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Geographical Education and Research in Nepal

Jagannath Adhikari

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THIS PAPER DISCUSSES the contribution of geographers and geographical research to the understanding of Nepal. The geographical scholarship of both Nepali and foreign scholars of Nepal is compared and analysed. The influence of various schools of thoughts in geography and their impact on geography education and research in Nepal is explored. Also analysed is the contribution of studies in Nepal to the advancement of geographical knowledge and understandings.

Development of geography as an academic discipline

Before entering into the subject as it relates to Nepal, what follows is a brief digression to discuss the evolution of the discipline itself. This discussion helps in understanding how changes in the focus and concepts of geography (both methodological and theoretical), especially in the West, have affected geographical education and research in Nepal by both external and local geographers.

The practice of geography, especially in the form of exploration, travel writing and mapping, had existed for a long time before it was established as an academic discipline around the late 19th century. There were disagreements among various academic disciplines in universities whether 'geography' comprised a discipline in itself. But 'geographical societies' formed in Europe consistently pressured their universities to recognise geography as an 'academic discipline' and these 'societies' even provided funds to that end. The main argument for not considering geography an academic discipline was the cosmographic nature¹ of the investigations promoted by 'geographical societies'. It was also argued that the subjects covered by geography were already being taught in other different disciplines. But the focus of the 'geography' departments remained the cosmography and to continue the tasks undertaken by geographical societies.

1 Cosmography includes not only geography and cartography but also natural sciences like biology, geology and geophysics as well as social sciences like anthropology, which only achieved independent academic standing towards the end of the 19th century. Schmithusen, 1976, as quoted in Holt-Jensen, 1988, p. 2.

The Renaissance brought a renewed interest in geography, especially on geographical knowledge of ancient times and of topography. The philosophical underpinnings developed by Immanuel Kant (1724-1804) were of great significance for the development of geography as a discipline. He believed that geography², together with history, has significant scientific contributions to make. Therefore, in the 19th century the emphasis of geography lay in the study of process, i.e., the development of phenomena over time in geographical space. The scientific basis of geography was further expanded with the works of Alexander von Humboldt (1769-1859) and Carl Ritter (1779-1859), but their emphasis on cosmography and historical development of phenomena meant that in academia geography was considered a part of history. In many schools of Europe in the 19th century, geography was taught as an auxiliary course of history. At that time, the principal components of the social sciences were history, economics and political science. It was only in the late 19th century that geography was established as a discipline in its own right.

Even though its concerns were similar to that of the other social sciences, geography resisted the division of knowledge into the sciences and the humanities, and tried to bridge the gap with natural sciences through physical geography and with humanities through human geography, which is akin to anthropology but places greater emphasis on the influence of the environment. By the late 19th century, the main social science disciplines had their own divisions of specialisation, but geography remained a field which was generalist, synthesising and non-analytical. For a long time, it remained an adjunct to history. As a result, treatment of place and space remained neglected in the social sciences.

One of the reasons for the general negligence of 'geography's

2 Immanuel Kant believed that the physical classification of empirical phenomena gives the scientific basis to history and geography. History studies the phenomena that follow one after the other in time (chronological science) and geography studies phenomena belonging to the same place (chorological science). Without the combined efforts of history and geography humans cannot fully understand the world. Holt-Jensen, 1988, p. 16.

concern for space and place' in the social sciences is also linked to circumstances existing in the late 19th century and until the earlier part of the 20th. The temporal dimension was considered important because the focus was on 'progress' and on the politics of organising and managing social change. This meant that spatial consideration was not of much concern. If social change was universal and deterministic, space was theoretically irrelevant and therefore just a platform; if it was unique and unrepeatable, space was just one minor element affecting the events. This led to the consideration of space just for finer empirical results but was not central to the analysis. As a result, geography remained a neglected field in the social sciences.³ But the development of geography as a field of inquiry was also linked with politics. For example, in Germany, the country's geography, the distribution of the German-speaking population and disputed boundaries were important elements in instilling the 'nationalist' idea. That was true also for Finland. Therefore, geography was emphasised as an academic division in most universities in Germany. On the other hand, Norway, which had no disputed boundaries, emphasised its 'history' as an element of 'nationalism'. In this sense, the early development of geography is also linked to the use of geographical knowledge for political purposes.

The development of geography as a field of inquiry or academic discipline is generally linked with imperialism and the exploitation of the world economy by powerful nations, especially from Europe. This could be one of the reasons for the strong academic emphasis on geography in European universities before World War II. As Hudson rightly argues, 'Geography was vigorously promoted [from 1870 onward], largely, if not mainly, to serve the interests of imperialism in its various aspects including territorial acquisition, economic exploitation, militarism and practices of class and race domination.'⁴ The concepts developed in geography in earlier times are also related to this aim of imperialism. Earlier definitions of ge-

3 Wallerstein et al, 1997.

4 Hudson, 1977, p. 12.

ography such as 'geography is concerned with providing accurate, orderly, and rational descriptions and interpretations of the variable character of the earth surface',⁵ are also linked to this aim of imperialism in the development of this discipline.

After the publication of Darwin's *Origin of Species*, the focus of geography changed dramatically. The theory of evolution considered nature to be a battlefield upon which there is an incessant struggle for life and survival, and this led to an emphasis on 'environmental determinism'. In the period between the mid-19th and -20th centuries, the main body of geographers employed 'environmental determinism' to stress the relationship between it and imperialism. In the United States, environmental determinism was best associated with geographers like Ellsworth Huntington and Ellen Churchill Semple who developed 'economic geography', and in Britain with the school of 'climatic moral economy'.⁶ The theory of 'survival of the fittest' was also applied in the social sciences, leading to the concept of 'social Darwinism', which argues that there are differences in the natural qualities and abilities of different racial groups, and able groups or individuals survive, conquer and dominate or control others. It justified imperialism on the grounds that if local or indigenous peoples are not able, owing to environmental and climatic conditions, to exploit geographical resources, then it is up to the white man to do it for them. Social Darwinism was also linked with the political aim of material progress at that time. Peet and Thrift⁷ argue that in modern geography social Darwinism took the particular form of environmental determinism: differences in human beings' physical and mental abilities, and in the level of their cultural and economic potential and achievement, were attributed to regionally differing natural environments. Up to the middle of the 20th century, school textbooks in most

5 Hartshorne, 1962, p. 21.

6 Livingstone, 1994. This concept maintained that people's development—physically, intellectually and socially—is linked to climatic conditions. This theory also regards that people from temperate regions (like Europe) have better ability and are more capable than people living in hot climates.

7 Peet and Thrift, 1989, p. 4.

countries in Europe and North America included strong elements of environmental determinism. Peet argues that there was a political purpose in following the idea of environmental determinism in North America, which was to support the perceived rights of American settlers to dominate native Americans.⁸

The approach of environmental determinism was somewhat derailed by geographers in the mid-20th century. Even earlier, a Russian geographer, Count Peter Kropotkin (1842-1921), had expressed disagreement with the 'social Darwinists', and instead emphasised that struggle for existence is not carried out by individuals, rather by groups of individuals co-operating with each other. Therefore, mutual aid within small and self-contained communities is a source of existence and civilisation. Later geographers like Friedrich Ratzel, Alfred Hettner, Lucien Febvre, Paul Vidal de la Blache and Jean Brunhes helped in developing the concept of 'possibilism'. This concept did not totally reject environmental determinism, but argued that the influence of nature on human societies and behaviour is lower than emphasised by environmental determinism. Possibilism also led to the emphasis on 'human geography' in that the physical environment provides the opportunity for a range of possible human responses and that people have considerable discretion to choose between them. There is a view that geography cannot be reduced to social morphology (as studied by sociology and anthropology) and that nature or the physical world (*milieu externe*) cannot be treated as only a slave to human activity. Ratzel emphasised that 'society should not be left suspended in the air', which essentially means that the physical world in which a society exists also has an important role to play. Closely associated with possibilism are concepts such as 'neo-determinism', 'social determinism' and 'humanistic geography'. These concepts were developed to recognise the influence of human agency on society and the environment through their perception, which leads to thought as well as action.⁹

⁸ Peet 1985, p. 317.

⁹ Johnston, 1993.

Possibilism owes its emergence mainly to the strong criticism of environmental determinism in the period from the 1930s to the 1950s. But this school of thought was also vague in its formulation of environmental causation and hence precluded systematic, theoretical and causal generalisations.¹⁰ In general, geography, especially human geography, is now thought to investigate three related components: spatial analysis of the human population; ecological analysis of the human population and the environment; and regional synthesis, which combines the first two to examine areal differentiations. In the United States, geography then turned mainly into areal differentiation and as an 'integrating science'. But this formulation was considered not very helpful in developing universal laws or theories. On the other hand, economic interests on an international scale led to the emergence of 'economic geography', which was taught in economics departments across the United States.¹¹

After 1945, when both the world economy and politics was transformed, developments in society took another turn. The United States became a superpower, both militarily and economically. The world was polarised into capitalist and communist societies. There was also an economic boom. The investment in social science increased in absolute terms. The concept of 'area studies' became popular. Area studies programmes in the United States (and later in Europe and the United Kingdom and other rich countries) were interdisciplinary programmes which brought together a number of social scientists specialising in different fields as well as a few natural scientists. They focused on some specific geographical area in an interdisciplinary manner and trained people who then would become specialists on that particular area.

