steward, 1955), as Albera, Kezich, Salvucci, Viazzo, and Zanini underline in their respective chapters. Steward’s method prompted focusing first on the human technological adaptation to the natural environment (as a cultural core), looking at the different types of subsistence or modes of production. Only at a second step would it investigate those cultural aspects which are less connected to the core and, therefore, much more

dependent on cultural diffusion or casual innovation than on the natural environment. The main aim of this method was to trace the multiple lines of the historical evolution of the types of subsistence in order to compare them. As early as the 1960s, Steward's approach was strongly criticised as a form of ecological reductionism for lacking any consideration of history and political economy. Examples of these critiques are the ethnohistorical work by Murra (1972) in the Andean region and that of Cole and Wolf (1974). These latter compared two villages in the Eastern Alps on opposite sides of a cultural frontier. In their chapters, Albera, Boos, Kezich, Salvucci, Viazzo, and Zanini recall and even retrace in depth Cole and Wolf's masterpiece *The Hidden Frontier* (1974), highlighting its strong impact on Alpine anthropology. Despite these critiques of Steward's method, comparative mountain anthropology, which emerged and consolidated in the 1970s, highly relied on Steward's cultural ecology.

Following Steward, Robert Burns (1963)<sup>8</sup> proposed that cultural variations should be compared within an extended ecological "circum-Alpine-culture area". This area spans in Europe from the Pyrenees to the Balkans and potentially reaches the Himalayas along the orogenetic Alpine belt of a Euro-Asian Cordillera-like chain. In line with the cultural ecology paradigm, Robert Rhoades and Stephen Thompson (1975) compared adaptive strategies in three settings: a traditional Swiss alpine village, the Himalayan Sherpa communities, and the Andean region. They individuate as a common feature the mixed-mountain agriculture, based on generalised or specialised forms of access to different altitudinal zones of production. Through a similar approach, Stephan Brush (1976) promoted a comparative perspective on Andean, Alpine and Himalayan communities to investigate cultural adaptation to mountain ecosystems, recalling the idea of verticality theorised by Murra. By discussing Troll's geocology and Murra's verticality, David Guillet (1983) compared Andean and Himalayan communities. He elaborated a complex model of mountain production strategies by considering processes of transformation, individual and collective agency, and global power relations within the world system, thereby developing Steward's method much further.

---

8 Albera, Salvucci, Viazzo, and Zanini recall this work in their chapters.

Since the 1970s, indeed, new paradigms have been emerging in comparative mountain anthropology. As Viazzo and Zanini point out in Chapter 4, in those years, many ecological anthropologists shifted from the cultural ecology approach to the eco-systemic one, based on the study of organic populations that interact in a specific environment, forming a system in dynamic equilibrium. Brooke Thomas (1979), for example, maintained the focus on adaptation and its limits, studying comparatively biotic mountain human/environment systems. He also investigated energetic flows in the Andean high mountain (*puna*), measuring the apport of nutrition as an input to be contrasted with the energetic output of labour.

In a different line, Robert Netting (1981) improved Steward's method through historical demography. He was inspired by the economic-demographic work of Ester Boserup (1965/1993) and the Cambridge Group for the History of Population and Social Structure's research, moving from the study of subsistence types to the analysis of population-resources balance and demographic dynamics. At the same time, he displaced his fieldwork activities from West Africa to the Alps. Although Netting did not explicitly compare his previous research on agriculture, household, and land use among the Kofyar of Nigeria with his new research among the Swiss peasants, he clearly stated the interrelation of these two projects in the introduction of his Alpine monograph (Netting, 1981)<sup>9</sup>. Through ethnographic work, demographic analysis, and historical archival research in the Alpine village of Törbel (Switzerland), Netting (1981) contributed to a better understanding of dynamics of change and relations among environment, population, and social structure.

Developing Netting's methodology and results further, Pier Paolo Viazzo (1989) compared demographic data from Törbel with those he collected during his ethnographic fieldwork and historical demographical archival research in Alagna, a Walser village in Piedmont (Italy). Viazzo proposed a

---

9 Viazzo recalls in his introduction to the Italian translation of Netting's volume (1981/1999), promoted by Kezich as director of the Museo degli Usi e Costumi della Gente Trentina, that Netting was a student of Fred Eggan. This latter theorised social anthropology's "controlled comparison" (Eggan, 1954). Within Alpine anthropology, the notion and method of controlled comparison inspired the panel at the meeting of the Anthropological American Association in New York in 1971 on the dynamic of property rights in the circum-Alpine area and the subsequent special issue coordinated by Berthoud in 1972. Several anthropologists working in the Alps in those years, such as Cole, Friedl, Honigmann, Netting, Weinberg, and Wolf, participated in this panel, as Salvucci looks back on in her Chapter.

broad comparison of anthropologic, geographic, historical, and demographic literature on the Alps. He highlighted the diversity of the Alpine upland communities in a continuum that spans between the two polarities of a demographically open community (about migration and mobility, for instance), such as Alagna, and a closed one, as Törbel. A recent work in this direction, combining ethnographic fieldwork, demographic analysis, and historical archival research, carried out over a prolonged period starting in the 1980s, is Albera's comparison of Alpine domestic organisation concerning land use, kinship, and juridical-political powers between 14<sup>th</sup> and 20<sup>th</sup> century (Albera, 2011). In Chapter 5, Dionigi Albera presents this alternative methodology of comparison, retracing back his way to overcome environmental determinism in both its hard (Burns, 1963) and soft (Cole & Wolf, 1974) versions. To this aim he collaborated with Viazzo in regional more comprehensive comparative demographic investigations. At the same time, he was able to get rid of the strict typologies of the European family history research by recovering a micro-historical focus on tactics and actors' agency, thereby elaborating a new path to dense, contextualised, controlled, and reflexive comparison. Drawing on his research on the Piedmont Alps as well as on Netting's work in Törbel (Netting, 1981) and Cole and Wolf's volume (1974), Albera proposes a comparison of Weberian ideal types of domestic organisation, connected to forms of inheritance, family and kinship, in a relation of path dependency with the constitution of local and regional territorialised political powers.

