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# Dissertation Abstracts

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## V. DISSERTATION ABSTRACTS

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+ADHIKARI, R.B.

--M. Phil.

--University of Bradford [ England ], 1981

TITLE: "Application of Social Cost Benefit Analysis in Nepal"

\*ALI, Thair

-Ph.D.

-The University of Rochester, 1983

TITLE: The Burusho of Hunza: Social Structure and Household Viability in a Mountain Desert Kingdom

Order No. DA8311485

This study of selected aspects of the social structure of the Burusho of Hunza in northern Pakistan focuses on the relationship between civic status and household organization and develops an analysis of the structural factors which govern household viability under a given set of ecological-economic conditions.

Burusho social and economic organization is subject to severe ecological constraints. The valley which they inhabit, like the adjacent valleys, is a stony desert, steeply inclined and extremely rugged. Precipitation is negligible, while residence and cultivation are only possible on tracts of land far above the Hunza River. In consequence, Burusho settlements are oases utterly dependent upon a network of irrigation channels which bring water from distant glaciers and springs.

This study is divided into two parts. The first part describes the external systems of relationship in which households are embedded. Civic status among the Burusho is a compound of jural rights, duties and obligations defined and allocated in terms of the principles of kinship/descent on the one hand and kingship on the other. These principles are descriptively isolated through an examination of concepts of relatedness and social classification. The analysis then proceeds to show how the interaction between these two principles determines the structure and composition of corporate groups, particularly the village, the neighborhood, the clan and the lineage.

The second part of the study elucidates the household system itself. The Burusho household is conceptually and institutionally differentiated from the family; accordingly, the constructs of

household are analytically distinguished and contrasted to those of marriage and interpersonal kinship. The rules of household formation, management and devolution are formulated in light of these considerations, and the effects of the rules are indicated with reference to the processes of the domestic developmental cycle and to situational adjustments necessitated by imbalances between household personnel and resources. Functional interdependencies between the household and other parts of the social system are then described. The remainder of the study examines the ways in which household viability is enhanced by forms of inter-household collaboration. Material is also presented illustrating the role of the household as an organizational unit in the wider community.

**\*BAJRACHARYA, Deepak**

--D. Phil, Science Policy Research

--University of Sussex, 1981, 395 pp.

TITLE: "Implications for Fuel and Food Needs of Deforestation: An Energy Study in a Hill Village Panchayat of Eastern Nepal"

Copies available through the British Library Lending Division, Boston Spa, Yorkshire, England, shelfmark no. LD:D44022/82.

**\*BANDYOPADHYAY, Tarapada**

--Ph.D.

--University of Calcutta, 1978

TITLE: "Geography of Sikkim: A Regional Analysis

**\*BOGGS, Robert Kirby, Jr.**

--Ph.D.

--University of California, Berkeley, 1982, 501 pp.

TITLE: "The Political Basis of Socioeconomic Development: The Case of Nepal"

Order No. DA8312763

This study starts with the premise that although political and economic development are intimately interdependent, the poorer a country the more important is effective political organization as a precondition of economic growth. An optimal, nine-phase sequence of political development is defined in terms of changes in the quantity and distribution of power in the hierarchic, sectoral, and spatial dimensions of a society. Criticisms that this power-based paradigm does not recognize sufficiently the importance of democracy, equality, revolution, values, and international stratification in development are examined and rejected.

The remaining major portion of the study demonstrates the utility of this sequential model in an analysis of the development problems and prospects of Nepal, one of the world's poorest countries. It reviews Nepali history through the perspective of the model, reinterprets events since 1950, appraises present government development policies, uncovers some of their unintended and regressive consequences, and recommends measures better suited to Nepali conditions. These recommendations involve retrenchment in several areas of public development activity and the building of several new institutions, including a National Development Service and a restructured National Planning Council.

**\*BROWN, Kevitt Deane**

--Ph.D.

--Cornell University, 1983, 165 pp.

