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Social Sciences and Humanities

Acharya, Jayaraj

A Descriptive Grammar of Nepali and an Analyzed Corpus. Ph.D., Georgetown University, 1990. 392 pp. Order No. DA9122111

This is a descriptive grammar of Nepali, the national language of Nepal. The theoretical framework for this description is provided by the system of the Tagmemic analysis developed by K.L. Pike, and used by the Summer Institute of Linguistics in analyzing the structures of many languages of the world. This grammar describes the forms and functions of the constructions of Nepali at phonological, lexical, and grammatical levels.

This descriptive grammar has two parts. *Part One*. Grammar contains twenty-four chapters, and describes the sound systems (segmental and suprasegmental phonemes), and the writing system of Nepali. This part also contains the definition and classification of the form classes (parts of speech) of Nepali in terms of their inflection, function, dependents, and lexical morphology. Then the descriptions of the phrase level structures (nominal structures, adjectival structures, and adverbial structures) follow. Finally, the clause types and sentential structures of Nepali are described.

Part Two. Analyzed corpus contains the Nepali text, literal English translation and roman transliteration of the story *Nāso* 'Ward' by Guruprasad Mainali, a famous short-story writer of Nepal. Then the clause structure analysis is presented. This clause structure analysis accounts for all the forms and their functions in the syntactic structure of Nepali. This analysis yields the grammatical categories and functions, and the syntactic structure of Nepali described in Part One.

Dissertation Abstracts International vol. 52, no.3, September 1991, p. 895-A

Axinn, William George

Social Change, Family Organization, and Fertility Limitation: Tests of a Theoretical Model Among the Tamang of Nepal. Ph.D., University of Michigan, 1990. 293 pp., Supervisor: Arland Thornton, Order No. DA9116116

This research develops the family mode of organization framework to link previous hypotheses connecting social change to fertility limitation. This conceptual framework focuses on the extent to which the family organizes fundamental social activities such as production, education, residence and leisure. It clarifies many proposed causes of fertility change, suggests new mechanisms linking social change to fertility, and provides a coherent set of propositions predicting fertility limitation. Individual level event history data are used to test these hypotheses in a setting representing the entrance of a population into fertility limitation behavior. The data for these tests come from a micro-demographic community study, combining ethnographic and survey methods, of a Tamang village in rural Nepal. The community chosen has only recently been exposed to opportunities for nonfamily education, work, living, and leisure experiences. The analysis improves on previous research by using individual level data and by using independently collected event history measures to specify models in the same causal order as implied by hypotheses.

Tests of the influence of schooling experiences indicate that children's schooling significantly increases the likelihood of limiting fertility while parents' schooling does not. This finding points toward mechanisms linking education to fertility like the increased costs and decreased benefits of child rearing. Husbands' experiences in nonfamily work, living, and leisure each encouraged fertility limitation, but similar experiences among women did not. This finding provides support for hypotheses linking changes in family organization to fertility limitation but also indicates the importance of examining the experiences of all relevant family members. Women living in households or areas of the village with more access to nonfamily experiences were more likely to limit their fertility. These two findings also support hypotheses predicting that variations in family organization affect fertility. Finally, participation in a development program, which organized villagers into cooperative primary groups, increased fertility limitation. I argue that these group organizations provide an avenue for the negative externalities of childbearing on neighbors to affect fertility decisions. Together, the consistent effects of different types of nonfamily experiences support joining hypotheses with the family mode of organization framework.

Dissertation Abstracts International vol. 52, no.1, July 1991.

Belbase, Krishna Prasad

Agricultural technology, income, and nutrition: A study of farm households in the middle hills of Nepal. Ph.D., Cornell University, 1991. 255pp. Order Number DA920401

The diffusion and household-level effects of improved rice technology are examined using primary data collected from six villages in the middle hills of Nepal. The theoretical framework for the study is provided by the agricultural household model and its extensions.

Diffusion of the rice technology has occurred primarily in the low elevation villages in the areas closer to roads and markets. The availability of irrigation, cost of fertilizer, and distance from market centers are found to be the major determinants of technology adoption. The level of fertilizer use is found to be positively associated with farm size. Small farmers in the study area appear to lack resources to purchase fertilizer.

The gain in productivity resulting from the improved technology translates into a positive effect on household income. In addition to access to agricultural technology—particularly irrigation—household endowment of human and non-human resources, education, ethnicity, and location are found to be significant determinants of the components of household income.

The effect of technology on nutrition is examined in terms of its impact through income on calorie intake and children's nutritional status. Income is found to be significantly associated with calorie intake but the elasticity estimates of calorie intake with respect to income are low. Other factors affecting calorie intake are household control of land, maize price, climate, and the mother's knowledge of nutrition.