Since the 1980s, thus, anthropologists involved in comparative mountain studies have gone beyond both cultural ecology and community studies by integrating regional and historical perspectives on processes of sociocultural change and political economy at different scales, from the regional to the global one (Orlove & Guillet, 1985), moving toward a processual ecological anthropology (Orlove, 1980), as well as, above all in Alpine anthropology, combining ethnographic fieldwork, demography and historical research.

In the 1990s, some of the anthropologists who had previously contributed to comparative mountain research from the perspective of the cultural ecology, such as Rhoades (2007), started being involved in the elaboration of the new political Mountain Agenda together with geographers (Ives et al., 1997), playing an essential role in shaping the interdisciplinary and transdisciplinary field of montology, thereby leading the shift from mountain anthropol-

ogy to montology (Veteto, 2009). In line with this montological perspective (Branca & Haller, 2020), in Chapter 3, Domenico Branca and Andreas Haller, a sociocultural anthropologist and a human geographer respectively, discuss concepts for possible comparisons of processes of urbanisation, gentrification, touristification and conservation in mountain cities, focusing on their case-study of a private project of conserving a green mountainous area in Cusco (Peru).

Regardless of whether ecological anthropologists have been re-joining the field of montology or not, since the end of the 1990s, ecological anthropology has evolved into a more politically committed and engaged new ecological anthropology (Kottak, 1999), as well as into several anti-reductionist symbolic, historical and political new ecologies (Biersack, 1999). These trends link to anthropological political ecology (Roberts, 2020) and indigenous cosmopolitics, for instance, in the Andean worlds (de la Cadena, 2010), as critical reactions toward climate change and frictions (Tsing, 2005) within the Anthropocene or Capitalocene, among other definitions (Haraway, 2015). Ecological anthropology has thus been transforming into environmental anthropology (Orr et al., 2015; Townsend, 2000), ending up at the very core of contemporary concerns toward ecological crisis, the rethinking of human-nonhuman relations, and the critique of both ecological and cultural reductionism. Within and behind anthropology, sociocultural scientists are now also involved in reframing cultures as biocultural environments.

In Chapter 4, focusing on changes in both Alpine anthropology and the Alpine population in the last two decades, Pier Paolo Viazzo and Roberta Zanini retrace the shift in the main research topics of this branch of the discipline from ecology and change, passing through ecosystem and modernisation, to cultural heritage and historical memory. Despite the rising of these new themes and directions in Alpine anthropology, an interest in ecology, reframed as the environment, seems to have persisted and even been renewed concerning climate change in the Alps, as the work by Krauß (2018), quoted by the authors, demonstrates. Such a current interest in mountain ecological-environmental anthropology still entails comparative perspectives, as the research on how mountain dwellers in the USA, Peru, and Italy adapt to glaciers retreat carried out by Orlove and his teams (Orlove et al., 2019), discussed by the two authors of the Chapter, illustrates. A recent example of

comparative research in the Eastern Alps on human relations to land through environmental concepts is given by Schneider and Tauber (2019).

A wider frame of environmental anthropology, then, would include phenomenological approaches (Orr et al., 2015), such as Ingold's dwelling perspective and anthropology of life (Ingold 2000, 2010, 2015), but also reflections on the politics of nature from science and technology studies (Latour, 2004), and political ontologies, following Descola's reconsideration of the nature/culture divide, and Viveiros de Castro's perspectivism. Such an extended idea of environment seems to be at the centre of current debates within the discipline, fostering multiple ways of comparison<sup>10</sup> of biocultural environments, including mountain areas. This broad concept of environment could help to recover and reshape valuable notions from geoecology and cultural ecology and to stress connections with the valuable work carried out by ecologists on these topics, such as the human -and nonhuman- reactions to glaciers retreat (Brighenti et al., 2020).

As an example of anthropological study of bio-cultural worlds, in Chapter 2, Denise Arnold refers to the concept of predation, which has been elaborated by anthropologists involved in Amazonian indigenous studies and perspectivism (Costa & Fausto, 2001; Fausto, 2008; Viveiros de Castro, 2012), applying it to human-mountain relationships in the Southern Andean region. Relying on ethnographic material from Northwestern Argentina (Bugallo, 2015; Pazzarelli, 2014) and Southern Bolivia (Arnold & Yapita, 2001), she analyses pastoral-agricultural ritual activities of offering and sacrifice toward metahuman powers associated with the mountains of the Andean area, such as the *Uywiri*-Guardian Mountains, the *Pachamama*-Virgin Earth, and *Coque-na*, a tutelar being of the herds. Linking to Ingold's anthropology of life (Arnold, 2017, 2018), Arnold shows that these contemporary ritual practices are directed toward the reproduction of life within biocultural systems. Therefore, they are both techniques of resource management and ethical patterns, which aim to maintain an environmental balance, avoiding human abuse of resources, through the ethics of commensality and symmetrical reciprocity with the metahuman powers. By comparing profound anthropological and archaeological notions between Andean highlands and Amazonian low-

---

10 For a recent overview of the role of comparison within sociocultural anthropology, see Candea (2018) and Schnegg and Lowe (2020), amongst others



lands, contrasting commensality with predation and mastery, as an asymmetrical power relation, and looking at the iconography of the feline, Arnold suggests that an ancient hunters' logic is still being reproduced in contemporary Andean herders' ritual practices. Both predation and commensality make life-forces circulate within biocultural environments.