TITLE: "Studies in the Evaluation and Improvement of Cold Tolerance in Rice"

Order No. DA8309499

Studies were conducted to evaluate various aspects of the international rice cold tolerance breeding program of the International Rice Research Institute (IRRI). First, a method is presented using the 1978-1979 data from the International Rice Cold Tolerance Nursery (IRCTN) to identify optimum selection sites for consistent discrimination of genotypes among homogeneous groups of environments. Nursery locations were classified by cluster analysis on environmental and climatic variables, then analyzed by linear regression of cultivar performance at each site on mean cultivar performance over all sites to identify the optimum selection environment for each cluster. Second, the results of this method applied to the IRCTN together with a survey of IRCTN cooperators are given. Delay in heading date (Hd) and spikelet sterility (St) were found to be the most common and important effects of low temperatures on rice. An efficient international scheme of testing for these traits is discussed. Kathmandu, Nepal was chosen as the optimum selection environment for Hd evaluation worldwide. Entries could be divided into maturity nurseries in Kathmandu, then sent to the appropriate optimum selection site for St evaluation within each sterility-maturity cluster. Third, IRRI's current field cold tolerance testing site in Banaue, Philippines was evaluated on the basis of heritabilities and correlations of traits in several nurseries to determine ways of improving selection there. One suggestion was to de-emphasize breeding and selection in the wet season in Banaue because of its variable and extreme climatic conditions. In general, Banaue was found unsatisfactory for screening of cold tolerance traits in both seasons with respect to other IRCTN sites. Finally, farmer surveys and yield and fertilizer trials were conducted in Banaue to evaluate the introduction and adoption of improved, cold tolerant varieties in that traditional society. Resistance was found to the adoption of these varieties which farmers considered inappropriate to their socio-economic and agricultural system. Cold tolerant varieties which are improved for earliness, tillering capacity, and productivity under the traditional low fertilizer management system without greatly altering the indigenous plant type, are expected to be more widely adopted by Banaue farmers.

**\*CHANDLER, Charles Groce**

--Ph.D.

--The University of Texas at Austin, 1981, 229 pp.

TITLE: "Appropriate Technology for Planning Hydroelectric Power Projects in Nepal: The Need for Assumption Analysis"

Order No. 8119269

Supervisor: Gerard A. Rohilch

The study focuses on the project development process for hydroelectric project planning in Nepal. Chapter I describes the contrast between the vast potential for hydroelectric power development in Nepal and the current energy shortage within the country, not only for electricity, but for firewood and other fuel sources as well. Chapter II explores some of the unknown factors facing hydropower project planners in Nepal, where data for hydrologic, geologic, environmental, and sociological project components are lacking. The chapter also examines institutional and fiscal factors which constrain the planning process. Chapter III describes the critical role of assumptions in the project development process, and details the stages that a project goes through as it is planned. The chapter introduces the concept of assumption analysis as a technique for project planning, listing the potential conflict between the assumptions of foreign consultants and the host-country users of project outputs as an ingredient in the project's success or failure. Chapter IV demonstrates the mechanics and usefulness of assumption analysis through an Assumption Analysis Chart, which shows the interaction among project objectives, project alternatives, project assumptions, and the project development process. Assumption analysis techniques are expected to be useful among bilateral and multilateral aid donors servicing less developed countries.

**\*CHATURVED, S.K.**

--Ph.D.

--Meerut University [India], 1979

TITLE: "Indo-Nepal Relations in the Indian Context of International Relations and Domestic Policy"

**\*DAHAL, Dilli Ram**

—Ph.D.

—University of Hawaii, 1983, 375 pp.

TITLE: "Poverty or Plenty: Innovative Responses to Population Pressure in an Eastern Nepalese Hill Community"

Order No. DA8319822

The present study is designed, in part, to fill the void of local-level research on population and research problems in Nepal. Relationships which will be examined include: (1) population size and growth; (2) resource availability; and (3) adaptive strategies at the individual, family and community levels. This study proceeds from the assumption that the affects of population growth need not always have negative consequences for all people or communities; it may be possible to consider the expansion of a people's resource base as a result of growing population in a positive light.

The population chosen for analysis, called "Pipalbote Cluster" was selected from Barbote Panchayat, Ilam District.

It was found that population had increased over time and that the historical resource base no longer provided an adequate subsistence. Yet, it was clear that people had developed coping strategies that adapted to their changing situation.

Among these changes were: (1) intensification of agriculture; (2) adoption of cash crops; (3) increased use of marginal lands; (4) the development of other sources of income (trade, army service, white collar jobs, and wage labor); (5) out-migration; and (6) various kinds of fertility control.