Area studies focussed mainly on regions that were politically active and sensitive, and where economic opportunities could be exploited, such as West and East Asia, Eastern Europe and Africa.

¹⁰ Peet and Thrift, 1989, p. 5.

¹¹ It is also noteworthy that students of commerce were taught 'commercial geography' in earlier times in Nepal.

Countries like India, China and Pakistan were also of special interest. As for Nepal itself, it was not a politically sensitive area nor an active one for area studies to focus on. As a result, Nepal was generally not included in American area studies programmes. In the few cases where geographers and anthropologists were involved in area studies, some of them also looked at Nepal not out of political interest (which was then the main reason for funding) but mainly due to its mountains and unique retention of culture until the 1950s. Therefore, it is due to this romantic vision that some academics were involved in area studies focussing on Nepal. But, as a general rule, Nepal remained outside the scope of area studies. Some interest from British academics is also due to the presence of Gurkhas in the British Army and the long association of British administrators in India with the Rana rulers of Nepal.

In the late 1950s and 1960s, geography was criticised from a methodological perspective as well as in terms of usefulness of its research. The focus of positivism at this moment led to an approach of 'quantitative revolution' in geography. Similarly, to grasp contemporary social and political crises the 'radical geographical' approach was established. The latter owes its origins to two crises of capitalism: armed struggle in developing countries and the involvement of the United States in the Vietnam War; and urban social movements in many cities. Radical geographers studied almost every aspect of life that had previously been considered marginal – women, ghettos, the mentally ill, etc. Quantitative methods were developed and used especially for the analysis of locational aspects. Different mathematical models were formulated to understand complex situations. But this approach ended with the publication of David Harvey's *Social Justice and the City* (1973). In this book, Harvey argued that the motivation to follow quantitative methods came from a positivist school of thought and an interest in paradigm development. Paradigm, as explained by science historian Thomas Kuhn, is a kind of dominant thought that guides our education and practice like a tradition. Therefore, developing a paradigm, or a quantitative model, is essentially targeted at controlling or manipulating human activity

through planning. Such a desire comes as a response to pressures from the material or economic bases of society. In essence, Harvey argued that paradigm development, as in the physical sciences, is not applicable in geography. He further argued that geographical work should aim at abolishing social injustice. Any method, or combination of methods, which helps in abolishing injustice needs to be followed. Critics of Harvey believe that he was not concerned with finding the truth but in creating or following a particular truth.

In the 1970s and early 1980s, structural Marxism was particularly emphasised in geography. The Marxist approach and methods, especially the uses of 'structure' and 'class' as analytical units, were very common. The structure of pre-capitalist society, modes of production, state and critical analysis of culture, ideology and consciousness were common in this approach. Structuralism was also emphasised around this time. Manuel Castells's *The Urban Questions* (1977) was an important milestone in the use of the concept of structure. Castells saw the city as the projection of society in space: people in relation to one another give space 'a form, a function, a social signification'.¹² Castells writes further:

To analyse space as an expression of the social structure amounts, therefore, to studying its spacing by elements of the economic system, the political system and the ideological system, and by their combinations and the social practices that derive from them.¹³

In the mid-1980s, the debate on structure and agency¹⁴ was pronounced. This also influenced geography. The increased role of

12 Castells, 1977, p. 126, as quoted in Peet and Thrift, 1989, p. 11.

13 Castells, 1977, p. 126, as quoted in Peet and Thrift, 1989, p. 11.

14 Structure refers generally to the composition of society and its various components that helps create a stable order which influence the behavior and actions of the individuals remaining within this structure. Agency refers to autonomous actions of individuals and their innovativeness that help them bypass the restrictions imposed by social structure. Because of agency, people can make progress by overcoming barriers imposed by social structures.

'agency' gave further boost to what is called 'humanist geography'. The various limitations in Marxism to explain contemporary practices and situations led to this approach. There were new methods of capital accumulation, based on mass consumption, segmentation of mass markets, flexible accumulation, development of the service industry, and new international divisions of labour. Non-economic factors of state and civil society became important. New political movements which cut across 'class' lines started to emerge such as the environmental and feminist movements which were not based on class but on other social experiences. The general social science question whether 'theory' can explain all social practices also had an influence on geography. Most importantly, geographers were attracted to the idea of 'agency' because the Marxist approach, with its emphasis on structure and class, had given less importance to 'space'. It was realised that 'space' was much more important than what structural Marxism was willing to concede. Space is not just a reflection of the social but a constitutive element of what the social is. It is not just that the spatial is socially constructed; the social is spatially constructed, too. That is to say, the spatial includes various aspects of the social world like distance, the differences in measurements, connotations and appreciations of distance, movement of people, notions of place and specificity, and the symbolism and meaning society and people give to all these things.¹⁵

Starting in the late 1980s and coming up to the present, the influence of post-modernism has also been felt in geography. Structuralism is being criticised in favour of post-structuralism. This approach assumes that meaning is produced in language, not by it, and there are multiple realities which cannot be captured by grand narratives or theories. This also has consequences for methodology; methods should be supple and able to capture the multiplicity of different meanings without reducing them to the simplicity of a single structure.

Of late, geography has embraced an interdisciplinary approach in research. This has helped it emerge as a strong field for policy

15 Massey, 1984, pp. 4-5, as quoted in Peet and Thrift, 1989, p. 18.

studies. Consequently, the most important practical contributions of geography has been in policy studies, wherein geography integrates both physical or natural as well as social sciences.

How far have the above developments in geographical theories and approaches influenced the study of geography in Nepal? Even though this is a difficult task requiring exhaustive reading and analysis of writings about Nepal from within the country and outside, an attempt has been made in the following paragraphs.

The earliest studies conducted in Nepal by foreign scholars seem to be influenced by expansionism. The often-quoted historical books in Nepal by William Kirkpatrick and other British writers sound very much like geography texts on Nepal, and correspond to the geographical writing (cosmography) of that time in that they were thoroughly descriptive. These books were not able to analyse the differences in human activities and their interactions with the physical world. They were exploratory in nature and were aimed at gathering information that could be useful for traders and economic colonisers and for political purposes (e.g., the recruitment of Nepalis into the British army). The earliest of such books include Brian H. Hodgson's *Notes on Gurungs of Nepal* and *Trade in Nepal*. The former gives some detail about the ethnography and geography of a people suitable for recruitment, while the latter deals with the possibility of expansion of trade and commerce. Both books were written during the late part of the 1820s when Hodgson served as the British Resident in Kathmandu. These writings also made Nepal known to the outside world as a country of Gurkhas, 'the valiant warriors'.

Geographical studies conducted in Nepal by both Nepali and foreign scholars were not guided by attempts to develop any theoretical understanding. For example, as already stated, most studies conducted prior to the 1950s were descriptive in nature. It is only after the 1960s that serious university-based research was done on topics related to Nepal. The books and articles by Harka Gurung belong to this genre of geography. Other books published in Nepal by geographers are also based on this approach of 'environment-man interaction'. The influence of the Marxist tradition can be seen

to a certain extent. The writings of Nanda Shrestha, a foreign scholar of Nepali origin, are guided by the structural Marxist approach in studying the migration pattern in Nepal. He concludes that 'class' in the origin determines the 'class' in the destination for domestic migrants. Among other writings by foreign scholars, *Nepal in Crisis*¹⁶ also followed the Marxist approach, particularly neo-Marxism.¹⁷ Here, the influence of the centre (dominant) on the periphery (subordinate) is analysed using 'dependency theory'. It is again based on the structuralist approach in that it uses 'class' as the unit of analysis. The cause of underdevelopment in Nepal is considered to be the exploitative relationship of the centre (world trade centres and India) on the periphery (Nepal). But after conducting longitudinal research spanning a couple of decades, the authors themselves felt that it was also important to give emphasis to 'agency' of the people and use other categories to group the people as well, mainly in terms gender, caste and ethnicity. Moreover, it is now seen that integration with the developed world is not necessarily disadvantageous as it has provided opportunities for people in developing countries like Nepal. The growing mobility of people and their migration for work in other countries is also a result of global integration. Nepal has also benefited from this opportunity, and remittance earnings from foreign countries accounted for almost a quarter of the gross domestic product (GDP) in 2008-09, and it is this income that has been propping up the economy of the country. About half of the households of the country have one or more members working in foreign countries.

The quantitative revolution did have some effect on geography in Nepal. Its particular impact was seen in the introduction of a course on quantitative techniques. In terms of impact using this approach, however, there has been almost none, even though a few

16 Blaikie, Cameron and Seddon, 1980.

17 Neo-Marxism differs from Marxism in that the former considers the influence of developed countries on developing countries as detrimental, whereas the latter finds it to be a modernising effort.

master's theses did adopt it. The quantitative approach has been used in the analysis of location, and trade and traffic flow. Robert H. Stoddard is considered to have contributed in developing the quantitative approach in curriculum and thesis-guiding in Nepal.¹⁸

A few studies conducted in foreign universities by Nepali scholars seem to have been guided by contemporary theoretical and methodological approaches. But these scholars have not been able to take their studies further upon their return to Nepal. For example, the study by Manandhar-Gurung¹⁹ on the 'ecological knowledge of local people' belongs to the humanist tradition, particularly environmental behaviour. She has demonstrated how different cultures gain different knowledge about the environment and manage it to suit their culturally determined livelihood strategy, and, in this process, sustainably manage resources and the environment. The study by Subedi²⁰ reveals how knowledge about migration is culturally ingrained in people's culture, and they have the language to describe different types of movements in relation to their place of origin. These are some of the studies emphasising the 'agency' of people.