The analysis of children's nutritional status reveals a severe problem of stunting (low height-for-age) in the study area. The variables significantly associated with children's nutritional status include child age, number of children in the household, mother's knowledge of nutrition, morbidity, source of drinking water,

and distance to hospital. Surprisingly, the effect of income on children's nutritional status is found to be insignificant.

Findings of the research indicate that policies relating to health programs and access to clinics would have a greater impact on nutritional status of children than policies designed to enhance income.

Dissertation Abstracts International, vol. 52, no. 8, February 1992, p.3008-A.

Bentor, Yael

The Indo-Tibetan Buddhist consecration ritual for *stūpas*, images, books and temples. Ph.D., *Indiana University*, 1991, 492 pp., Supervisor: Grégory Schopen, Order No. DA9120508

Even though ritual practices are one of the main preoccupations for the vast majority of Tibetan monks, they are to a large extent neglected by modern scholarship. This dissertation on the Indo-Tibetan consecration ritual (*rab-gnas, pratiṣṭā*) attempts to shed some light on consecration, not only as one important example of a Buddhist ritual, but also as the means of rendering religious objects, such as *stūpas* and images, sacred. This study is based primarily on textual material, just as is the performance of the ritual itself. Still, since rituals are meant to be performed, this study would have been impossible without actually attending the ritual performances and discussing them with officiants.

The Indo-Tibetan consecration ritual is a special application of the tantric *sādhana* practices, by which practitioners transform themselves into *lha*. The employment of a soteriological ritual performed by human beings for the transformation of an object raises certain difficulties which are discussed. The tantric process is the dominant, but not the only means of consecration. The consecration as it is known since the eleventh century is a composite of various consecration processes which seem to be rooted in different periods and views. Rather than being supplanted, these forms of consecration were integrated by the authors of the tantric manuals. Furthermore, the present-day elaborate consecration is typically performed within a matrix of five complete rituals, some of which form a frame for still others. This complex structure of frames within frames is analyzed. Chapter 1 contains a brief general discussion of the Indo-Tibetan consecration ritual. Chapter 2 provides a context for each of the ritual episodes of which the consecration is comprised with special references to the annual re-consecration of Bodhanath St pa in Kathmandu by Dga'idan-chos-'phel-gling Monastery in 1988. Chapter 3 is a translation of the consecration manual by Khri-byang Blo-bzang-ye-shes-bstan-'dzinrgya-mtsho (1901-1981) which was used for the same re-consecration of Bodhanath St pa. The appendix contains a bibliography of more than 200 Tibetan textual sources on consecration, a list of major consecration works or passages on consecration contained in the Tibetan Kanjur and a selected bibliography of sources on certain rituals closely related to consecration (*gzungs-'bul* and *argha cho-ga*).

Dissertation Abstracts International vol. 52, no.2, August 1991, p. 566-A

Des Chene, Mary Katherine

Relics of Empire: A Cultural History of the Gurkhas, 1815-1987. Ph.D., *Stanford University*, 1991. 428 pp., Order No. DA9205621

Since 1815 Nepalese men have served as soldiers in foreign armies, first of colonial India, and later of India and the United Kingdom. The first part of this study documents the creation of Gurkha regiments and analyzes the invention of Gurkhas as a kind of man in colonial India. The second part is a local study of the meaning and import of Gurkha soldiery for one heavily-recruited Gurung community in the hills of West-Central Nepal.

During the nineteenth century Gurkhas were transformed from prisoners-of-war to a celebrated *corps d'elite* within the British-Indian army. Using archival materials, memoirs and regimental histories, I show how Gurkhas were domesticated through assimilation to European self-images, yet remained alien, understood in the terms of colonial Indian ethnology as a martial race. Comprehensible enough to control with assurance, yet alien enough to deploy against foreign and domestic enemies, the Gurkhas became the military familiars of the British in India and the currency of diplomacy in Anglo-Nepalese relations.

For Gurungs the central attribute of Gurkhas is not even that they are soldiers, but rather that they engage in wage labor in foreign places, returning with alien commodities and knowledge. Gurungs conceive of the years of soldiering not as the centerpiece of their lives, but as a hiatus in them. I examine the historical transformation of the value of soldiering as three distinct cohorts of soldiers have coped with leaving their

community, living in foreign lands, fighting and returning home. I argue that Gurung ideals of social harmony and the value they place on competency are effectively turned to obedience within the military and to violent ends in warfare. Thus while Gurungs little resemble British images of the Gurkhas, their comportment can be assimilated to those images. The final chapter examines efforts to sustain a Gurung identity while dealing with the changes wrought by soldiery. I argue that neither models of modernization nor post-modern images of pastiche can describe Gurung styles of negotiating the modern, and that understanding best emerges by attending to Gurung thoughts, based on long and varied experience, about the “developed” world and its relation to their own.