Multiple working hypotheses were developed from the models of Malthus, neo-Malthusian writers, Boserup and Brookfield to analyze the complex relationship between resources and population. Malthus views on a static resource base proved inadequate to explaining a people's changing adaptation. Boserup's model of agricultural intensification provided the starting place from which to construct an adequate explanation for local processes. In the course of refining the Boserup model, it was found necessary to consider complex factors of environment, technology, and social organization as they interact to both restrict and facilitate agricultural intensification in Pipalbote Cluster.

This study makes a contribution to the still scarce body of demographic work in anthropology in general, and Nepal in particular. Also, the mechanisms by which populations adjust to changing resource situations are still only tentatively known and the need for solid demographic data and local level studies for the sake of development programs in the Third World is obvious. This study from Nepal is intended as such a contribution.

**\*DAR, Mohamad Hamza**

—Ph.D.

—University of Kashmir [India], 1979

TITLE: "Promotion of Learning in Kashmir: The Sultan Period"

**\*DeVOE, Dorsh Marie**

—D.S.W.

--University of California, Berkeley, 1983, 188 pp.

**TITLE:** "Survival of a Refugee Culture: The Longterm Give Exchange Between Tibetan Refugees and Donors in India"

Order No. DA8328769

This dissertation analyses the relationship between aid givers and one longterm refugee group, the Tibetans in India. A major assertion of the study is that the key to understanding refugee recipients of aid lies not only in cultural information about the group or theories about refugees in general, but rather in an analysis of their association with donors over the gift of aid.

Field work for this study was conducted in various Tibetan refugee settlements and communities in India, between December 1980 and December 1981. The author used several anthropological methods of conducting research in the field, including participant observation, key informants, formal and informal interviewing of various western donors and Tibetan recipients of aid.

In this study, the author suggests that there is an unusual fit between a small group of western donors and Tibetan recipients who have developed a social bond through the gift of aid. Importantly, the Tibetan refugees engage in gift exchange with western donors on the same principles and understanding of exchange that they exercised in old Tibet. Furthermore, an intermediary group, the Tibetan middle level, has arisen within the exiled community that acts on behalf of Tibetans while simultaneously satisfying donor's expectations of returns for their help. Stressing the crucialness of reciprocity in refugee aid, the author concludes that the twenty-three year aid relationship between Tibetan refugees and western donors is unusually successful because the Tibetan middle level has devised endearing ways to return gifts.

**\*DHANALAXMI, Ravuri**

—Ph.D.

—Berhampur University [India], 1978

**TITLE:** "British Attitude to Nepal's Relations with Tibet and China, 1814-1914"

**\*DHARAM, Vir**

—Ph.D.

—Meerut University [India], 1979

**TITLE:** "Social Background of College Students in Nepal"

**\*FRENCH, Walter Thomas**

—Ph.D.

—City University of New York, 1983, 763 pp.

**TITLE:** "Northern Naga: A Tibeto-Burman Mesolanguage" (Volumes One and Two)

Order No. DA8319765

Adviser: Professor Edward H. Bendix

This study in comparative historical linguistics deals with the languages of the Northernmost of the Nagas of the Assam-Burma frontier: those which have been called "Nagish" (Shafer) or "Konyak" (Benedict). Using data from seven dialects — Yogli, Moshang, Nocte, Wancha, Wakching Konyak, Phom, and Chang — it reconstructs the phonological system and basic lexicon of the Tibeto-Burman mesolanguage from which these dialects are descended, which I call Northern Naga (NN). Lexical comparison is employed to construct models of the diversification of this mesolanguage into its daughter languages and of its relation to other Tibeto-Burman nuclei.

NN is noteworthy for preserving distinctions which must be reconstructed for Proto-Tibeto-Burman (PTB), but which have been lost in many Tibeto-Burman languages: it distinguishes consonantal prefixes, manner-series of initial stops, initial consonant clusters, four position-classes of initial nasals, and vowel length in both open and closed syllables. It is thus an important step toward refining the accuracy of the PTB lexicon. Most PTB initials and rhymes are represented by distinctive correspondences in Northern Naga; in some cases, further distinctions, suggesting an expansion of the PTB inventory, are required.

The results of the lexical comparison demand clinal models of the relations among the languages compared. These models are interpreted as reflecting retardation in the replacement of cognate forms within communicatory fields embracing related but already separated languages.