There has not been much change in the methodological approach either. As stated earlier, different approaches require different methods. Humanist geography requires a more reflexive and interpretive method in which researchers need to define themselves in the research milieu and explain how their actions have influenced the research. Similarly, the perceptions and experiences of people in relation to space, resources located in space and their ways of interpreting the space need to be understood. General survey techniques may not be entirely appropriate for this since these methods cannot capture the multiple realities of the people. This is the basic drawback in geographical studies on Nepal by Nepali as well as foreign scholars.

18 Stoddard, 1979.

19 Manandhar-Gurung, 1988.

20 Subedi, 1993.

There has, however, been a rapid shift in the themes of research in Nepal. This is guided more by the change in development paradigms brought about mainly by the funding agencies. It has to be noted that in most of the studies conducted with the support of donors (development agencies) there is no special approach of geography to be seen. Rather, they seem to be the output of general social scientists, except perhaps in the use of some maps. However, some of the books written by prominent Nepali geographers have given in-depth empirical information about the subjects covered. This has been discussed in detail in a later section.

B. Teaching geography in schools and university in Nepal

Modern education began in Nepal much later than in India, where British administrators introduced modern (western) education. Once school education was started in Nepal, geography occupied its place in the curriculum. Initially, geography in Nepal was organised in the Indian pattern, influenced as it was by the British system of education, and by the fact that the early geographers in Nepal had been educated in that system as well. Later, Nepali geographers themselves were trained in British universities, and their influence is seen in the emphasis given to cartography and physical, economic and regional geography as the main fields under geography. In regional geography, students were taught physical divisions and climate types in detail, but regional and economic problems were not emphasised. Students were taught to describe the different regions but not trained as problem-solvers. As more and more people started going to the United States for education, geography education began to be gradually influenced by the American system.

By the time the Government of Nepal established the School Leaving Certificate (SLC) Examination Board in 1934 to conduct the national-level examination after the 10th grade, geography had already formed part of the school curriculum.²¹ Initially, 'geography' was taught only at Durbar High School and Patan High School. The

²¹ Pandey, 1998; Subedi and Poudel, 2006.

status of geography in high school as a stand-alone subject continued until the implementation of the New Education System (National Education System Plan/NESP) in 1973. Thereafter, geography was included in the course called 'social studies'. Later, in the early 1980s, when the SLC curriculum was brought down to seven papers and one optional subject (as opposed to the original nine), social studies faced competition from mathematics and science.²² Most schools opted for subjects other than social studies because students wanted to take subjects in which they could secure higher marks. Accordingly, social studies as a whole faced a setback. For example, in 2000, of the 121 public secondary schools of the Kathmandu Valley, only six offered 'geography' as the only first or second optional paper, and 24 offered it as an optional paper with the choice of history or economics or health science. Of the 221 private secondary schools of the Kathmandu Valley in the same year, only five offered geography. If this trend continues, students would eventually become geographically illiterate. Lamichhane argues that there is also no congruence between high school and college-level curricula. As a result, geography has not progressed well.²³

The allocation of marks to geography in relation to the total provides some indication of how geography has slid down the scale of importance (Table 1). The teaching style and course content are far from satisfactory as only traditional rote-learning and the old style of describing places are still followed. It is also noteworthy that in most cases non-geographers teach geography.

In the past, geography education in Nepal was more or less the same throughout the country, based as it was on the same curriculum. But with the introduction of the private school system, there is now flexibility in the use of curricula. Many private and English-medium schools follow one that is used in schools in developed countries like the USA, whereas government schools follow the curriculum and textbooks prepared by the government. Only in the

²² Subedi and Joshi, 1997.

²³ Lamichhane, 2005.

Table 1: Allocation of marks on ‘geography’ as compared to total marks in the school curriculum of Nepal (government schools)

Period	Full Marks	Marks allocated to Geography
Pre-1951	800	Geography 100
1951-61	900	Geography or History 100
1961-71	900	Geography or History 100 Geography (optional) 100
1971-81	900	Geography 50
1981- to date	700	Geography (optional or extra-optional) 100

Source: HMG/N 1985. *School Level Curriculum*. Ministry of Education and Culture, Kathmandu, Nepal.

preparation for the SLC do these private school teach the government curriculum.

Geography as a subject of study at the college or university level started much later. It was introduced at the college level (in Tri-Chandra College) in 1947,²⁴ while the Department of Geography in Tribhuvan University was set up only in 1960. The main credit for introducing geography at the college level and to its establishment as an academic discipline at Tribhuvan University goes to Jagat Bahadur Singh Burathoki, who had studied in Patna, India. Although his main specialisation was ‘road’ development, Burathoki also helped in the planning of education in Nepal.

Geography was introduced at the intermediate (IA) level at Tri-Chandra College in 1947, and at the bachelor’s level in 1949. Patan College was second in line, introducing geography at the IA level in 1954. This was upgraded to the BA level in 1958. Until 1960, geography was confined to the Kathmandu Valley. In 1973, it was extended to three colleges outside the valley – Prithvi Narayan Campus (Pokhara), Mahendra Campus (Dang) and RaRa Campus (Janakpur). By 1973, there were seven colleges that offered geography – at a time when there were only 30 colleges in all of Nepal. In the 1980s, geography teaching saw rapid expansion. Of all the colleges offering geography (21 in 1995/96), 10 started at the intermediate level during the 1980s and an equal number of colleges upgraded geogra-

²⁴ Malla, 1968.

phy to the BA level during this period. At present, 24 colleges offer geography up to the BA or above level.

Master's level teaching in geography began at University Campus, Tribhuvan University, Kirtipur, in 1961. To run a similar programme in Pokhara, senior teachers were brought in from India, mainly Gorakhpur. At present a PhD programme in geography is offered by the Central Department of Geography in Kirtipur and the Geography Department of the Prithvi Narayan Campus, Pokhara. As of 2006, five students had obtained PhDs from Tribhuvan University, while 12 were in the programme and four others had dropped out.²⁵ The themes of PhD research is also found to have changed over time. Prior to 1980, it was mostly regional, population, land use and agricultural issues, but recent works focus more on issues such as human livelihood, tourism, basic needs, rural-urban linkages, gender and the like.²⁶

After the government allowed the setting up of private colleges in 1990, geography also began to be taught in these institutions. By 1995, there were 12 private colleges offering geography at the intermediate level and three at the bachelor's.²⁷ Although their number has certainly increased since 1995 the number of private colleges offering geography courses fluctuates depending on the availability of teachers and students. Similarly, the government has also expanded its higher secondary (10+2) schools, and in most rural as well as urban centres, there are schools teaching geography.

C. Textbooks and curriculum in geography

When geography was introduced as a school subject in Nepal, students had to use Indian textbooks. Within Nepal, the first books on geography were written by non-geographers. Jaya Prithivi Bahadur Singh is considered to be the first Nepali to write a geography book. He was followed by Chandra Lal Singh, Lok Man Singh and Khadga

²⁵ Ranjitkar, 2006.

²⁶ Ranjitkar, 2006, p. 19.

²⁷ Subedi and Joshi, 1997.

Man Malla. None of them were geographers and they depended mainly on foreign books for a conceptual understanding of the subject. From the Darjeeling region, Paras Mani Pradhan and Krishna Bahadur Gurung also wrote geography textbooks in Nepali.

In the 1940s, writers like Netra Bahadur Thapa, Ramji Prasad Sharma and Nir Mardan Basnet wrote geography texts. Compared to previous books, these were able to give geographical interpretations to the description of areas. But the descriptive approach was still common.

Saran Hari Shrestha made geography popular in schools and almost all the students in the 1960s read his books on geography. He produced a number of geography textbooks with a distinctive geographical focus. But they were still influenced by 'environmental determinism'. Books published later by Soorya Lal Amatya, P.L. Shrestha, B.G. Shrestha and T.R. Joshi were somewhat different and attempted to avoid the traditional interpretation based on 'environmental determinism'. One development during this period was the use of the Nepali language in textbooks as a result of the increasing use of the language in schools and colleges since the 1960s.

Changes in the approach and focus of geography have had implications on teaching and research. Teaching is influenced by the curriculum, and the geography curriculum has undergone changes to accommodate recent trends and developments in geography, even though these trends and developments have reached Nepal rather late. As is discussed later, Nepal has always remained a laggard in this regard.

Subedi and Joshi²⁸ have compared the MA courses in the 1960s and the 1990s, and they have identified the following differences:

- emphasis has shifted in favour of systematic studies;
- focus is changing towards human aspects;
- specific sub-branches (population geography, political geography) have been introduced in recent times to allow for specialisation;

28 Subedi and Joshi, 1997, p. 98.

- updating of content in technical and practical courses has been slow;
- courses in regional studies have been minimised;
- flexibility in terms of choices for students has been emphasised but in practice they are not so;
- a full curriculum has not been provided, only the syllabus;
- the content of regional studies is of a formal and classical nature; and
- the prescription of the content fits more textbook-style teaching than offering scope for research and development of the discipline.

