

HUMAN IMPACT ON MOUNTAINS

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Preface

Twenty years ago when I enrolled in a course entitled "Peoples and Cultures of the Himalaya" I was struck by the dispersion of the literature I read for the course. The English language materials were scattered and often conflicting, and French and German sources were often buried in obscure places. Since that time matters have improved somewhat through the establishment of the International Mountain Society and the provision of a forum through the pages of its journal, *Mountain Research and Development*. In addition to the established mountain research centers in Munich, Innsbruck, Bern, and Grenoble, bibliographic centers on the Himalaya have sprung up in Paris (CNRS) and in Kathmandu at the newly established International Centre for Integrated Mountain Development (ICIMOD).

Despite the tremendous proliferation of information on mountain societies in journals, no single book in the English language has brought together a review of studies of mountain societies around the world. This book is designed to fill that void by emphasizing humans and their life in mountains. It is not intended to be a survey of the world's mountains, as the focus is on the traditional patterns of mountain occupancy and the mountain peoples' transition into a modern world. For a comprehensive survey of the literature about the physical or environmental aspects of mountains, the reader is advised to consult Larry Price's *Mountains and Man*.

As undergraduate courses in mountain studies continue to increase in the disciplines of anthropology and geography, this text will provide the college student with a synopsis of mountain societies. It can also be used as a reference volume for those involved in cross-cultural studies or by physical scientists who require a measure of human life in the mountains. A cumulative bibliography is provided that will direct the reader to further sources, especially in the non-English literature.

My coeditors, Professors Stadel and Knapp, who conduct research in the Andes, collated and translated the contributions from Latin America. Stadel also translated two manuscripts originally written in German and checked other German language materials.

The gestation period for this book was longer than for most volumes. Either the editors were conducting extended research in inaccessible places, or the contributors were mailing in manuscripts from mountain locations around the world. Our editors at Rowman & Littlefield, Paul A. Lee and Janet S. Johnston, kindly tolerated this state of affairs.

The editors were supported in their mountain studies over the years by a variety of research fellowships and grants. Without this support this book would not have been created. Thanks go to the National Geographic Society, the National Science Foundation, the National Academy of Sciences, the Fulbright-Hays Program, the Ford Foundation, the American Institute of Pakistan Studies, and the Canadian Social Science and Humanities Council.

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Nigel J. R. Allan
Kathmandu, Nepal
November 1986

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PART I
The Mountain World

1

Introduction

Nigel J. R. Allan

The chapters in Part One are written to give the reader insight into the mountain world. After teaching a course on that topic for several years I realized how inadequate is our knowledge of mountains as the habitat of people. Scholars, especially in the English language, have not greatly helped to expand that knowledge because they have frequently misused or poorly translated material written in another language. This book is designed to assist the English reader in comprehending traditional mountain societies while it provides a contemporary look into the forces of change which are altering mountain societies and the natural environment.

Chapters by Groetzbach, Troll, and Bharati address the fundamental nature of life in the mountain environment. Later chapters by Rinschede, Penz and Brush describe traditional mountain livelihoods. Whiteman's chapter is inserted into the middle of Part One to provide a bridge between the mountaineers and their natural environment.

Hewitt's opening chapter highlights the current debate facing many Westerners and local Western educated scholars and administrators who are engaged in mountain activities. One can cite a litany of particularistic field studies or failed projects in reviewing the efforts of people from "downcountry" who have tried to "improve" the lot of mountaineers. Hewitt's comments are especially valuable as they come at a time when traditional livelihoods of mountaineers are shifting from being influenced by geoeological conditions to the more human concerns of integration into capitalistic and socialistic societies. The geoeology paradigm is less successful in elucidating formerly selfsupporting mountain societies that are becoming dependent on outside lowland dwelling people and institutions. The effect of this transition is everywhere visible on the mountain landscape. Ski resorts, parking lots, dams and power lines, roads and scruffy new towns constitute the litter of modern civilization. The chapter provides a valuable counterpoint to the dominant geoeological view of those who study mountain life.

Nowhere has mountain geography received greater emphasis than in the German-speaking countries, a fact which is reflected in the contents of this book. Groetzbach, for example, begins by tracing the theme of a "high mountain culture" as it has been developed in Europe by describing and defining the terminology used by European scholars in studying alpine areas. He then extends this typology to high mountains elsewhere in the world. Whether or not mountain development in the non-Western world will emulate the modernization processes of Europe remains to be seen.

To clarify the German developed geocology paradigm used in studying mountains, Stadel has translated one of the late Carl Troll's review articles. While no one has dominated research like Carl Troll, we now see from a reading of Hewitt's chapter that this paradigm, well exploited in the past, is less suitable for examining mountain societies today. In Troll's time the natural environment influenced much of mountain life; now modernization is underway and forcing us to develop human oriented modes of inquiry. This chapter will assist English speakers because it provides a succinct summary of Troll's method of looking at mountain environments, while it also gives a review of its associated literature.

Few visitors to mountains are aware of the environmental complexity that confronts mountaineers when they are extracting a livelihood from the soil. In Chapter Five, Whiteman elucidates the mountain farmer's agrosystems in three localities. A prominent feature of his work among mountain agriculturalists is his effort at producing greater agricultural production via methods selected by the cultivators. Standardized prescriptive remedies often conflict with local cultural and agronomic practices; therefore Whiteman would argue for a "smorgasbord" approach in which the farmer is provided with choices, is free to organize his own labor, to try new cultigens, and to choose an appropriate technology. All these components of the agrosystem are manipulated within the fixed bioclimatic environment.