When this factor is discounted, the comparison shows that the Northern Naga languages fall into two subgroups, with Wancho affiliated with the languages spoken to the south of it rather than with those to its north as previously suggested. Following this split, the language ancestral to the northern subgroup (Yogli, Moshang, Nocte) re-entered a communicatory field with Jinghpaw.

Externally, the comparison demonstrates that, as Shafer and Benedict had suggested, NN is more closely related to Bodo-Garo than to any other Tibeto-Burman nucleus, but that it is almost as closely related to Jinghpaw. It emphatically supports Benedict's hypothesis of a Bodo-Garo-Konyak-Kachin "supergroup", implying that these languages comprise a discrete division of Tibeto-Burman.

**\*GOSWAMI, Dulal Chandra**

—Ph.D.

—The Johns Hopkins University, 1983, 199 pp.

TITLE: "Brahmaputra River, Assam (India): Suspended Sediment Transport, Valley Aggradation and Basin Denudation"

Order No. DA83-2656

The Brahmaputra, a major river of the world, carries an average annual suspended load of 13,000 ha.m (344.5 million metric tons) at Pandu, Assam (India). A suspended sediment budget, based on the principle of continuity, provides a basis for estimating changes in storage of sediments along successive reaches of the Brahmaputra river in Assam for the period 1971 through 1979. The Assam reach as a whole, 607 km. from Ranaghat to Jogighopa, registers a net gain of about 79,000 ha.m of sediment equivalent to 70% of the total suspended sediment inflow into the reach. Distributed uniformly over the channel, this volume of sediment would raise the bed by about 16 cm. Expressed as a percentage of the change in storage for the different reaches, the computed errors due to sampling variability generally lie within about 14 percent. They do not appear to be large enough to affect the conclusions drawn from the suspended load budget.

An alternative method based on measurement of cross-sections (end-area method) is used to evaluate aggradation of the channel in a 145 Km reach of the Brahmaputra river between Kobo and Bessamara for the period 1971 through 1977. The study indicates degradation of the channel by about 21 cm. A suspended load budget in this reach for the same period also suggests degradation, but the estimated amount is somewhat lower, 15 cm. Measurements on the limited number of cross sections for the 1951-71 period suggest a net aggradation of 1 to 2 meters during that period. Thus degradation of 21 cm from 1971 to 1977 has removed a small fraction of the volume of sediments deposited during 1951-1971. A similar trend is indicated by the specific gage-discharge relationship at Pandu near Gauhati.

Sediment rating curves are used to derive suspended load estimates for the periods not covered by the existing data base. Exponents of the power functions relating water and sediment discharge range from 1.44 to 4.05, the latter representing a Himalayan tributary in an area of steep slope, heavy monsoonal precipitation and high sediment production. Estimates of bedload transport in the Brahmaputra at Pandu by different equations give widely varying results. Based on comparability of particle sizes and consistency, the estimate of 5-15 percent (of total load) given by Laursen's (1958) formula seems to be a reasonable one.

The present rate of denudation of the eastern Himalayas is estimated to be 73 to 157 cm/10<sup>3</sup> years on the basis of suspended load in trans-Himalayan rivers. The average rate for the last 2-3 million years,

however, is  $3 \text{ cm}/10^3 \text{ years}$  based on the aluvial fill of the Brahmaputra valley in Assam, sediment yield of the Himalayan rivers, and a transport to deposition ratio of 1:0.7 obtained from this study.

**+GYAWALI, Saroj K.**

—M.A., Agricultural Development Economics

—Australian National University [Canberra], 1977

TITLE: "Rural Unemployment in Nepal: The Chitawan Valley Experience"

**\*HADA, Kumar Prasad**

—M.A., Agricultural Development Economics

—The Australian National University, 1978

TITLE: "A Study of Farm Household Income and Resource Allocation in the Eastern Hills of Nepal (with Special Reference to Barbote Panchayat)"

**\*KARKI, Dan B.**

—M.A., Agricultural Development Economics

—Australian National University [Canberra], 1979

TITLE: "The Impact of the Supervised Sajha (Cooperative) Program on the Credit Function of the Sajha Societies: A Case Study of Nepalese Cooperatives"

**\*KHADKA, Shyam Sunder**

—M.A., Agricultural Studies

—University of Queensland [Australia], 1979

TITLE: "A Study of Factors Associated with Diffusion and Adoption of High Yielding Rice Varieties (H.Y.V.s.) in Nawalparansi District of Nepal"

**+KIESEWETTER, Willi**

—Dr.