Dissertation Abstracts International vol. 52, no.9, March 1992, p. 3329-A

Dreyfus, Georges Bernard Jacques

Ontology, Philosophy of Language, and Epistemology in Buddhist Tradition: A study of Dharmakirti's Philosophy in the Light of Its Reception in the later Indo-Tibetan Tradition. Ph.D., University of Virginia, 1991. 885 pp., Supervisor: Paul Jeffrey Hopkins, Order No. DA9219270

This work focuses on the problem of universals and its epistemological implications in the Indo-Tibetan tradition. It is divided into two parts, the first centering around the problem of universals and the second dealing with epistemology proper. I first present it in relation to the ontology of the tradition, relating it to questions such as the concept of existence and the status of specifically characterized phenomena (*svalakṣana, rang mtshan*). In the second part, I analyze the problem of universals *per se*, contrasting the anti-realism of Sa-pa and his followers with the Ge-luk-ba moderate realism. Finally, the third part examines the issue of universals in relation to the philosophy of language of the tradition. It is mostly an impressionistic description of the evolution of the *apoha* theory in India and Tibet. It also analyzes conflicting Tibetan views about the problem of concept-formation. Throughout this first book, I expose differences between the Sa-gyas' consistent refutation of real universals and the Ge-luk-bas' more compromising position, which does not exclude the possibility that certain real universals exist in dependence on their instances.

The second book examines Tibetan contributions to epistemology, once more differentiating between the two Tibetan traditions. First, using a genealogical method, I consider the development of the theory of perception, which is one of two forms of knowledge admitted by Buddhist epistemology. I distinguish Dharmakirti's view from that of later Indian and Tibetan interpreters. In particular, I show how the new epistemology developed by early Tibetan thinkers continues a movement begun in India. I also examine Sa-gya Pandita's reaction against this new epistemology and its significance.

The second part of the second book addresses the nature of valid cognition, investigating the various interpretations among Indian and Tibetan thinkers. Focusing on the textual ambiguities of Dharmakirti's presentation, I delineate the conflicting stands that Tibetan scholars have taken on the definition of knowledge. I also examine the significance of the restriction of knowledge to perception and inference. Finally, I consider the closely related problem of the epistemological status of language and scripture in the Buddhist tradition and conclude by examining the difficulties of systematic philosophy.

Dissertation Abstracts International vol. 53, no.2, August 1992, p. 521-A

Ghimire, K.

Forest Frontier Relations and Agrarian Change in Nepal's Tarai: A Case Study of Landless Illegal Settlers (Sukumbasis) in the Nawalparasi District. Ph.D., East Anglia, 1989. Order No. DX88318 (Available from UMI in association with The British Library)

This is a case study of landless illegal settlers in Nepal's west-central Tarai. The illegal occupation and use of forest land for purposes of growing staple food-crops by landless and propertyless migrants is a widespread phenomenon over much of the Nepal's Tarai and this research represents the single substantial study on the subject, accompanied with the first real census on the number and the different groups of people involved in one district of the Tarai.

Academic writings on peasant societies and agrarian change have commonly emphasised access to land as being one of the prime motivating factors for social movements within rural areas in the Third World (e.g. Wolf, 1971, Huizer, 1972, Paige 1975, Scott, 1977, Griffin, 1976 and 1977). In Nepal, the social movements involving the landpoor and landless are poorly documented. This study explores the experiences of the

landpoor and the landless in seeking titles to land in the Tarai where prospects for agricultural settlement are substantial. But because of the growing State concern for forest protection, maintaining an effective control over land and securing eventual legal ownership rights is an extremely painful experience for the settlers. This thesis describes hopes and frustrations of these people with respect to their aspirations to land, as well as examines the rationality of present land-use policies and the vested interests of socially dominant groups which coincide with the official forest protection measures, but are totally contradictory to the subsistence needs of the settlers.

The conclusions drawn in this study is that despite the existence of a high level local solidarity, the settlers have made no effective gains. The protection of forest area (from encroachment) is made increasingly a 'nonnegotiable' issue by the State on economic, moral and ecological grounds. This is aggravated by the tight control on party politics and the lack of any firm political support from other social groups to the settlers' demand for land. Thus it appears that despite the existence of a strong peasant ideology and the present "semi-proletarian" nature, most settlers would have little choice but to become landless labourers in the future. It is further argued in the thesis that the lack of creation of agricultural wage employment and the rising competition for the existing employment resulting from the high natural growth of the local labour force and the continuous immigration of labourers from India in search of employment would lead to reduction in the bargaining power vis-à-vis their employers and even further decline in their standard of living. Therefore what emerges from this thesis is the bleak picture of economic destitution and cumulative pauperisation that is likely to be experienced in Nepal's Tarai.