#### 4. Ways of Comparison in Global History and Geography of Mountain Areas

The variety of possibilities for comparison that the chapters of the volume propose resonates with several comparative studies elaborated on in recent years. In his book *The Third Dimension. Comparative history of mountains in the Modern Era*, Mathieu (2011) proposes four main aspects for historical comparison at a global scale: 1) the historical and political construction of a global perception of the mountains; 2) the asynchronous processes of population growth and urbanisation in the different mountain regions, based on path dependency dynamics; 3) the variations and transformations within mountain agricultural systems concerning verticality, family forms and mobility, animal husbandry, land use and technological innovations, thereby recalling geographical and anthropological comparative ecological studies; 4) cultural diversity within mountain areas, concerning processes of modernisation and globalisation. This elaborated and comprehensive method convincingly suggests considering together literature on mountain studies from history, demography, ecological approaches in geography and anthropology, and sociocultural research on cultural diversity.

From a distinct perspective about the alpine region, cultural geographer Werner Bätzing in the fourth updated edition of his monograph *Die Alpen. Geschichte und Zukunft einer europäischen Kulturlandschaft* (2015), presents a complex geoecological comparison of Alpine municipalities. His approach is fascinating because it combines diverse ways of comparison: from descriptive approaches to indicator- and statistically-based typologies to the construction of narrative scenarios. His goal is to raise consciousness about the Alps being a human ecosystem, one which is central to the European social and

economic future, as well as to inform decision-makers in territorial planning about the possibilities of achieving sustainable development.

First, Bätzing's descriptions aim to delimit the area under investigation, the Alps, by presenting a concise history of the evolution of the imaginations of the Alps. Then he describes the natural dynamics, such as the geological history, hydrology, and climate changes, to set out the natural ecological configuration of the Alps. After this relatively short outset of the natural elements and dynamics, he broadly describes the history of settlement, economic and ecological development, urbanisation and industrialisation, tourism, and nature protection programs in different administrative contexts (provinces, regions, and states) of the Alps. He describes how new socioeconomic and technological circumstances went hand in hand with reconfiguring the Alpine landscape, which he depicts as a genuine cultural one. Although, presenting a cultural and social history of the Alps, Bätzing structures his geocological comparison of Alpine regions similar to Hettner's (1907) *länderkundliches Schema* (regional geographical scheme of descriptive analysis) frequently used in the geographic description of landscapes and which is often criticised as following a natural deterministic perspective on ecological systems.<sup>11</sup> On the contrary, Bätzing avoids natural determinism showing that social orders and cultural patterns are not merely adapted to natural factors but can shape nature.<sup>12</sup> From this perspective, landscapes are social-economic-technological-natural co-productions deeply embedded in political and historical contexts.

In addition to his descriptions, Bätzing summarises the general changes in the alpine area in economic, ecologic, and cultural dimensions to identify, in a qualitative way, the adequate periods and indicators on which to base his following quantitative typology of the social-economic-ecological

---

11 As Hettner (1859–1941) was for a long time a leading figure in geography, this scheme bears his name, although it was a widespread, systematic way of describing landscapes throughout the 19<sup>th</sup> century. Hettner (1907) suggests a typical scheme of describing landscapes initiating by delimiting, first, the area under investigation, describing then the natural conditions, which in his view, are the primary layers of the landscape upon which social and cultural layers are built from people. Despite its natural determinism, it showed a rather holistic descriptive way of analysing the formation of landscapes, including the “human factor”, which contrasted the indicator-driven constructions of typologies of that time. It also provided the principle for the comparative spatial analysis called *vergleichende Länderkunde* (comparative regional geography).

12 See Bartaletti (2022) and Funnell and Parish (2001) for a similar sociocultural account.

development of the Alpine municipalities. As a further step, he uses the demographic evolution, the sectoral economic structure (agrarian, industrial, service) and commuter movements as primary indicators for the Alps' socioeconomic and ecological territorial development<sup>13</sup>. Subsequently, Bätzing interprets the quantitative development categories in their political and historical contexts. In this way, the qualitative-quantitative comparison results in a path-dependent typology sensitive to national and regional histories and policies in the Alps. His typology presents the status quo of the municipalities concerning their social, economic, political, and ecological potentials, which in turn could inform decision-makers in territorial planning from the local to the international level. Overall, Bätzing's (2015) analysis of the Alps represents a multi-level comparison, including descriptive, qualitative, and quantitative analyses, which regularly inform each other. In this way, the scholar achieves his objectives: he presents a politically informed cultural history of the geoecology of the Alps. He demonstrates that the Alps are not an isolated area but are well embedded in the social and environmental dynamics of the European lowlands as well as in global ecologic, economic, and political mechanisms.

Elisabeth Lichtenberger (1965, 1979) had already presented a similar combination of historical descriptions of changes in the landscape, agricultural techniques, politics, and tourism. She describes these modifications by comparing different regions of Austria (Lichtenberger, 1965) to construct a model of typical landscape transformations that largely depend on different political frames, interconnected with ways of building settlements and organising agricultural work. This way, she can elaborate a vertical profile diagram of the Alps, from Tyrol to Carinthia, showing Austria's emblematic changes. In a successive step, she applies this profile model to other mountainous regions of Europe (Lichtenberger, 1979), refining and updating it and increasing its

---

13 The use of data on demographic development as a proxy for social, economic, and ecologic development is a widespread and well-funded academic practice (see Albera, 2011; Viazzo, 1989; Chapter 4 by Viazzo & Zanini). For a detailed discussion on the difficulties and possibilities of selecting and comparing quantitative data in the case of the Alps, see the volume *Mapping the Alps* (2008), edited by Tappeiner et al. Apart from methodological discussions, that volume presents maps of the Alps in the thematic fields of topology and location, society, economy, and environment. All information is given in German, Italian, French, Slovenian and English.

abstractness. Lichtenberger (1979) designs a diagram<sup>14</sup>, an ideal profile of the change from an economy characterised by agriculture to a tourist economy, expanding the explicative range of her model from Austria to many European mountainous areas.