Earlier, Hewitt had written about his concern for local mountain folk trying to maintain their identity and particular way of life in the face of increasing pressure from lowlanders. A frequent cause of friction between these people is the opinion lowlanders have of mountain folk. Pejoratives abound. The "Highlanders" of Scotland, "Oberwalder" of Austria, "Kohistani" of Afghanistan, "Rohilla" of India and "Hillbilly" of America are only a few of the names used by lowlanders in describing mountaineers. Nowhere are the distinctions of social geography more pronounced than in the South Asian mountain rimland. Professor Bharati's essay focuses on that social and environmental interface. Formerly only a few pilgrims visited remote Himalayan enclaves but now masses of tourists, both native and foreign, trek into the mountains, bestowing upon them an almost mystical identity.

The last three chapters in Part One discuss the livelihoods of mountain communities in Europe and the Americas with applications elsewhere. Terms such as transhumance and almwirtschaft are almost invariably misused by English speakers. The chapters by Rinschede and Penz define these terms and provide examples for those unfamiliar with basic types of mountain livelihoods. Brush concentrates on one vital component of the agrosystem, strategies, in examining traditional hill farm systems in the New World. These chapters conclude Part One which provides a guide to the current human impact on mountains.

The Study of Mountain Lands and Peoples

A Critical Overview

Kenneth Hewitt

Introductory Remarks: Mountains and “Big Science”

To focus one's studies on mountain regions is, presumably, to accept that they define a distinct and meaningful area of specialization. The boundaries, technical or geographic, need not be exact nor inviolate. As with national geographies or histories, law and economics, or the civil and military, independent study is sometimes useful without implying their separation in the “real world.” Nevertheless, those choices that define or imply a special subject matter in terms of regional differences and habitats, need careful reflection by the geographer.

It is not difficult to find experiences and conditions that seem peculiarly well-developed in, if not unique to, mountain lands. That is especially so of activities within the compass of human senses and physique. When we examine the geographical patterns of a variety of geophysical, biotic and cultural kinds, they reflect or seem to highlight the arrangement of mountain lands. These are also uniquely associated with geotectonic processes or orogenic zones and altitudinal vegetation zones. That does not mean we have no difficulties defining the limits of orogenic and vegetation belts, the scale at which accidented topography becomes or ceases to be “mountainous,” nor exactly what widespread features, if any, are actually unique to mountain societies (Thompson 1964; Hewitt 1972; Troll 1972c; Soffer 1982; Uhlig 1984). One merely discovers that there are issues in which these difficulties are minor compared to the advantages of concentrating upon mountain conditions. There have been numerous essays and introductory passages describing or defending such specialization (Peattie 1936; Troll 1972a; Price 1981; Ives and Messerli 1984).

“Natural regions” once provided, if they no longer do, one of the favored ways of organizing the subject matter of geography. Although surviving in introductory texts, they have fallen into disrepute as a means of organizing human geographic study, mainly because of the association with environmental determinism and a change in our preoccupations (Soffer 1982). They do remain a significant concern in climatology, plant, soil and even crop geography.

There is also, largely inspired outside of geography itself, a resurgent “natural regions” approach associated with environmental concern and the ecology movement (Parsons 1985). It is identified especially with regional environments marginal to the urban-industrial heartlands, or in so-called Third World countries. Moreover, it is a growth area for studies associated with international cooperation and agencies such as UNESCO. The latter’s “Man and Biosphere” Programme is a prime example, which divides up most of its projects in terms of natural regions, including the “Arctic and Alpine” (UNESCO 1974). Such regions are also commonly those that recent ecological works have identified as “fragile,” at least in relation to the contemporary development pressures and as being “in crisis.” That has been an impetus for recent mountain studies. It seems to me that regional or biosphere studies in this vein raise issues for geographers going well beyond the mountains or their environmental problems.

My purpose here, however, is to critically review what seems a prevalence of poor and inappropriate definitions of the mountain problem field. I am concerned with both the ideas that are employed to divide off and to unify mountain land studies. The problem is primarily a failure to deal adequately with the human dimensions of mountain lands. But it is also reflected in a debatable choice of concerns in the physical or environmental dimensions. The weaknesses become most acute where this knowledge is employed to assess and recommend action in relation to the so-called crisis in the mountains (Eckholm 1975; UNESCO 1974; Pitt 1978; Ives and Messerli 1984).

In the first place I would argue that what are commonly presented as the unique or special problems of mountain lands are less and less a real outgrowth of mountain land experience and mountain studies. Rather, they revolve around a quite different intellectual and institutional environment, albeit “applied” in the mountains. From a scholarly point of view, it reflects the terrain and targets mapped out by particular disciplines. These might be geophysics, plant ecology, or cultural anthropology. Likewise the expertise in mountain problems today is largely drawn from and evaluated in terms of such disciplines, and their cutting edge in the more prestigious schools. It is not something greatly changed by the rise of interdisciplinary studies. The choice of expertise is similarly based. Their problem realms also tend to reflect fashionable concerns of the