—Universität Mainz, 1980, iii, 152 pp.

TITLE: "Geländebedingte Monsunklimate im Himalaya: Beispiele aus dem Tal von Kathmandu und der Region Darjeeling. [German: Monsoon climates in the Himalayas, conditioned by the terrain: examples from the Kathmandu Valley and the Darjeeling region]"

**\*KOUL, Ram Krishen**

—Ph.D.

—University of Kashmir, 1979

TITLE: "The Constitutional History of the Jammu and Kashmir State, 1846-1966"



**\*MATHEMA, Sudarshan Bhakta**

--M.A., Agricultural Development Economics

--The Australian National University, 1977

TITLE: "Development of Hill Farming in Nepal"

**\*MATTOO, Abdul Majid**

--Ph.D.

--Aligarh Muslim University, 1978

TITLE: "Subas of Kashmir Under the Mughal with Special Reference to Administration of Society"

**\*McKEWIN, Alison Mary**

--M.A.

--The Australian National University, 1978

TITLE: "The Tanka of Ishikawa Takuboku"

**\*NELSON, DeVon O.**

--Ph.D.

--The University of Wisconsin - Madison, 1981, 268 pp.

TITLE: "Evaluation of a Land Classification in Nepal"

Order No. 8120323

Supervisor: Professor Gerhard B. Lee

An inventory of watershed condition was made in Nepal to provide information for watershed planning. A "Land Classification" approach was used in which land units at four levels of mapping intensity were delineated, described, and interpreted. This inventory was made in connection with a Food and Agriculture Organization of the United Nations project in Nepal whose goal was to help the Nepalese government develop a watershed management program.

A review of the literature on the land classification approach to natural resource inventory showed it to be a rapid, inexpensive means to gather natural resource data at low intensity over large, remote areas of land. This description was confirmed by experience in Nepal with this inventory. Major contributions to land classification have come from Canada and Australia. Federal land management agencies in the United States have recently begun using land classification methods.

The objective of this study was to evaluate the usefulness of land classification units to assess watershed condition. The units studied were eleven regions in the Middle Mountain Zone of Nepal. Land units were defined at four categorical levels; namely zones (5 mapped), regions (22), land systems (75), and landtypes (220 identified and described but not mapped). Zones were closely tied to major elevational and climatic differences. Regions, subdivisions of the zones, were based on differences in local climate, drainage pattern, and geologic structure. Land systems were refinements of regions. Landtypes mostly represented different slope positions within the land system. Field studies were carried out to check the accuracy of mapping and to obtain additional resource information.

In the study, aerial photographs of the Middle Mountain Zone were interpreted to determine the extent of the three major cover types (forest, brush, and agriculture) and the number of landslides associated with each. Landslides were used as indicators of watershed condition. The brush cover type was found to be associated with large numbers of landslides. The variation in the extent of this cover type was

less within the regions mapped than between the regions in the Middle Mountain Zone. A boundary test using cover type data showed the regions to be distinct. It was concluded that the Ecological Regions were valid land units for determining watershed conditions in this zone.

**\*OKWUDISHU, Chris Ogochukwu**

—Ph.D.

—Southern Illinois University at Carbondale, 1983, 133 pp.

Order No. DA8326555

Major Professor: Dr. Charles B. Klasek

TITLE: "A Cost-Effectiveness/Cost-Benefit Analysis of the Educational Radio in Developing Countries: The Nepal Experience"

Problem. The purpose of this study was to investigate the application of cost-effectiveness/cost-benefit analysis techniques to educational radio projects in developing countries using the Radio Education Teacher Training Project in Nepal (RETT) as a case study.

Research Design. Data for this study was based on the first full year of operation (1981-82) of the RETT. For that year, a total of 1,217 primary school teachers were involved in the project and a total of 165 hours was broadcast. Four main cost components — Central Project Costs, Production Costs, Transmission, and Reception Costs (Jamison, Klees & Wells, 1978) were used in the data analysis. The following cost function was used to calculate total cost, average cost, and per-student-hour cost" Total Cost =  $TC(N,h) = F + V_nN + V_hh$ , where N = number of students in the system, h = number of hours broadcast, F = fixed costs of the system,  $V_n$  = variable costs per student, and  $V_h$  = variable cost per hour. Three social discount rates — 0 percent, 7.5 percent, and 15 percent were used in the calculations.