Apart from these intra-mountain comparisons or comparisons of mountains of the same continent, several typologies at intercontinental or even global scales were also developed in human geography. For example, Grötzbach (1988) presents a typology of human habitats in high mountains of the world. He uses population density and settlement history as indicators for his classification. Rinschede (1984) develops a stage model on the evolution of migratory livestock management (transhumance and Alpine farming) in North America and Europe. Such a model confronts sociopolitical and historical evolution in both areas. Grötzbach's and Rinschede's accounts show that comparison on an intercontinental or global level can provide information on general socio-ecological trends but tend to solid reductionism. Comparison on a global level requires a close examination of the selection and quality of the indicators on which the typologies rest. Such general models can easily lead to the formation of stereotypical ideas regarding entire mountain ranges and obscure the cultural diversity of mountain regions. Nevertheless, Rinschede (1984) shows that the presentation of case studies can accompany comparative studies on the intercontinental scale to balance their elevated level of abstraction with glimpses of complex lifeworlds in selected

---

14 Diagrams, profiles and maps are standard methods for geographical comparison. For instance, Bätzing (2015) mainly uses thematic and synoptic maps, and Lichtenberger (1969, 1979) uses vertical profiles of mountain areas and block diagrams. Rinschede (1984) develops historic stage models, each represented by a series of schematic mountain profiles, as a tool for spatial and temporal comparison and to illustrate their findings in an iconic and comprehensible way. Indeed, choropleth maps, as well as profiles of mountain areas, are specific analytic tools applied already by von Humboldt and Troll (Uhlig, 1984; Mathieu, 2011). Uhlig (1984) gives a comprehensive overview of the visual techniques of comparative mountain studies from a geographical perspective. He qualifies profiles of mountains as the most distinguished method in geographical mountain studies which varies from graphics respecting spatial scales to rather abstract displays of vertically ordered phenomena. However, Troll had already compared landscapes and vegetation using photogrammetric methods (Toll, 1975), a comparison done today by applying GIS or photogrammetric software. Although the high proficiency geographers developed in these comparative visual methods, scholars should bear in mind the performative power of graphic illustrations. As Harley (1989) and Wood (1992) demonstrate in the academic realm of critical cartography, graphics are not only social constructions, but also shape phenomena and the way societies perceive themselves and construct identities.

micro-regions inside the macro areas under investigation. In this respect, anthropological ethnographical accounts would add vivid descriptions and informed analysis of social relations and cultural practices embedded in mountain landscapes.

Besides comparing mountain regions, mountains are frequently compared to lowlands, primarily to their close forelands. Debarbieux and Rudaz (2010/2015) demonstrate that the construction of sociopolitical identities in mountain areas is often shaped by people living in the lowlands, in contrast to their aspired modern self-image. In 18<sup>th</sup> century Europe, people living in mountainous regions were seen by people living in lowlands as the archetype of traditional rural people in contrast to the open-minded and economically advanced society of urban areas and lowlands. Comparison applied by non-academic inhabitants and academics can establish a relational way of constructing social identities in which people living in high- and lowlands co-constructed their identities in a contrastive manner. This mountain-lowland relationship imbued with political and economic power is often at work in the emergence of imaginations on mountains and national territorial policies, as della Dora (2016, 2018) and Bätzing (2015) assert.

In contrast to most comparative studies on high and lowland relations, which focus on the distinction between both, in Chapter 2, Arnold proves that academic concepts circulate between sociocultural anthropology of Andean highlands and Amazonian lowlands. She thereby shows that mountains are not, in all respects, a distinguished habitat concerning lowlands, as people living in these areas could share visions of ecological and spiritual embeddedness.

From a distinct perspective, Dematteis and Corrado (2021) present further comparisons between high- and lowlands concerning sustainable development. They show that the mountain areas of the Alps, close to economically highly dynamic cities such as Milan, are primarily in economic, social, and ecological decline. Their decrease is caused by the political prioritisation of urban centres in national and regional territorial development plans. Dematteis and Corrado (2021), as well as articles collected in the edited volume *Riabitare l'Italia* (de Rossi, 2018), unveil the power asymmetry in economic and political terms between mountains and lowlands, in which mountain areas frequently seems to be the politically weaker part. All the presented compara-

tive studies discussing the relationship between low- and highlands indicate that instead of a sole geoeological unit or detached biocultural environment, mountains are relational spaces embedded in social, cultural, economic, and ecological dynamics at work at the national, international, and global level.

## 5. Structure of the Volume

The volume starts and ends with chapters discussing comparison within academic fields, that one of the religion studies the first chapter, that one of Alpine and Andean mountain anthropology the last. In Chapter 1, Jon Mathieu critically reviews the Western bibliography on global sacred mountains, focusing mainly on the work by religion studies scholar Bernbaum (1990) to demystify general assumptions on the spiritual relevance of mountains in all religions and in premodern times. Instead, he proposes a rigorous historical method to approach cultural diversity, religion, and religiosities in connection to mountains at a global comparative scale, based on investigating political, social, and cultural processes, besides myths and rituals. In a complementary way, in Chapter 2, Denise Arnold analyses ritual human-mountain relationships, drawing on ethnographic material from Northwestern Argentina and Bolivia, comparing the Amazonian lowlands notion of predation and the Andean highlands notion of commensality, as both techniques of resource management and ethics of behaviour, deepening into the anthropological and archaeological bio cultural logic of sacrifice in hunting and herding practices. In these first two chapters, therefore, comparisons are made about both the history of the studies (religion studies in one case, Andean/Amazonian anthropological theory in the other) and the spiritual relationships with mountains (historical and political in Chapter 1, biocultural in Chapter 2) in European, African, Asian, and North American mountain areas (Mathieu) and the South American Andes (Arnold).