By 2010, several changes had been made in the geography curriculum. The new curriculum included: mountain landforms and processes; mountain climate hydrology; biogeography; natural resources and environmental management; human settlement and ecology; climate change and human adaptation; urban planning and management; rural development and planning; geography of tourism; agricultural transformation and food security; advanced political geography; advanced population geography; gender and development; rural land use planning; geography of transportation; local governance and public policy; landscape ecology; and, project-cycle management. This curriculum seems modern, and aims to give students the knowledge of both physical and human geography. Moreover, there is more emphasis on the applied aspects of geography.

Prior to 1966, there was no course on human geography up to the BA level. Even regional geography focused mainly on the description of physical features and their variations across space. It was only in 1967 that a full course on human geography was started at the MA level, and a provision for a short course on human geography was made for the BA level as well. Later, specialised courses within 'human geography' were offered to students. With this change, geography shifted its focus from physical science to social science. This still holds true today. There are more teachers for courses on 'human geography' than physical geography.

In the mid-1990s, the MA level introduced a 'seminar course' under which experts from various fields would be invited to give lectures, and the students would also make presentations. The seminar course seemed like a good idea, but because of lack of funds, the geography department usually faced problems in inviting guest lecturers. That was particularly true of regional colleges like Prithvi Narayan Campus in Pokhara.

At present, the geography curriculum tries to cover three main aspects of geography: i) systematic studies such as physical and human geography, ii) regional studies such as the geography of India, South Asia and the like, and iii) courses on techniques, including field studies, cartography, surveying and GIS. Now, more emphasis is given to systematic geography than to regional studies.

In 1999, there were also changes in the curriculum to strengthen the research component. Compulsory subjects like 'modern geographical thought', 'advanced geomorphology', 'human ecology', and 'remote sensing and GIS' were added in the first-year MA course. For the second year, applied subjects were added, mainly under the influence of the School of Development Studies of the University of East Anglia, including 'rural development planning', 'natural resources management', 'policy context in environment and development', 'mountain climate and hydrology', 'mountain environment, land forms and processes', 'population, environment and development' and 'gender and development'.

Courses were changed at the IA and the BA levels as well. It was believed that the IA course content was overloaded, and, as a result, students were feeling discouraged to study geography at the college level and above. The switch from 2- to 3-year BA also led to changes in the geography curriculum. At both levels, the focus shifted in favour of 'human geography'. The changing focus of geography not only resulted from changes in approaches in geography in western countries (as discussed above) but also due to some compulsions. The lack of laboratories and funds for teaching the more expensive 'physical geography' was one reason for the emphasis on 'human geography', and that could also be the reason why there are

no courses at all levels on 'bio-geography'. The change in curriculum was envisioned with the planned phasing out of the IA degree from the university system that has so far been opposed by student groups.

There were several other problems in the effective teaching of geography at Tribhuvan University and its colleges. Its Institute of Humanities and Social Sciences launched a seven-year action plan in 1978 to strengthen teaching and research in the social sciences and humanities. The problems inhibiting the development of each discipline were chalked out, and, regarding geography, the following were considered serious at that time:²⁹

- inability of teachers to cope with new course content according to objectives;
- lack of uniformity in teaching and evaluation;
- lack of training for geography teachers;
- lack of textbooks in colleges;
- lack of foreign journals;
- lack of practical classrooms in various geography departments; and
- lack of survey instruments, thus hindering the growth of cartographic work in geography.

Some practical steps were also chalked out for improving geography education, including:³⁰

- introduction of regional planning as a special course and soil science with a laboratory;
- provision of teaching materials in all colleges where geography was taught;
- provision of topo-sheets at Kirtipur campus and other colleges offering geography courses;

²⁹ Shrestha and KC, 1984, p. 176.

³⁰ Shrestha and KC, 1984, p. 177.

- publication of required and reference geography textbooks at all levels;
- provision of drawing tables in practical classrooms;
- provision of spot training and regular workshops for geography teachers;
- provision of a separate library for geography where the Master's level is taught;
- provision of a publication outlet; and
- provision of research in areas of geographical importance.

The above demands from the geography department give the impression that even the basic requirements were not in place at that time. Provision of topo-sheets and drawing tables are the most basic requirements for the teaching of geography. There was some emphasis on bio-geography and physical geography and for which courses on soil science and a soil laboratory were demanded. Even by 1984, most of these improvements had not taken place. Regional planning had not been introduced nor was the soil laboratory made. It is perhaps due to the lack of a soil lab that geography education/research in Nepal has been so weak in physical and bio-geography. Very little funds were allocated for the publication of the departmental journal, *Geographical Journal of Nepal*, and the journal itself was later discontinued due to technical difficulties in management. Similarly, the expansion of geography education was not done according to any set plan but quite haphazardly. The plan to write and publish textbooks was initiated, but nothing materialised out of it due to lack of monitoring and co-ordination. With the increase in the size and quality of the geography faculty³¹ at the Tribhuvan

31 In 1995, there were seven professors (six with the Faculty of Humanities and Social Sciences and one with the Faculty of Education), 21 Readers (21 with the Faculty of Humanities and Social Sciences). There were many more Lecturers (see Subedi and Joshi, 1997). By 2001, there were nine professors (seven with the Faculty of Humanities and Social Sciences and two with the Faculty of Education), 22 Readers, 104 Lecturers, eight Assistant Lecturers, three Instructors and 18 Teaching Assistants. There have been some changes in the number of faculty members because of the retirement

University, production of materials for education should not have been a problem. But, it is also true that the popularity of geography as a discipline has been on the decline. One reason for this is the phasing out of the government programme that recruited those with degrees in geography as surveyors. The availability of interdisciplinary courses that help provide employment opportunities to students is also another cause of geography losing its appeal.³²

The popularity of geography in regional colleges has also gone down significantly. To take an example, in the geography department at Prithvi Narayan Campus in Pokhara, which is considered second only to the central department in Kirtipur in geography education, there is now a severe dearth of students. This is especially so at the Master's level. Students completing their MA with a written thesis are now quite rare compared to even just a few years ago. Even if they do plan to write a thesis, it takes them a long time to complete it.

Over time, a large number of geography students, particularly MA students, have written theses, which could potentially be helpful in augmenting the understanding of geographical knowledge of the country. But, so far, the impact of these studies has not been evident. They are not even published because most of them seem to be the run-of-the-mill kind. They tend to follow the same pattern (not only in terms of organisation but also in the writing). Creativity and

of senior teachers, but some of them are still retained on a contract basis. Most of the faculty members involved in teaching and research at the MA level have PhDs or MAs. Almost all university teachers have MAs or higher degrees as well as some research experience. The centralisation of quality and experienced faculty members in Kathmandu is also seen in the case of the 'geography discipline'. All the Professors (all in Kirtipur) and 16 Readers (out of 22, seven in Kirtipur) are stationed in Kathmandu. The total number of 'faculty members' in geography would be slightly higher if 'private campuses' were also included. It should also be noted that most of the teachers teaching in private colleges are 'part-time' teachers, who are actually Tribhuvan University teachers. Therefore, in total, there may be slightly more teachers in geography at the college level than the 164 teachers teaching at Tribhuvan University at present.

32 See also Subedi and Poudel, 2006.

originality are generally lacking. Furthermore, the trend now is for more students to opt for coursework instead of working on a thesis.

D. Research and writing: Impact of changes in development paradigms

Serious geographical research in Nepal began in the late 1950s because of two main reasons. First, prior to that period, Nepal did not allow foreign researchers, with a few exceptions, to enter Nepal. Second, Nepalis were not trained in the academic discipline of geography and there was no culture of doing research and exploration within the country itself.

Until the 1960s, regional geography remained a popular discipline, and this influenced the research conducted in Nepal in the 1960s. This is again related to the influence of British geographical education, which initially emphasised regional studies. One example is Harka Gurung's study of the regional geography of Pokhara Valley as part of his PhD from the University of Edinburgh in 1960. Regional geography essentially means an analysis of areal differentiation to clarify a specific situation in a particular locality. Harka Gurung's study was remarkable in that it combined geological evolution and human habitations and changes to understand the specific characteristics of Pokhara and variations within the valley.

Geography is also concerned with regionalism, which can also be practised by the state for functional reasons such as planning divisions, administrative regions and the like. But it also means a movement that seeks to politicise a territorial region with the aim of protecting or furthering regional interests. In this form of regionalism, feelings of collective identity are not rooted in an officially defined region but emanates from a grassroots identity. Regionalism can also be involved in ethnic regions since there is always a counter-culture in regionalism. The most important of such studies is *Regionalism and National Unity in Nepal* by Frederick H. Gaige,³³ which was also a part of a PhD thesis (in political science) and raised

³³ Gaige, 2009 [1975].

serious concerns among the Tarai population. After this much-noted study, others were also conducted in Nepal about 'nationalism and regional identity', but these came mainly from the other social sciences, particularly political science.

Planning in Nepal had attracted geographers until recent times. Regional planning was introduced in Nepal forcefully with the help of geographers. Harka Gurung's booklet *Regional Development Planning for Nepal* started a new vision of regionally balanced development in the country.³⁴ This book aimed at interlinking the country horizontally with the East-West highway and creating a growth centre in each development region which would act as a growth axis for the north-south integration of the mountain, hill and the Tarai areas. The inter-linking of these regions was to help in the integration of the economies of these ecological belts.