Findings. Using a 7.5 percent social discount rate, it was found that the RETT cost \$240 per-student-per-year and \$1.46 per-student-hour. The Campus-Based Teacher Training Program, on the other hand, was found to cost \$329 per-student-per-year, or 27 percent more than the RETT.

**\*PARBHAKAR, Naresh Chander**

—Ph.D.

—University of Jammu [India], 1978

TITLE: "Development of Road Transport in Jammu and Kashmir State Since 1947"

**RABIA, Caroline D.**

—M.A.

—California State University, Hayward, 1982

TITLE: "The Effects of International Tourism in Kathmandu Valley" (cited in the Bulletin of Asian Geography)

**\*SCHEIBLER, G.**

—Dr. Sc. Tech.

—Eidgenössische Technische Hochschule Zürich, 1982, 323 pp. In German

TITLE: "Bauen in Entwicklungsländern am Beispiel Bhaktapur (Building in developing countries as seen in the example of Bhaktapur)"

A contribution to the discussion of the problems of "appropriate technology", building in a historical context" as well as the "transfer of technology."

By means of a case study of a small town in Nepal a methodical way of completely covering and finding a solution to the problem is set forth to illustrate the current state of the problems of building in Third World Countries. The treatise deals with the following problems:

- How much of the available traditional architecture and its building methods is it sensible to take over or improve for the inhabitants of Bhaktapur of today?
- To what extent must appropriate technology be imported or newly developed?
- What consequences can be foreseen therein for architecture and town-planning?

The treatment of these problems takes place in three main chapters, a basic part, an analytical part and a synthetic part. This is preceded by an expose and concluded by a summary.

The author deals thoroughly with the influence of social epoques on the types of buildings and the residential areas that arose out of these. As a new aspect he includes bulding and material techniques as a basis for a careful description of the material and constructive components of the building culture including the principles and traditions of the trade.

An outline of the customary building technique is followed by a thorough analysis of the present day aspects of building in Bhaktapur. Factors of construction costs and functions are also the subject of examination. Current tendancies in construction are examined and analysed with respect to potential dangers, in particular negative developments in town-planning. The compilation of all the areas of construction problems shows that the root causes are to be found in several fields of study.

In the fourth chapter suggestions for solutions based on material and construction technique as well of an architectural and town-planning nature are developed.

The technical solutions put forward are along the lines of appropriate technology.

Parallel suggestions concerning the sphere of problems of construction in the historical context are developed and discussed.

The treatise closes with a summary of its findings and with recommendations for general application to building in developing countries as well as specifically referring to the local situation.

**\*SCHULER, Sidney Ruth**

—Ph.D.

—Harvard University, 1983, 275 pp.

TITLE: "Fraternal Polyandry and Single Women: A Study of Marriage, Social Stratification and Property in Chumik, A Tibetan Society of the Nepalese Himalayas"

Order No. DA8403069

This thesis is an ethnography based on research conducted in "Chumik", a small Tibetan society in Mustang District, northcentral Nepal, from 1976 to 1979. It focuses on an unusual demographic phenomenon, a marriage pattern which appears more akin to those of pre-industrial Western and Northern Europe than to South Asia and the majority of the less developed world. Twenty to twenty-five percent of all Chumikwa women spend their lives unmarried, as do 10-15 percent of Chumikwa men.

Demographic findings revealing a high incidence of nonmarriage are interpreted by examining the social and economic context in which this occurs. The study identifies a complex of cultural phenomena linking the economic system with patterns of nuptiality. Among these, fraternal polyandry and preferential primogeniture are traditional means by which families avoid division of land and limit marriage and, by extension, legitimate reproduction. These practices also enable landed families to hold onto the labor of grown children and siblings. Unmarried women and others whom the system defines as peripheral are attached to landed households as low status family members, semi-

dependents in separate households, or as hired laborers. They are conveniently present when needed, during the agricultural peak season, but generally do not expect year-round support.