Staying in the Andean area, as well as inside a biocultural understanding of the environment, but from a different perspective that links to montology, in Chapter 3, Domenico Branca and Andreas Haller investigate the process of urbanisation in the middle-size mountain city of Cusco, highlighting dynamics of gentrification, touristification, and conservation. Contemporary

urbanisation in Cusco, the authors say, is extending toward the vertical rural neighbouring areas, which have begun being contended by new inhabitants, local farmers, amenity migrants, and even tourists. Also, Pier Paolo Viazzo and Roberta Zanini, in Chapter 4, centre their research interest on new inhabitants in mountain regions but take us to the European Alps, describing historical and contemporary population processes, depopulation, and repopulation in this area. They focus mainly on changes in both demographic dynamics in the Alps and the development of Alpine anthropology. Analysing contemporary trends of repopulation by “neo-rurales” and “new highlanders” in the Alps, the authors compare different situations of living together, ranging from conviviality to co-existence. These situations depend on negotiations between old and new inhabitants as well as on different historical patterns of political territorialisation. Both chapters (3 and 4), thus, deal with new population dynamics, in the Andes (the city of Cusco) in Branca and Haller’s case, in the Alpine region in that one of Viazzo and Zanini. Whereas Chapter 3 refers to geocological and montological theories, Chapter 4 retraces Alpine anthropology’s theoretical and methodological trajectories, highlighting the relevance of reframed ecological approaches in contemporary comparative mountain studies.

Also looking at the Alps, in Chapter 5, Dionigi Albera deepens into those historical and political processes of territorialisation of the Alpine region mentioned by Viazzo and Zanini. The author, while relying on his ethnographic and historical research, demonstrates that diverse types of domestic organisation in the Alps are firmly connected, through “path dependency”, to historical processes of constitution of regional and later national centres of juridical-political power from the late Middle Ages to the 20<sup>th</sup> century. Referring to Albera’s typology and recalling Cole and Wolf’s masterpiece (1974) *The Hidden Frontier*, in Chapter 6, Giovanni Kezich compares the ethnological differences between neighbouring Alpine peoples from South Tyrol and Trentino, which Cole and Wolf have not directly addressed. Comparing popular and scientific images of mountain peoples, Kezich contrasts the highlander’s ideal of autonomy with the historical reconstructions of the political processes of colonisation and territorialisation from the bottom up to the mountains. The authors of Chapters 4 to 6 refer to Cole and Wolf’s work, as a hallmark within Alpine anthropology in the case of Viazzo and Zanini, as a

source for elaborating a heuristic typology in the case of Albera and as a base to find and compare cultural differences within a border region in Kezich's Chapter.

Deepening into the historical production of the cultural frontier between Italian and German speaking populations, highlighted by Kezich, Tobias Boos compares in Chapter 7 the scientific and political constructions of nationalistic identities. He shows that setting the political border between Austria and Italy from the 19<sup>th</sup> to 20<sup>th</sup> century went hand in hand with constructing a ramified system of sociocultural boundaries along national categories. Further, he proposes the concept of borderscape to analyse academic debates and historical dynamics that contribute to constructing socio cultural boundaries in border regions. In a similar way, but from the perspective of the history of folklore studies and European ethnology, in Chapter 8, Konrad Kuhn compares political and scientific constructions of Alpine peoples as ethnic groups through folklore studies in the 19<sup>th</sup> and 20<sup>th</sup> centuries in Switzerland and Austria, focusing on the case of the Walser. According to the author, producing academic knowledge within scientific and politically conservative networks impacted local life by elaborating political-ideological identities with long-lasting consequences. Both chapters (7 and 8), thus, look at the history of the studies between the 19<sup>th</sup> and 20<sup>th</sup> centuries (geography in the case of Boos, folklore studies in the case of Kuhn), comparing nationalistic academic production (Italian/Austrian and German in Chapter 7, Austrian and Swiss in Chapter 8) and new critical scholarship (critical history in contemporary South Tyrol mentioned in Boos, critical European ethnology in Kuhn).

Finally, in Chapter 9, maintaining the focus on academic networks and scientific production about mountain areas, Daniela Salvucci compares Alpine and Andean anthropological studies at the time of their emergence, looking at the method of cultural ecology and recovering personal and academic connections among founding figures, such as Julian Steward, Eric Wolf, and John Murra. As in the previous chapters, she deals with the Alpine region linking it back to the Andean one and global comparative mountain studies, looking at the comparison in the history of studies (mountain anthropology) at a global level, as Mathieu proposes in Chapter 1 (religion studies).

The chapters of this edited volume, thus, propose different ways of comparison, focusing on mountain studies trajectories in diverse disciplines such



as religious studies, Alpine, Andean and mountain anthropology, montology, geography, and folklore studies. On the one hand, drawing on ethnography and demographic and historical research, they propose to follow critical historical and political perspectives to develop comparative mountain studies. The inclusion of critical perspectives, sensitive to historical and political contexts, as well as the analysis of the role of scientific ways of knowledge production and distribution, could be highly relevant within the interdisciplinary and transdisciplinary fields of mountain studies and montology. The development of a critical mountain studies seems particularly appealing for designing applied and local-community-oriented research because of its commitment to the valuable legacy of ecological approaches, which combines cultural and natural sciences. On the other hand, by contributing to the study of cultures in mountain areas as historical, social, and ecological productions, the chapters of this volume promote an understanding of mountains as biocultural environments, thereby suggesting to rethink both the notions of ecology and culture. We hope that they will be able to inspire and shape further comparative perspectives in interdisciplinary studies on mountain areas.

## References

- Arnold, D. (2017). Hacia una antropología de la vida en los andes [Towards an anthropology of Andean life]. In H. T. Garlaza Mendoza (Ed.), *El desarrollo y lo sagrado en los Andes. Resignificaciones, interpretaciones y propuestas en la cosmo-praxis* [Development and the sacred in the Andes. Resignifications, interpretations and proposals in cosmo-praxis.] (pp. 11–40). ISEAT.
- Arnold, D. Y. & Yapita, JdeD. (2001). River of fleece, river of song. Singing to the animals, an Andean poetics of creation. Bonn: University of Bonn.
- Albera, D. (2011). *Au file des générations* [In the line of generations]. PUG.
- Allan, N. J. R., Knapp, G. W. & Stadel, C. (Eds.). (1988). *Human impact on mountains*. Rowman & Littlefield.
- Bätzing, W. (2015). *Die Alpen. Geschichte und Zukunft einer europäischen Kulturlandschaft* [The Alps. History and future of a European cultural landscape]. C.H. Beck.