Apart from this book on regional planning, Harka Gurung's other publications, namely, *Vignettes of Nepal* and *Nepal: Dimensions of Development*, give a general account of the country. *Vignettes of Nepal* is a travel account that covers various important locations within the country from east to west. Gurung's description covers social, cultural, ecological, and, in a few cases, geological aspects of the country. The second book is a collection of essays, providing detailed accounts of the various development problems facing the country, including regional planning in Nepal, graduates of Nepal and their mobilisation, food security in the country, nature and culture in the Himalaya, etc. Each essay is written in a very precise and analytical manner. Harka Gurung's *Annapurna to Dhaulagiri*³⁵ is very unique in that it describes various Himalayan mountains and attempts made to conquer them.

Regional development and planning has also been studied in detail by geographer Pitamber Sharma. In his book on urban growth and development,³⁶ he gives a detailed historical account of how

34 Gurung, 1969.

35 Gurung, 1968.

36 Sharma, 1989.

urbanisation has been growing in Nepal. He has also contributed extensively to the study of market places.

Perhaps the most important works that helped make Nepal known to the outside world were that of Toni Hagen and Pradyumna Prasad Karan (popularly known as P.P. Karan). Their works are still considered the leading sources of geographical information on Nepal. Hagen travelled the country extensively and surveyed its geology, regional divisions and physiography. His book *Nepal: The Kingdom in the Himalayas* was an important milestone in understanding the geographical diversity and human habitations in these diverse physiographies besides being illustrated by some stunning photographs.³⁷ This book also helped in defining Swiss aid to Nepal. P.P. Karan's *Nepal: A Cultural and Physical Geography* also gave a good overview of Nepal's geography.³⁸

Hagen's study has also been taken as the basis for the ecological divisions of Nepal. He divided Nepal into seven ecological regions based on physical features: i) Tibetan Marginal Mountains, ii) Inner Himalaya, iii) Himalaya, iv) Midlands, v) Mahabharat Lekh, vi) Siwalik zone, and vii) the Tarai. He added three more to this list: Dun Valleys (mid-Tarai); the Fore Himalaya (Lesser Himalaya); and the Tibetan Plateau.³⁹ Gurung and Khanal⁴⁰ take the basis for the division of the country along the traditional classification used by Nepalis: Tarai or Madhes, for the plains; Pahar for the hills; and Himal for the mountains. They divide the Tarai into the Inner Tarai (Dun) and the Tarai. The limits of the middle hills is considered by them to be the higher and temperate highlands—the Mahabharata Lekh—in the south. The trans-Himalayan valleys are enclosed by Himals and the Tibetan border ranges. Gurung and Khanal indicate that the general distinction made by planners between mountain and Himal is spurious.

37 Hagen, 1961.

38 Karan, 1960.

39 Hagen, 1969.

40 Gurung and Khanal, 1987.

Other geographers who worked in Nepal in the 1960s include Robert Schmidt,⁴¹ who studied the Jiri area for his PhD. He looked at the transport and communication problem and its impact on agricultural and rural development in the Jiri area. This led to the focus of Swiss development aid in the Jiri region. The area in and around Jiri resembled a landscape similar to Switzerland, and this developed a bond between Swiss geographers/development experts and Jiri.

In the section below, the contribution of both foreign and local geographers in different fields (themes) of geography, particularly human geography, is highlighted. Even though various other themes in human geography have been studied, the following are the ones in which major contributions have been made.

Cultural ecology

Barry Bishop used the concept of 'cultural ecology' in studying life and livelihoods in the Karnali region in the 1960s. His book and articles on the Karnali are considered seminal works on cultural ecology⁴² and its application. His works reveal that livelihood strategies are defined by or oriented to fit the geographical conditions of an area and that these strategies are considered to be cultural traditions. Livelihoods in the Karnali region are not based solely on agriculture but also on animal herding, pastoralism, trading and home enterprises. These strategies involved the movement of people to Tibet and to the lower hills in Nepal and various parts of India. This movement is also combined with the movement of animals, taken away from the Karnali region because of the severe cold and lack

41 Schmidt, 1969.

42 Cultural ecology is the study of relationships between a culture group, i.e., a group sharing a common mode of life, both material and mental, and its natural environment, drawing upon the biological analogy of animal and plant lifestyle adjusting to and exploiting its natural habitat in specific ways. Cultural ecology may be viewed as a branch of human ecology, a discipline which placed emphasis on shared activities and meaning. R.J. Johnston, Derek Gregory and David M. Smith (eds), *Dictionary of Human Geography*. Oxford, p. 86.

of pastures during the winter season, and this movement of people with their animals helped in transporting goods from one place to another. As a result, this cultural-ecological pattern has been able to maintain the homeostasis, ecological balance and livelihood security in the Karnali. Bishop writes:

Since the livelihood pursuits of the people are fitted to the heterogeneous environment, they are extremely complex and varied. The principal livelihood pursuit is agriculture, but by itself it is not sufficient for even subsistence living. Therefore, the economy is composed of a combination of agriculture, animal husbandry, trade, and, to a lesser degree, home industry. These components interact among themselves...The presence as well as the importance of these components varies among households in a single village, among villages in a valley, as well as from valley to valley, and from area to area within the zone...The result is a hierarchy of economic systems that differs temporally as well as spatially.⁴³

Bishop published several articles, both academic and otherwise, on the Karnali in the late 1960s and the 1970s. His major book, *Karnali under Stress*, published only in 1990, contains detailed data and information and rich analyses even though it pertains to the period of the late 1960s. Bishop's articles on the Karnali in the *National Geographic* magazine (he, in fact, headed the Committee for Research and Exploration at the National Geographic Society) made this area known as a roadless and pristine region.⁴⁴

In an attempt to study the problem of food insecurity in the Karnali, Adhikari⁴⁵ used the extensive data collected by Bishop in the Karnali as his baseline. But the cultural ecological approach Bishop had adopted did not fully explain food insecurity in Karnali. This is so because his approach gave greater emphasis to 'adaptability' by

43 Bishop, 1978, p. 10.

44 Bishop and Bishop, 1971.

45 Adhikari, 2008.

the people and disregarded the political circumstances that make or force people to adapt to a given ecology. Adhikari tried to fill this gap by emphasising the political-economic dimensions that affect food security in the Karnali, and argued further that 'class' is much more important than 'ethnicity' in studying the food insecurity problem in the Karnali.

Some Japanese scholars such as Jiro Kawakita followed the tradition of cultural ecology while conducting research in Nepal. Kawakita's book *Hill Magars and Their Neighbours*⁴⁶ is an interesting and exploratory book on how Magars have been adapting to their natural environment through their cultural traditions and how they have been interacting with neighbours who arrived later such as the Bahuns.

Phytogeography and climate

Vertical differentiation of plants according to altitude has been a fascinating feature of the Nepali landscape to have attracted geographers and plant ecologists alike. The enormous range of altitudes in the short north-south horizontal distance and the existence of the extremely high east-west trending of the Himalaya alter the normal climatic pattern seen in such geographical areas. The regional climate is also modified with an increase in altitude. Numata,⁴⁷ Joshi, and, most importantly, Dobremez,⁴⁸ have studied the fascinating characteristics of plant ecology in Nepal. Dobremez developed a schematic approach based on his own fieldwork to illustrate the extreme complexity of vegetation of Nepal.⁴⁹ The schema developed by him also provides a combined altitudinal (latitudinal) transect and a moisture gradient (decreasing moisture with decreasing longitude). Other researchers who studied the ecological variation of

46 Kawakita, 1974.

47 Numata, 1981.

48 Dobremez, 1976.

49 Dobremez, 1976.

plants in Nepal are Schweinfurth,⁵⁰ Troll,⁵¹ and Japanese researchers Nakano,⁵² Kawakita⁵³ and Kanai.⁵⁴

New knowledge has developed regarding rainfall patterns. In the past, inferences on rainfall patterns were based on vegetation maps. But new studies have shown the existence of 'pockets' of extremely high annual rainfall. One such pocket is the Lumle area located north of Pokhara. Until recently, Pokhara was considered to be the place receiving the highest rainfall in Nepal. But it is no longer so, thanks to the study by Dhar and Mandal.⁵⁵ Their study shows that Lamachaur and Lumle have more rainfall (above 5,000 mm annually) than Pokhara valley (about 4500 mm). Until 1947, Nepal had only one meteorological station and that was located in Kathmandu. In the period from 1955 to 1958, the Indian government helped establish 50 additional stations across Nepal in order to get information for its Flood Control Scheme. In the 1960s, the government of Nepal established more than 200 stations. Data from such stations helped in the analysis of rainfall patterns in Nepal, including identifying pockets of low rainfall.⁵⁶

The relationship between climate and vegetation pattern, and their parallelism from north to south and east to west, are the main concerns of the various vegetation maps developed in the context of the Himalaya, in Nepal and elsewhere, such as by Troll⁵⁷ and Schweinfurth.⁵⁸ Such a pattern is also important in terms of the region's glacio-hydrology and associated variations in water sources and availability throughout the region. The rainfall pattern in the eastern Himalaya may affect the snowmelt pattern in the western

50 Schweinfurth, 1957.

51 Troll, 1967.

52 Nakano, 1957.

53 Kawakita, 1956.

54 Kanai, 1966.

55 Dhar and Mandal, 1986.

56 See Nepal Research Centre, 1988, for details.

57 Troll, 1939, 1967.

58 Schweinfurth, 1957.

Himalaya, and this will, in turn, determine the agricultural pattern. But there is a general lack of systematic studies in glacio-hydrology, which affects hydro-electricity as well as irrigation systems, both very serious issues for countries like Nepal.