The study points to a tendency in much of the literature on Tibetan societies to inflate the status of Tibetan women in counterpoint to Hindu women. While this tendency is not without basis, in view of behavioral norms and women's potential for economic independence and control, it is also misleading. As in most Hindu societies, Tibetan inheritance systems are predominantly patrilineal, and women's main access to property is through men. Wealth is an important source of social status as well as material well being, and marriage and legitimate reproduction are socially valued. Hence, the life of unmarried women in such societies is often a difficult one. The phenomenon of widespread nonmarriage, this thesis suggests, and its implications regarding the status of women in Tibetan society, cannot be understood without taking into account social stratification as it affects access to property, labor, marriage, and legitimate reproduction.

**\*SHARMA, Dewand Chand**

--Ph.D.

--University of Jammu [India], 1978

TITLE: "Social and Economic History of Kashmir, 1819-1846"

**\*SHUKLA, Virendra**

--Ph.D.

--Patna University [India], 1979

TITLE: "Indo-Sikkim Relations"

**\*SPERLING, Elliot Harris**

--Ph.D.

--Indiana University, 1983, 294 pp.

TITLE: "Early Ming Policy Toward Tibet: An Examination of the Proposition that the Early Ming Emperors Adopted A "Divide and Rule" Policy Toward Tibet"

Order No. DA8321394

It has been generally accepted by Tibetologists that the early Ming court adopted a "divide and Rule" policy toward Tibet. Ming Ch'eng-tsu in particular is associated with this thesis. It is believed that the titles and honors which he bestowed on the eight Tibetan hierarchs who are given special prominence in the Ming-shih were designed to promote fragmentation among them. In this dissertation both Chinese and Tibetan primary sources have been examined to see if there is any evidence to show that such a policy was formulated at court. The results reveal no such evidence, but other reasons which explain Ch'eng-tsu's interests in the Tibetan hierarchs are brought to light. It is found that the emperor had definite religious interests in three of the hierarchs, and maintained secular ties with the others. His religious leanings in this matter derived from his favorable attitude toward Buddhism. His secular ties to the hierarchs were centered around the trade in Tibetan horses and the need to keep the routes carrying the trade secure.

**\*TAMANG, Kirti Man**

--Ph.D.

--Michigan State University, 1982, 138 pp.

TITLE: "The Status of the Tiger (*Panthera tigris tigris*) and Its Impact on Principal Prey Populations in the Royal Chitawan National Park, Nepal"

Order No. DA8303861

The status of the tiger (*Panthera tigris tigris*) and its impact on the principal prey populations in the Royal Chitawan National Park, Nepal, were studied between December 1973 and May 1977. A total of nine tigers and twenty ungulates of four species were immobilized using the Parke-Davis drug CI-744 and fitted with radio-transmitter collars.

Methods used for the immobilization, capture and handling of tigers and ungulates are described. A traditional "ring" method used for hunting of tigers by royalty in Nepal was modified for the purpose of darting. Trained domestic elephants were used to drive the tigers which were lured to live buffalo baits. They were then eased by carefully-handled elephant crews into a funnel-shaped white-cloth fence and near the trees in which dart shooters were stationed.

A line transect method was used to estimate the numerical and biomass densities of ungulates in all vegetation types. Herd composition counts were carried out on all ungulates to determine herd size, sex and age ratios, and other prey population characteristics. Home range sizes also were estimated for the tiger and its principal prey animals.

The relative importance of various ungulates in the tiger diet and prey preference ratios were determined by species and sex. In order of the total biomass consumed, the sambar (*Cervus unicolor*), hog deer (*Axis porcinus*), chital (*Axis axis*), wild boar (*Sus scrofa*) and barking deer (*Muntiacus muntjak*) were the principal prey. These species in the order that they evidently were preferred as prey by tigers was sambar, hog deer, wild boar, barking deer, and chital. A comparison of kill percentages and availability by sex indicated males and sambar, chital and wild boars were sought out as victims of tiger predation in preference to females.

The resident tiger population was estimated at 5 adult males and 16 females, an average density of one per 43 km<sup>2</sup>. An estimated total predation of 7 percent of the standing crop indicates that tiger predation does not limit the prey populations in the park.

Sex and age proportions, reproductive potential and mortality factors have been discussed. Home ranges, territoriality, defense of territory by tiger are examined. Intraspecific competition seems to be the factor limiting tiger density.