- Bätzing, W., Perlik, M. & Dekleva, M. (1996). Urbanization and depopulation in the Alps. *Mountain Research and Development*, 16(4), 335–350.
- Bartaletti, F. (2022). *Le Alpi. Geografia e cultura di una regione nel cuore dell'Europa* [The Alps. Geography and culture of a region in the heart of Europe]. FrancoAngeli.
- Bender, O. & Karnitscheider, S. (2012). New immigration into the European Alps. Emerging research issues. *Mountain Research and Development*, 32(2), 235–241.
- Bernbaum, E. (1990). *Sacred mountains of the world*. Cambridge University Press.
- Biersack, A. (1999). Introduction: From the “new ecology” to the new ecologies. *American Anthropologist*, 101(1), 5–18.
- Boserup, E. (1993). *The conditions of agricultural growth. The economics of agrarian change under population pressure*. Routledge. (Orig. publ. 1965)
- Brighenti, S., Hotaling, S., Finn, D. S., Fountain, A. G., Hayashi, M., Herbst, D., Saros, J. E., Tronstad, L. M. & Millar, C. I. (2020). Rock glaciers and related cold rocky landforms: Overlooked climate refugia for mountain biodiversity. *Global Change Biology*, 27(8), 1–14.
- Brush, S. (1976a). Introduction. *Human Ecology*, 4(2), 125–133.
- Burns, R. K. Jr. (1963). The Circum-Alpine culture area: A preliminary view. *Anthropological Quarterly*, 36(3), 130–155.
- Byers, A. C., Price, L. W. & Price, M. F. (2013). An introduction to mountains. In M. F. Price, A. C. Byers, D. A. Friend, T. Kohler & L. W. Price (Eds.), *Mountain Geography. Physical and human dimensions* (pp. 1–10). University of California Press.
- Candea, M. (2018). *Comparison in anthropology. The impossible method*. Cambridge University Press.
- Cole, J. W. & Wolf, E. R. (1974). *The hidden frontier. Ecology and ethnicity in an Alpine valley*. University of California Press.
- Costa, L., & Fausto, C. (2019). The enemy, the unwilling guest and the jaguar host. An Amazonian story. *L'Homme*, 231/232, 195–226.
- de la Cadena, M. (2010). *Earth beings. Ecologies of practice across Andean worlds*. Duke University Press.
- de Rossi, A. (Ed.). (2018). *Riabitare l'Italia. Le aree interne tra abbandoni e riconquiste* [Repopulating Italy. Inner areas between abandonment and reconquest]. Donzelli.

- Debarbieux, B. (2018). How can one be a ‘Montagnard’? Social and political expressions of modern imaginaries of territoriality. In C. Kakalis & E. Goetsch (Eds.), *Mountains, mobilities and movement* (pp. 129–154). Palgrave Macmillan.
- Debarbieux, B. & Rudaz, G. (2008). Linking mountain identities throughout the world. The experience of Swiss communities. *Cultural Geographies*, 15, 497–517.
- Debarbieux, B. & Rudaz G. (2015). *The mountain. A political history from the enlightenment to the present* (J. M. Todd, Trans.). University of Chicago Press. (Orig. publ. 2010)
- della Dora, V. (2016). *Mountain. Nature and culture*. Reaktion Books.
- della Dora, V. (2018). Mountains as a way of seeing. From Mount of Temptation to Mount Blanc. In C. Kakalis & E. Goetsch (Eds.), *Mountains, mobilities and movement* (pp. 189–212.). Palgrave Macmillan.
- Dematteis, G. (2018). Montagna e città. Verso nuovi equilibri? [Mountain and city. Toward new balances?]. In A. de Rossi (Ed.), *Riabitare l’Italia. Le aree interne tra abbandoni e riconquiste* [Repopulating Italy. Inner areas between abandonment and reconquest] (pp. 285–296). Donzelli.
- Dematteis, G. & Corrado, F. (2021). Per una geografia metromontana dell’arco alpino italiano [For a metro-mountain geography of the Italian Alps]. In F. Barbera & A. de Rossi (Eds.), *Metromontagna. Un progetto per riabitare l’Italia* [Metromontagna. A project to repopulate Italy]. Donzelli.
- Eggan, F. (1954). Social anthropology and the method of controlled comparison. *American Anthropologist*, 56(5), 743–763.
- Fausto, C. (2008). Too many owners: Mastery and ownership in Amazonia (Donos demais: maestria e domínio na Amazônia). (D. Rodgers, Trans.). *Mana*, 14(2), 329–366.
- Funnell, D. & Parish, R. (2001). *Mountain environments and communities*. Routledge.
- Funnell, D. & Price, M. F. (2003). Mountain geography. A review. *The Geographical Journal*, 169(3), 183–190.
- Graf, F. (2021). *Migration in den Alpen. Handlungsspielräume und Perspektiven* [Migration in the Alps. Spaces for action and perspectives]. transcript.
- Grötzbach, E. (1988). High mountains as human habitat. In N. J. R. Allan, G. W. Knapp & C. Stadel (Eds.), *Human impact on mountains* (pp. 24–35). Rowman & Littlefield.