People and Population

Like the complex physical geography of the region, it is not easy to describe its current cultural, economic and ethnic patterns. The historical development of society in the Himalayan region has been taken up by English,⁵⁹ and he describes the cultural and economic history of the Himalayan region with an emphasis on state formation and the impact of British rule. He has also developed a map showing the maximum extent of the Gorkhali Empire in 1814.

Karan⁶⁰ was one of the earlier geographers to show cultural developments and patterns in the Himalaya. Even though his writings cover the entire Himalayan region, it deals with Nepal quite extensively. Karan's study also depicts the Himalayan region as one where population movement takes place on a wide scale. He says that migration is constantly occurring from rural to urban areas and from urban to urban areas. According to him, there is also a great deal of seasonal migration in this region. Now, migration (both internal and external) studies are popular among geographers, both foreign and local.

Changes in the Himalayan region are described in detail in Karan's other book *Himalaya: Life at the Edge of the World*, co-authored with David Zurick.⁶¹ This book can also be considered an 'environmental history' of the Himalaya since, apart from providing a detailed and quantitative analysis of the changes in the socio-economic and environment aspects of the Himalaya, it also laid stress on balanced development that gives attention to decentralised and local-level planning for development as well as conservation of the

59 English, 1985.

60 Karan, 1987.

61 Zurick and Karan, 1999.

environment.

In recent times, ethnicity and ethnic identity have become prominent following political developments in Nepal. Even though these concepts are studied more by anthropologists and political scientists, geographers too have a role to play because these identities are also based on geographical space or territories. A recent work by Pitamber Sharma⁶² gives an account of the ethnic composition of the Nepali population up to the lowest administrative unit (the village development committee, or VDC), which becomes invaluable in understanding how the ethnic mosaic is shifting in the country.

*Nationalism and Ethnicity in a Himalayan Kingdom*⁶³ can be considered the first book that dealt with various aspects of the then emerging phenomenon of 'ethnicity and nationalism' in Nepal. The book focuses on language and culture as the basic building blocks of this phenomenon while 'region' or 'space' receive little attention. This could be because this aspect is least studied and/or understood in Nepal.

Geographers and mountain environment

The main interest of foreign as well as Nepali geographers has been mountains, mountain hazards and environmental problems along with society and the environment. The geography of Nepal has proved a good basis for formulating theories on mountain environment and development. The high mountains, including the highest in the world, have made Nepal a popular research destination for geographers, both physical and human. Glaciers and glaciology, and the presence of unique flora and fauna also attract researchers. Some of the physical geographers were also adventurers who climbed mountains.

It is difficult to distinguish among the disciplinary backgrounds of researchers conducting research about mountains and mountain societies. However, their contribution to a better understanding of

⁶² Sharma, 2008.

⁶³ Gellner, Pfaff-Czarnecka and Whelpton, 1997.

the geography of Nepal is discussed here on the basis of the subjects they have looked at regardless of whether they were sociologists, anthropologists, economists or political scientists.

Regarding the environment, the book that drew the attention of the world was Eric Eckholm's *Losing Ground*. This book, published in 1976, created worldwide alarm on the condition of the mountain environment of Nepal. His earlier article, 'The Deterioration of Mountain Environment' in *Science*,⁶⁴ had already created a furore among international policy-makers, donors and academics. In that article, he argued that '...there is no better place to begin an examination of deteriorating mountain environments than in Nepal. In probably no other mountain country are the forces of ecological degradation building so rapidly and visibly...'.⁶⁵ He also wrote about the process whereby Nepal was exporting to India the commodity that it could least afford to part with, namely, topsoil, and in the form that India could least afford to receive it—as silt that clogged reservoirs, turbines and irrigation works. These two were the most compelling and trend-setting publications on the mountain environment and its anticipated eco-disaster, while the film *The Fragile Mountain* directed by Sandra Nichols and supported by the World Bank visually presented the impending eco-disasters in the mountain region.

Following the publication of Eckholm's book, donors came to view Nepal as a place where an environmental crisis was impending. The 'Theory of Himalayan [Environmental] Degradation' ensured that the environment received funding priority from donors, and this played a positive role in creating awareness of Nepal's environmental problems. The theory was also considered an intellectually sound one to which even environmentalists were attracted. The environmentalists' main concern was deforestation and its impact on the climate in the form of a reduction in rainfall which could cause deterioration in the mountain environment and society.

The implications of this 'theory' were conceived in a way that af-

64 Eckholm, 1975.

65 Eckholm, 1975, p. 764.

fected the rest of South Asia. While Nepal could demand increased funding from donors for improving the environment in the mountain regions, the inference of the theory was that the carelessness and irresponsibility of a few million Nepali hill farmers have led to massive problems in India and Bangladesh. The blame for flooding and siltation, affecting the lives and property of several millions living in the Gangetic plains in India and Bangladesh, was placed categorically on Nepal. Accordingly, downstream countries could influence developments in the mountains of Nepal, arguing that these have a direct impact on their life and property.

This alarmist theory also led to many studies in Nepal, by geographers as well as others. A World Bank study conducted in the late 1970s concluded that forests accessible to people would be completely destroyed by the end of the century. 'Nepal has lost half its forest cover within a thirty-year period (1950-80) and that by 2000 no accessible forests will remain.'⁶⁶ This prediction, however, did not come true, and by the turn of the century, forest cover in the hills seems to have improved due mainly due to community forestry, even though there are still questions about community forestry's impact on the livelihood of the poorer and marginal households. It is natural that if the condition of resources is improved it will benefit everyone, but the gains of community forestry have gone mainly to households with large land holdings. On the question of donor involvement in community forestry, it was seen in the 1980s and 1990s that the 'forestry sector' did not take loans, but only grants. Initially, the World Bank was also interested in community forestry. It experimented with this approach of forest management in the Tarai, but for some reason it was not successful. There is still debate about whether community forestry is a suitable model of forest management in the Tarai as compared to the hills owing to heterogeneous social composition there.⁶⁷

In any case, the various studies then conducted came to the con-

⁶⁶ World Bank, 1979.

⁶⁷ Adhikari and Dhungana, forthcoming.

clusion that the eight-point scenario discussed in the 'Theory of Himalayan Degradation' cannot be proved from the information available. The cause-and-effect linkages have still been not been fully understood and ascertained.

In a situation of such uncertainty whereby there is great delay in the response to solve problems in the Himalayan region, Thompson et al⁶⁸ argue that more action is needed than more research, which would, in any case, lead to greater uncertainty. They further argue that there is institutional failure in generating knowledge and defining problems and suggest that responses to crises should be based on a synthesis of information or knowledge gained from both hard and soft sciences, in a marked departure from privileging only the hard sciences.

Researchers nowadays base their work on the ways people have coped with and managed their resources, and it has become clear that recent studies do not support the alarmist theory of 'Himalayan degradation'. They do not claim that degradation has not happened or that it is not happening, but they differ in terms of the extent of degradation and causation, and the process of recovery. The extent is said to be of a smaller scale than believed while causation is mainly due to natural reasons, i.e., the continuous process of mountain-building. Causation through anthropogenic reasons is considered to be of lesser significance since farmers know how to redevelop degraded land. In a few cases, it is also emphasised that landslides and erosion make it easier for farmers to reclaim farmland since it becomes easier to develop terraces on land softened by land erosion and landslides. Indigenous systems of resource management, including soil and erosion management, forest management, bio-diversity management and community forestry, have become popular topics in recent times. There are several researches in this regard, and geographers have made significant contributions in these studies.

At a time when the cause of environmental degradation (wheth-

68 Thompson, Warburton and Hatley, 2007 [1986].

er physical or anthropogenic) could not be ascertained in mountain areas, research was also focused on historical trends of resource degradation. It has been argued that even though the population was small in the past political processes were also responsible for deforestation in the mountain areas. This is also true in the case of the Tarai in Nepal, and so, population alone cannot be said to be solely responsible for deforestation.

A critique of past research that emphasised degradation in Nepal has been discussed in detail in *The Himalayan Dilemma* by Jack D. Ives and Bruno Messerli, geographers and development experts. Ives's own contribution is in the field of glaciology and glacial lakes and their impact on downstream river basins and hydropower stations.⁶⁹ Geographers, including geologists, have been responsible for the study of glaciers and glacial lakes in Nepal. Their warning of the bursting of glacial lakes and the resultant flood's impact on hydropower stations and downstream lives has now been taken into consideration, even though not as seriously as warranted. The attention to this process came to the notice of planners and policy-makers after the Namche hydropower station was swept away by the bursting of the glacial lake dam in Langmoche glacier in 1985.

Political ecology

Political ecology has gained prominence mainly because of the work of geographers who studied resource management, and studies on Nepal have also been used to strengthen this concept. Political ecology essentially means the relationship between resource management practices and policies (solving resource management problems) and the state and its functions. As the state and its agencies emphasise the interests of the ruling class, the definition and recognition of resource management problems depend on the interests of the politically influential class which often is also the wealthier section of society. As a result, resource management practices generally tend to favour those with access to political power, and

⁶⁹ Ives, 1986.

often adversely affect individuals who actually depend on natural resources for a livelihood.