**\*THAPA, Madhab Bahadur**

—M.Sc.

—University of Melbourne [Australia], 1979

TITLE: "A Critical Appraisal of the Terai Forest in Nepal for the Rationalisation of Management and Marketing of Timber"

**\*TIWARI, Naresh Kumar**

—Ph.D.

—Jiwaji University [India], 1978

TITLE: "Political Development in Nepal: A Study"

**\*VIDYA, Bushan**

—Ph.D.

—University of Jammu [India], 1979

TITLE: "The Framing of Jammu and Kashmir's Constitutions"

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--Ph.D.

--Georgetown University, 1983, 179 pp.

TITLE: "Socio-Economic Status, Physical Well-Being and Childhood Cognitive Ability: A Case Study in Nepal"

Order No. DA8401512

The purpose of this research was to explore the relationship and to determine the factors that affect the cognitive abilities of children in developing countries. Using the new household economics as a frame of reference, an econometric model of the process of cognitive development was estimated for 637 children from the villages in the Terai, Nepal. The study hypothesis considered childhood cognitive achievement as an output of a production process in which inputs of parental time, goods and services purchased in the market place, as well as those produced in the household were employed.

The study focused on the following issues: (i) the effects of differences in the quality of parental inputs on a child's development' (ii) the impact of economic constraints; (iii) the influence of external environment; (iv) the relationship between the child's physical well-being and his or her level of cognitive achievement.

The causal relation between the quality of mother's input and childhood cognitive ability was clear from the results. Children of educated mothers appeared to have higher cognitive scores, *ceteris paribus*. The implication is that programs designed to reach the women in the community would not only increase the latter's productivity, but would benefit the next generation as well.

For the study population, family income influenced childhood cognitive abilities through its effects on the probability of the child being sent to school, as well as the type of home milieu. An environment conducive to intellectual development was associated with higher income levels, and also a community which was exposed to western influences.

The results affirmed the view that poor physical state was detrimental to a child's mental development. This suggests that an additional benefit from nutrition and health programs would be the improvement in the rate of cognitive progress.

**\*ZIETLER, Peter Karl**

--Ph.D.

--Dartmouth College, 1983, 297 pp.

TITLE: "Uplift and Cooling History of the NW Himalaya, Northern Pakistan -- Evidence From Fission-Track and  $^{40}\text{Ar}/^{39}\text{Ar}$  Cooling Ages"

Order No. DA8316918

This study reports 145 fission-track and 21  $^{40}\text{Ar}/^{39}\text{Ar}$  cooling ages from the Himalaya of northern Pakistan. Studies of the Himalaya are important because they provide geologists with an opportunity to test models of orogenesis in an active tectonic setting. As the Himalaya become better known and models became more quantitative, information about thermal histories and rates of uplift and erosion will be needed. This provides the motivation for this dissertation.

The cooling ages suggest, and thermal modelling confirms, that throughout the Tertiary, the cooling history of northern Pakistan was controlled by the effects of accelerating uplift and erosion. On average, from 30 Ma to the present, uplift rates increased from less than 0.1 mm/yr to 0.4/yr. This uplift and erosion, however, has been variable in space as well as time. For example, over the past 10 Ma, western and southern portions of northern Pakistan have been uplifted less than 3.5 km at rates of 0.2 mm/yr, northern portions have been uplifted 6km at rates as high as 1.0 mm/yr, and the Nanga parbat-Haramosh Massif and Hunza regions have been uplifted on the order of 10 to 15 km at rates (over the past 0.7 Ma) of nearly 5 mm/yr.

The association of the Nanga Parbat-Haramosh Massif and Hunza with very young cooling ages and with rapid uplift maintained for a period of several million years is the most striking discovery made by this study. The location of these two areas at the heart of the Pamir-Himalaya Arc suggests that their anomalous behaviour is linked in some way to a locally vigorous collision of India and Eurasia, possibly due to a promontory of Indian crust.

Several of the cooling ages reported here help constrain the emplacement ages of intrusives located in northern Pakistan. In addition, cooling ages from the southern Swat-Hazara region can be interpreted to give the time of (final?) southward thrusting of the Kohistan Arc along the Main Mantle Thrust, at about 30 Ma.