- Grötzbach, E. & Stadel, C. (1997). Mountain people and cultures. In B. Messerli & J. D. Ives (Eds.), *Mountains of the world. A global priority* (pp. 17–38). Parthenon.
- Grötzbach, E. & Rinschede, G. (Eds.). (1984). *Beiträge zur vergleichenden Kulturgeographie der Hochgebirge* [Contributions to the comparative cultural geography of the high mountains]. Friedrich Pustet.
- Guillet, D. (1983). Toward a cultural ecology of mountains: The central Andes and the Himalayas compared. *Current Anthropology*, 24(5), 561–574.
- Haller, A. & A. Borsdorf (2021). Montología urbana: ciudades de montaña como enfoque de investigación transdisciplinaria [Urban montology. Mountain cities as a transdisciplinary research approach]. *Cuadernos de Geografía: Revista Colombiana de Geografía*, 30(2), 509–523.
- Haller, A. & D. Branca (2020). Montología: una perspectiva de montaña hacia la investigación transdisciplinaria y el desarrollo sustentable [Montology: a mountain perspective to transdisciplinary research and sustainable development]. *Revista de Investigaciones Altoandinas – Journal of High Andean Research*, 22(4), 313–322.
- Haraway, D. (2015). Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making kin. *Environmental Humanities*, 6, 159–165.
- Harley, J. B. (1989). Deconstructing the map. *Cartographica*, 26(2), 1–20.
- Hettner, A. (1907). *Grundzüge der Länderkunde* [Basic features of regional geography]. Otto Spamer.
- Ingold, T. (2000). *The perception of the environment: Essays on dwelling, livelihood and skill*. Routledge.
- Ingold, T. (2011). *Being alive: Essays on movement, knowledge and description*. Routledge.
- Ingold, T. (2015). *The life of lines*. Routledge.
- Ives, J. D. (2012). The origins of mountain geocology. *Pirineos Revista de Ecología de Montaña*, 167, 15–27.
- Ives, J. D., Messerli, B. & Spiess, E. (1997). Mountains of the world. A global priority. In B. Messerli & J. D. Ives (Eds.), *Mountains of the world. A global priority* (pp. 1–16). Parthenon.
- Ives, J. D., Messerli, B. & Rhoades, R. E. (1997). Agenda for a sustainable mountain development. In B. Messerli & J. D. Ives (Eds.), *Mountains of the world. A global priority* (pp. 455–466). Parthenon.

- Kottak, C.P. (1999). The new ecological anthropology. *American Anthropologist*, 101(1), 23–35.
- Krauß, W. (2018). Alpine landscapes in the Anthropocene: Alternative common futures. *Landscape Research*, 45(8), 1021–1031.
- Latour, B. (1993). *We have never been modern* (C. Porter, Trans.). Harvard University Press. (Orig. publ. 1991)
- Latour, B. (2004). *Politics of nature. How to bring the sciences into democracy*. Harvard University Press.
- Latour, B. (2005). *Reassembling the social. An introduction to Actor-Network-Theory*. Oxford University Press.
- Lichtenberger, E. (1965). Das Bergbauernproblem in den österreichischen Alpen. Perioden und Typen der Entsidelung [The problem of the mountain farmer in the Austrian Alps. Periods and types of desettlement]. *Erdkunde*, 19, 39–57.
- Lichtenberger, E. (1979). Die Sukzession von Agrar- zur Freizeitgesellschaft in den Hochgebirgen Europas [The succession from agricultural to recreational society in the high mountains of Europe]. *Innsbrucker Geografische Studien*, 5, 401–436.
- Mathieu, J. (2011). *The third dimension. A comparative history of mountains in the modern era*. The White Horse.
- Mathieu, J. (in press). *Mount sacred. A brief global history of holy mountains since 1500*. The White Horse Press.
- Messerli, B. (2012). Global change and the world's mountains. *Mountain Research and Development*, 32(S1), 55–63.
- Messerli, B. & Ives, J. D. (Eds.). (1997). *Mountains of the world. A global priority*. Parthenon.
- Moss, L. A. G. (2006). The amenity migrants. Ecological challenge to contemporary Shangri-La. In L. A. G. Moss (Ed.), *The amenity migrants. Seeking and sustaining mountains and their cultures* (pp. 3–25). CABI.
- Membretti, A., Kofler, I. & Viazzo, P. P. (Eds.). (2017). *Per forza o per scelta. L'immigrazione strainieri nelli Alpi e negli Apennini* [By force or by choice. Immigration in the Alps and Apennines.]. Arcne.
- Murra, J. V. (1972). El “control vertical” de un máximo de pisos ecológicos en la economía de las sociedades andinas [The “vertical control” of a maximum of ecological levels in the economy of Andean societies]. In J. V. Mur-

- ra (Ed.). *Visita de la provincia de León de Huánuco en 1562* [Visit to the León de Huánuco province in 1562], v. 2. (pp. 427–476). Universidad Nacional Hermilio Valdizán.
- Netting, R. M. (1981). *Balancing on an Alp: Ecological change and continuity in a Swiss mountain community*. Cambridge University Press.
- Netting, R. M. (1996). In *equilibrio sopra un'alpe. Continuità e mutamento nell'ecologia di una comunità alpina del Vallese* [Balancing on an Alp: Ecological change and continuity in a Swiss mountain community] (G. Cuberli & P. P. Viazzo, Trans.). Carocci editore, Museo degli Usi e Costumi della Gente Trentina. (Orig. publ. 1981)
- Orlove, B. (1980). Ecological anthropology. *Annual Review of Anthropology*, 9, 235–273.
- Orlove, B. & Guillet, D. (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.
- Orlove, B. et al. (2019). Framing climate change in frontline communities: Anthropological insights on how mountain dwellers in the USA, Peru, and Italy adapt to glacier retreat. *Regional Environmental Change*, 19(5), 1295–1309.
- Orr, Y., Lansing, J.S., & Doves, M.R. (2015). Environmental anthropology. Systemic perspectives. *Annual Review of Anthropology*, 44, 153–68.
- Perlik, M. (2011). Alpine gentrification: The mountain village as a metropolitan neighbourhood. *Journal of Alpine Research*, 99(1), 1–16.
- Price, L. W. (1981). *Mountains and man*. University of California Press.
- Price, M. F. (2004). Introduction. Sustainable mountain development from Rio to Bishkek and beyond. In M. F. Price, L. F. Jansky & A. A. Iatsenia (Eds.), *Key issues for mountain areas*. United Nations University.
- Price, M. F., Byers, A. C., Friend, D. A., Kohler, T. & Price, L. W. (Eds.). (2013). *Mountain Geography. Physical and human dimensions*. University of California Press.
- Rinschede, G. (1984). Wanderviehwirtschaft im Vergleich. Alpen/Pyrenäen – Hochgebirge der westlichen USA [Migratory livestock management in comparison. Alps/Pyrenees – High Mountains of the Western USA]. In E. Grötzbach & G. Rinschede (Eds.), *Beiträge zur vergleichenden Kulturgeographie der Hochgebirge* [Contributions to the comparative cultural geography of the high mountains] (pp. 285–304). Friedrich Pustet.