British geographer Piers Blaikie is one of the leading proponents of this concept. Given his long-standing association with Nepal, Blaikie often uses examples from Nepal to illustrate his ideas. The book that emphasised the concept of 'political ecology' was *Land Degradation and Society* by Blaikie and Harold Brookfield.⁷⁰ In this book, which has a large section on Nepal, they argue that 'land degradation' is a political problem, and cite examples from their study of mountain hazards in the Kakani area. They show that indigenous practices (de-intensification of agriculture, terracing, changes in land use to match land degradation, etc) have been helpful in slope stabilisation as they follow a certain cycle in the repair of degraded areas. Similarly, the study showed that bedrocks in the middle mountains weather easily, and, hence, there is a high incidence of soil formation, which means that farmland will continue to have soil even if erosion rates are high.

The concept of 'political ecology' has also been applied in *Forests, People and Power: The Political Ecology of Reform in South Asia* by Oliver Springate-Baginski and Blaikie as it examines the impact of participatory forestry on livelihoods in the context of Nepal and India.⁷¹ The study has described the circumstances leading to the practice of the 'participatory concept' and has shown that there are perceptible benefits to the conservation of resources but livelihood outcomes are not in favour of the poor and marginalised groups. Many of the previously held assumptions have been challenged in this book. The authors call for treating the population problem differently from the emphasis on seeing it as the main cause of environmental degradation. They argue that the 'population problem is a cause as well as a solution to the environmental problems'. Labour is essential to maintain terraces and plant trees in mountain areas, and where people have been migrating out, the problem of land degradation has been severe.

70 Blaikie and Harold Brookfield, 1987.

71 Springate-Baginski and Blaikie, 2007.

The concept of political ecology has also been emphasised by research done in the 1990s. Blaikie's students have been using this concept to study Nepal's environmental/ecological problems, including community forestry and protected areas. The question often asked is whether these protected areas and the concern with increased plantation have been in the interests of rural people, indigenous groups and minorities who would conserve these resources for their survival anyway, as they have done since time immemorial. Elvira Graner⁷² is another non-Nepali geographer who has used this concept in the study of community forestry.

Development/political economy

Development problems in Nepal have generally been studied by economists, but geographers have also been attracted to the problem of underdevelopment in Nepal. Even though there are not many theories derived from development studies on Nepal, theories have been applied to explain Nepal's underdevelopment. One such book to receive wide attention is *Nepal in Crisis: Growth and Stagnation at the Periphery*.⁷³ This book was based on an extensive study of the western development region consisting of the three zones, Gandaki, Dhaulagiri and Lumbini, and the authors apply the concept of the 'centre-periphery relationship' to explain underdevelopment in Nepal. In their view, Nepal is a small land-locked country facing a crisis on account of its geography; its history as a near-colonial marginal frontier region; and its neo-colonial peripheral relationship to post-1947 India. This theory is partly influenced by the 'dependency theory' postulated by Andre Gunder Frank,⁷⁴ which broadly states that the cause for the underdevelopment of developing countries is their relationships with developed countries.

As in the 'Theory of Himalayan Degradation', *Nepal in Crisis* also visualised Nepal as a place where, in due course of time, there

⁷² Graner, 1997.

⁷³ Blaikie, Cameron and Seddon, 1980.

⁷⁴ Frank, 1967.

would be millions of people suffering impoverishment, malnutrition, fruitless migration and early death. But after about 20-25 years of continuing research, the picture the three authors painted has not come true. One of the reasons for this is again the process of agrarian restructuring as people tried to diversify their livelihood opportunities, one of which is to migrate out of the village for a season, for a short time or temporarily.

Adhikari has argued that the increased injection of remittances into the village economy through certain sections of the society and changes in agrarian systems in the use and cultivation of land and other resources are responsible for the maintenance of livelihoods in the villages.⁷⁵ He also showed that the change in the agrarian system within the villages has been helpful in the redistribution of remittances. As a result, those not receiving remittances also have access to a part of the money coming in and this acted as cash income to buy food and other goods and services not produced locally. Remittances thus earned is from temporary migration. Migration studies until then had focused on permanent migration to the Tarai such as Harka Gurung's controversial 1983 report on hill-Tarai migration and Indian immigration to the Tarai.

Shrestha uses the Marxist approach in explaining why marginal groups in the hills end up being marginal at the destination (Chitwan) in their process of migration.⁷⁶ Rural-rural migration, landlessness and development studies are his interests. His book, *In the Name of Development*, describes the vested interests and unwise use of resources on the part of donor agencies, much of it based on his own experience.

Within the field of development, the attention of geographers is nowadays also focussed on food security, or 'livelihood security'. The general concern of geographers has been the role of political economy/political ecology on food (livelihood) security. Among the geographers, Michael Watt has done seminal research on food

75 Adhikari, 1996.

76 Shrestha, 1990.

security wherein he takes the example of Nigeria to show that political economy as manifested in the destruction of traditional mechanisms and the state's lack of responsibility to create another formal mechanism to secure food for marginal people lead to famine and hunger. In Nepal's case, research on food security has been done by Nepali researchers. Adhikari, in collaboration with Hans-Georg Bohle,⁷⁷ has done some research on food security as this issue has become vital in Nepal because of conflict, low production and other politico-economic reasons.

The role of geographers was also important in Nepal in developing concepts for rural development planning. Rural development as such means development in locations called 'rural' for which it was important to specify the relation or the interaction between the urban and the rural. Somewhat linked to dependency theory, is the 'agropolitan' approach to rural development. This approach assumed that urban areas will suck the resources of rural areas if their interactions were not checked and regulated. As a result, it essentially tried to de-link the relationship between rural and urban areas, and aimed to develop a few essential urban functions in rural areas. This is also called the 'city in rural areas' approach. The concept of small-town development or service centres (which was common in various integrated rural development programmes implemented in Nepal in the 1970s and the early 1980s) also has its origins in this 'agropolitan system'.

E. Publications of journals and their content analysis

Four academic geography journals have been published in Nepal so far but only *Himalayan Review* has maintained continuity since its first appearance in 1968.

The geographical journals published in Nepal are/were:

1. *Himalayan Review*: Published by the Nepal Geographical Society, which was established in 1961, the most recent issue of this

⁷⁷ Adhikari and Bohle, 1999.

journal (Volume 38, 2007) has been devoted to the works of the late Harka Gurung.

2. *Geographical Journal of Nepal*: The Central Department of Geography began publishing this journal in 1978 but discontinued after two years of publication. Shrestha and KC⁷⁸ reported that this journal was internationally recognised, and was one of the top 16 geographical journals at the time.

3. *Third Pole*: Published by the Geography Education Department of Tribhuvan University, it was started in 2000 but has so far come up with only four issues. The first contained a long article (covering over 75 per cent of the issue) on 'geography of religion' by its main editor, which read like an old-fashioned essay describing religious patterns and lacked analysis and geographical interpretations. There is a lack of diversity among the authors contributing to this journal.

4. *The Himalayan Geographers*: It was begun in 2001 in Prithvi Narayan Campus, Pokhara. The articles published in the first issues were related to watershed management, natural hazards, resource management and the like. Four issues of the journal had been published until 2005. This journal covers various developmental issues in Pokhara and its environs.

Himalayan Review is the only geography journal in Nepal to have been published without break. So far (i.e., until 2007), 38 volumes of this journal have been published, with 131 articles and 28 book reviews. An analysis of the articles shows that the maximum (9.4 per cent) are on agriculture, geomorphology, urban studies followed by geographic methods (7.7 per cent), tourism (6.8 per cent), climatology (6.0 per cent), and 5.1 per cent each on the environment, geography general, population and settlement. The minimum (1.7 per cent) are on remote sensing/GIS, social, political and nutrition.⁷⁹ In terms of spatial focus, the maximum (39.3 per cent) are on Nepal in

⁷⁸ Shrestha and KC, 1984.

⁷⁹ Subedi and Poudel, 2002, as quoted in Poudel, 2007.

general followed by the hills (34.2 per cent), other countries (9.4 per cent), mountains (7.7 per cent), geography general (6.5) and the Tarai (3.4 per cent).⁸⁰ Of the total (159) articles published up to 2005 the maximum (82.4 per cent) are research and 17.6 per cent are review articles; only 11.5 per cent of the research articles are contributions by foreign writers.⁸¹ Out of the 131 research articles published until Volume 37, Harka Gurung contributed 10, and of those 10, six are related to physical geography, two to population and one each on tourism and general aspects.⁸²

Harka Gurung had analysed the articles published in the *Himalayan Review* in its first decade (1968-78), while I have looked at the articles published in the journal from then until 2001. Gurung found that in the period of his analysis 45 articles and 16 book reviews were published, while between 1979 and 2001, the journal had published 70 articles. Until 1978, only 25 authors had published their papers in *Himalayan Review*, of whom seven were foreigners and the rest, Nepali.⁸³ The most frequent contributors were Chandra Bahadur Shrestha (6 articles), Soorya Lal Amatya (5), Harka Gurung (4) and Upendra Man Malla (3), while Ratna Shamsheer Rana, Mohan Narayan Shrestha, Sharan Hari Shrestha and R.K. Shrestha had two each. The articles surveyed in the later issues of the journal reveal that there was no particular dominance by any one author, even though Harka Gurung was found to have contributed three articles and one book review, while Pitamber Sharma, Mangal Siddhi Manandhar, Padma Chandra Poudel and Narendra Khanal also figure with a couple of articles each. Because of the emergence of a new generation of geographers it is natural that there is no dominance by any geographer in the later issues of *Himalayan Review*. Most of the articles were by Nepali authors. I counted only three foreigners even though a large number of foreigners were asked to lecture at

80 Subedi and Poudel, 2002, p. 3.

81 Poudel, 2007.

82 Poudel, 2007.

83 Gurung, 1980.

the Society's invitation.