- Rhoades, R. E. (2007). Whither montology? In R. E. Rhoades (Ed.), *Listening to the mountains* (pp. 173–184). Iowa: Kendall/Hunt Publishing Company.
- Rhoades, R. E. & Thompson, S. I. (1975). Adaptive strategies in alpine environments: Beyond ecological particularism. *American Ethnologist*, 2(3), 535–551.
- Roberts, J. (2020). Political ecology. In F. Stein (Ed.), *The Cambridge Encyclopedia of Anthropology* (pp. 1–17). <http://doi.org/10.29164/20polieco>
- Sarmiento, F. O. (2020). Montology manifesto. Echoes towards a transdisciplinary science of mountains. *Journal of Mountain Science*, 17(10), 2512–2527.
- Schnegg, M. & Lowe E. D. (Eds.). (2020). *Comparing cultures. Innovations in comparative ethnography*. Cambridge University Press.
- Schneider, A. & Tauber, E. (2019). Relations to land in the Eastern Alps. The challenge of framing comparative questions. *Etnografia e ricerca qualitativa*, 2, 267–273.
- Steward, J. H. (1955). *Theory of culture change: The methodology of multilineal evolution*. University of Illinois.
- Tappeiner, U., Borsdorf, A. & Tasser, E. (Eds.). (2008). *Mapping the Alps. Society – economy – environment*. Spektrum.
- Thomas, R. B. (1977). Adaptación humana y ecología de la puna [Human adaptation and high mountain Ecology]. In J. F. Ochoa (Ed.), *Pastores de puna. Uywamichiq Punarunakuna* [Shepherds of the Andean high mountain] (pp. 87–111). IEP-Instituto de Estudios Peruanos.
- Thomas R. B. (1979). Effects of change in high mountain human adaptive patterns. In P. J. Webber (Ed.), *High altitude geoecology* (pp. 139–188). Westview Press.
- Townsend, P. K. (2000). *Environmental anthropology: From pigs to policies*. Waveland Press.
- Troll, C. (1958). *Culturas superiores andinas y el medio geográfico* [High Andean cultures and the geographic medium] (Publications of Instituto de Geografía, Universidad Nacional Mayor de San Marcos, vol. 1). Universidad Nacional Mayor de San Marcos.
- Troll, C. (1966). Ökologische Landschaftsforschung und vergleichende Hochgebirgsforschung [Geo-ecological research and comparative high mountain research]. Franz Steiner.

- Troll, C. (1975). Vergleichende Geographie der Hochgebirge der Erde in landschaftsökologischer Sicht. Eine Entwicklung von dreieinhalb Jahrzehnten Forschungs- und Organisationsarbeit [Comparative Geography of the Earth's High Mountains in Landscape Ecological Perspective. A development of three and a half decades of research and organizational work]. *Geographische Rundschau*, 27, 185–198.
- Troll (1984). Studien zur vergleichenden Geographie der Hochgebirge der Erde [Studies on the comparative geography of the earth's high mountains]. In H. Uhlig & W. N. Haffner (Eds.), *Zur Entwicklung der vergleichenden Geographie der Hochgebirge* [On the development of the high mountains' comparative geography] (pp. 128–169). Wissenschaftliche Buchgesellschaft. (Orig. publ. 1941)
- Troll, C. (1985). *Carl Troll. Tagebücher in Bolivien 1926/1927* [Carl Troll. Diaries of Bolivia 1926/1927] (Ed. by I. Mohnheim). Franz Steiner.
- Tsing, A. (2005). *Friction: An ethnography of global connection*. Princeton University Press.
- Uhlig, H. (1984). Die Darstellung der Geo-Ökosysteme in Profilen und Diagrammen als Mittel der vergleichenden Geographie der Hochgebirge [The representation of geo-ecosystems in profiles and diagrams as a means of comparative geography of high mountains]. In E. Grötzbach & G. Rinschede (Eds.), *Beiträge zur vergleichenden Kulturgeographie der Hochgebirge* [Contributions to the comparative cultural geography of the high mountains] (pp. 93–153). Friedrich Pustet.
- Uhlig, H. & Haffner, W. (1984). Zur Entwicklung der geografischen Hochgebirgsforschung [On the development of geographic high mountain research]. In H. Uhlig & W. N. Haffner (Eds.), *Zur Entwicklung der vergleichenden Geographie der Hochgebirge* [On the development of the high mountains' comparative geography] (pp. 1–31). Wissenschaftliche Buchgesellschaft.
- Veteto, J. (2009). From mountain anthropology to montology? An overview of the anthropological approach to mountain studies. In B. Veress & J. Szigethy (Eds.), *Horizons in earth science research: Vol. 1* (pp. 1–17). Nova Science Publishers.
- Viazzo, P. P. (1989). *Upland communities. Environment, population and social structure in the Alps since the sixteenth century*. Cambridge University.



- Viazzo, P. P. & Albera, D. (1990). The peasant family in Northern Italy: a reassessment. *Journal of Family History*, 15(4), 461–482.
- Viveiros de Castro, E. (2012). *Cosmological perspectivism in Amazonia and elsewhere*. <https://haubooks.org/cosmological-perspectivism-in-amazonia/>
- Wood, Denis (1992). *The power of maps*. Guilford.
- Zinn, D. (2017). Migrant incorporation in South Tyrol and essentialized local identities. In F. Decimo & A. Gribaldo (Eds.), *Boundaries within. Nation, kinship and identity among migrants and minorities* (pp. 93–116). Springer.