In terms of content, *Himalayan Review* covered a wide range of issues, and also indicated the changing focus of the authors. Of the 45 articles published between 1968 and 1978 and analysed by Gurung, 11 deal with cultural and social geography, 10 with economic geography, and only 7 pertain to physical geography. Systematic analysis of the articles reveals that regional description and planning were most common, followed by urban geography and the theoretical field. The main theoretical aspects covered were methodological aspects in geography and included game theory, stochastic model, diffusion and simulation models. Even though all these articles were concerned with Nepal, one covered a town in India and another two towns in the United Kingdom as well.

Harka Gurung's analysis further revealed that only 4 articles (about 10 per cent) were related to agricultural geography, covering mainly crop distribution, cash crops, and crop combination and factorial analysis of agriculture. Pokhara and Kathmandu were the main focus of articles on geomorphology while two dealt with climatology.

The articles published during the period 1979-1990 concentrated on geomorphology, climatology, natural resources, population studies and urban and regional planning, and, again, the contributors were mostly Nepali. Articles published in the 1990s related mainly to tourism and natural resources management/environment and mobility. Volume 29 of *Himalayan Review* (1998), with 11 articles, was a special issue on tourism. The scope of these articles ranged from air transportation, local impact, tourism for local development, religious tourism and eco-tourism. Even though these articles were based on case studies, they provided a cross-section of opportunities and constraints for tourism development.

It is noteworthy that from 1993 to 1997 there was only one combined issue of *Himalayan Review* (Vols 24-28). This volume contained 10 articles, focussed mainly on resource management, with the use of GIS, analysis of ecological constraints, and the study of landslide processes, indigenous practices of natural resource management,

and functions of market towns and urban centres being the subjects covered. Volume 31 (2000) had an array of articles such as mobility, religious geography, urban problems and resource management.

The regional coverage of these articles is generally limited to the central and western regions with the eastern region covered to some extent. In terms of ecological belts, they cover mainly the hills. Back in 1980, Harka Gurung noted that the Tarai remains terra incognita, but the same pattern has continued in the articles since then. Geographers have overlooked the Tarai since they tend to be more fascinated by hills, slopes and natural hazards and their management, and socio-economic development in the hills and the mountains. Kathmandu has received a disproportionately large attention in these studies while the studies on the mid- and far-west have remained sparse. Glaciology and mountain-formation have received less attention, and have been the concern solely of foreign geographers.

Apart from publishing the journal, the Nepal Geographical Society has also been organising a number of activities to expand the teaching and knowledge of geography through events such as seminars and interactions with Nepali and international scholars during which disciplinary boundaries have sometimes been crossed. Since 2000, the Society has been awarding medals, cash prizes and certificates to the best geography students in the BA and MA programmes.

F. Geography in Nepal – foreign versus local: Some critical comments

In the preceding sections we saw that geographical studies on Nepal have been going on for quite some time, and geography has been established as an academic discipline in the university system since 1947. As in the West, geographers in Nepal are not sure exactly which of the two broad fields – natural science or social science – they belong to. They still consider geography to be a ‘bridge between natural and social science’ with spatial analysis as its methodology and focus.

The contribution of local geographers has been mainly in empirical research. The research done so far has been aimed at providing solutions to existing local and national problems. Theoretical research is still lacking although some geographers have taken new approaches (as discussed earlier) in the study of geographical phenomena. But this was usually done while studying in foreign universities. Considering the resources provided to Nepali researchers, however, their output is certainly high, and their in-depth empirical work has also been very fruitful in the understanding of society. As a matter of fact, the information generated by Nepali geographers has been of invaluable use for the development process of the country, and for foreign researchers to understand the ground situation as well.

The interest in Nepal for foreign geographers usually stems from its romantic life and environment. As a mountainous country with some of the tallest mountains and high-altitude glaciers, Nepal has also become a place of study for geographers to understand the mountain system. The peculiar nature of the country has mainly attracted physical geographers but a discussion of their findings is usually absent in Nepal because of the complexity of the subject for lay people. But, it is also true that physical geographical research is generally lacking in policy relevance since the problems they highlight (like land degradation, glacial lake formation and flooding) cannot be resolved immediately. It is for the same reason that physical geographical research does not attract much funding, and only committed university academics have carried out such research.

Among Nepali geographers, there are very few who are interested in physical geographical research. Even though Nepal is known to be a mountainous country, Nepali geographers have contributed very little to the study of high-altitude phenomena like mountain ecology, glaciology, climate and the like. Nepali geographers have even shied away from studies on high mountain cultures and societies, and whatever research there is has come mainly from foreign geographers and that, too, from those attached to universities. One of the main reasons for this lack of interest among Nepali geogra-

phers is that such research requires a lot of travelling and long periods of stay at high-altitude areas, which are harsh and inhospitable. Such research also involves a lot of expenses. And since this type of research does not have an immediate bearing on people's lives, securing finances is always a problem.

Even in the middle mountain region, with its relatively easier access, it is foreigners who have conducted research on the physical aspects although a few Nepali geographers such as Harka Gurung and Narendra Khanal have worked on geomorphology in the middle mountains and the Churia range. The study of the Tarai belt has received very little attention from physical geographers. But, in recent times, research on natural hazards, involving perspectives from both physical as well as human geography, has become more common.

The main contribution of local geographers has been on the human side and on development issues like resource management, migration, rural development, urbanisation and small town/market development. It is not a coincidence that these are also issues of general concern to donor agencies. The Nepali university and government systems do not usually provide research funds, and even in the few cases they do, the funds are meagre. Accordingly, researchers depend on foreign development agencies for funds, which are available only for areas considered important from the perspective of the concerned donor.

Foreign researchers in Nepal usually arrive with a notion of the country as underdeveloped and poor and attracted by the romantic image of Shangri-la or the land of the brave Gurkhas. Romantic ideals that brought geographers here, especially physical geographers, are also related to mountains, and Mount Everest, in particular. Local researchers, who are also part of the 'objects' studied by foreigners have not challenged their research and the concepts developed by them. By and large, they have not been able to develop alternative views on generalised ideas developed by foreign researchers. Notable exceptions are the research on erosion and land management in Kakani by Man-

andhar-Gurung⁸⁴ and on migration by Subedi.⁸⁵ But many aspects of universalism have not been taken up by local researchers even though they are in a better position to do that. For instance, no local researcher has developed the 'mental mapping' of the country, or any other place or space in Nepal. The focus has been only on scientific mapping.

New opportunities for taking up new concerns in geography have arisen in recent times. Activities such as collaboration with other universities, exchange of faculty and students, regular seminars and orientations, workshops and the like have been helpful in the transfer of knowledge of new developments in geography in other countries. And for the near future such exchanges and collaboration seem to be the only way to enhance the theoretical underpinnings of geographical research in Nepal.

In recent times, geographical research has also been conducted in areas like medical geography, natural hazards and their management, bio-diversity, the environment, tourism and population dynamics. The emphasis of the donors on these subjects means that funding has become available in these areas, and this has led to further studies and research. A new department, on population studies, has already been established at Tribhuvan University through World Bank funding.

Areas which have more or less been ignored include methodological developments, theoretical issues and biogeography. While Nepali researchers have totally ignored these aspects, there is little interest from foreign geographers either since they relate to Nepal only. Biogeographical research has been done to some extent in the study of the prehistoric society of Mustang. Outside Nepal, biogeography has been helpful in studying the environmental or natural history of a place, and has been used to reconstruct a vegetation history of a place. But this has not been applied in the context of Nepal.

While the above subjects need emphasis in general it is the Tarai that remains quite ignored. As mentioned earlier, even though Ne-

84 Manandhar-Gurung, 1988.

85 Subedi, 1993.

pal itself did not figure in 'area studies programmes', western geographers who came here for research did so because of the mountain environment and unique culture and the Tarai did not attract much of their attention. It is with regard to development problems such as migration, agriculture, irrigation, forest development or degradation that the Tarai has been attracting research from geographers. The planned settlement in the Tarai, mainly in the Chitwan and Rapti valleys, and resettlement of the landless and squatters have also been studied by geographers, both foreign and local.

The attention of geographers should be focused more on contemporary issues. At present, ethnic politics, identity and territory have become prominent, but there is still little understanding of these issues. Geographers, particularly Nepali geographers, could play an important role in shedding light on these issues because territory (e.g., homeland) is considered the main basis for identity and for the restructuring of the state. There is a need to discuss the concepts of home and homeland in the context of Nepal. A good start has been made by Sharma,⁸⁶ but more needs to be done in this area.

86 Sharma, 2008.

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