Aslib Index to Theses Accepted for Higher Degrees in Great Britain and Ireland vol. 40, part 2, 1991, p. 605

Gibson, Todd Allen

From *btsanpo* to *btsan*: The demonization of the Tibetan sacral kingship. Ph.D., Indiana University, 1991. 318 pp., Supervisor: Christopher I. Beckwith, Order No. DA9212317

The complex of beliefs surrounding the *btsan* of the modern Tibetan religious world has its origin in the Tibetan sacral kingship of the seventh to ninth centuries.

In tracing the relationship between the *btsan* and the *btsanpo*, this dissertation takes a multidisciplinary approach employing data and method from textual-historical, ethnological/anthropological, and linguistic fields. Chapter 1 briefly introduces trends in the study of Tibetan religion, and, more specifically, of the early sacral kingship and its possible relation to the *btsan*. Chapter 2 proposes as an investigatory hypotheses that the sacrality of the *btsanpo* was based on a perceived connection with the supernatural that modern observers could term "shamanic". It analyzes the difficulties with such a conception, and justifies the hypotheses with anthropological material. Chapter 3 examines the language of the sacral kingship, looking at some of the distinctive terminology of the institution and attempting to apply a historical-semantic approach to the language of the mind, developed by scholars of Classical Greece, to Tibetan. Chapter 4 deals with the mythology of the sacral kingship, and the problem of "mythical" and "historical" accounts. Chapter 5 addresses the investigatory hypothesis in terms of Tibet's imperial history. Chapter 6 examines ethnological data on the *btsan* and the part the spirit plays in modern Tibetan life; Chapter 7 discusses the literary source material on the *btsan*.

Chapter 8 sums up the information presented, showing that there is a definite connection between *btsanpo* and *btsan*, and that all the evidence indicates the dependence of the latter on the former, and hence the *btsanpo*'s historical primacy; the Iranian *fravashi* is proposed as an influential model in the formation of Tibetan *btsan* concepts. Implications of these findings on the historical dimension of "shamanism" are discussed.

Dissertation Abstracts International vol. 52, no.11, May 1992, p. 3969-A

Hargreaves, David J.

The Concept of Intentional Action in the Grammar of Kathmandu Newari. Ph.D., University of Oregon, 1991. 233 pp., Order No. DA9205810

This study describes the relationship between the concept of intentional action and the grammatical organization of the clause in Kathmandu Newari, a Tibeto-Burman language spoken primarily in the Kathmandu valley of Nepal. In particular, the study focuses on the conceptual structure of "intentional action" along with the lexical, morphological, and syntactic reflexes of this notion in situated speech. The construal

of intentional action consists of two distinct notions: one involving the concept of self-initiated force and the other involving mental representation or awareness. The distribution of finite inflectional forms for verbs results from the interaction of these two notions with a set of evidential/discourse principles which constrain the attribution of intentional action to certain discourse roles in situated interaction.

Dissertation Abstracts International vol. 52, no.9, March 1992, p. 3262-A

Hilton, Rita Marie

Cost Recovery and Local Resource Mobilization in Irrigation Systems in Nepal: Three Case Studies From the Rapti Zone. Ph.D., Syracuse University, 1991, 327 pp., Order No. DA9204514

This research concerns recurrent cost recovery and local resource mobilization in irrigation systems, emphasizing resource mobilization as a fundamental component of cost recovery. Three hypotheses relate effectiveness of cost recovery to: (1) levels of farmer input into system decisions; (2) outside involvement in the system; and (3) reliability of water delivery.

An analytic framework incorporating institutional factors and effective rates of taxation is developed and applied to three representative Nepali irrigation systems. Institutional, physical, resource mobilization and farm-budget data were gathered in the field. Detailed data analysis and the effective rate of taxation, defined as: VALUE OF RESOURCES MOBILIZED/MARGINAL INCOME DUE TO IRRIGATION are provided for each system. Further, patterns and clarity of incentives are outlined.

The findings lend support to each of the three research hypotheses. First, the more direct control farmers have over their systems, the higher are the levels of resources which they mobilize. Second, indirect outside involvement in systems is associated with higher levels of resource mobilization than is direct outside involvement. Third, reliable water delivery appears to be a necessary condition for effective resource mobilization. These findings have both policy and theoretical implications.

Three primary policy implications can be drawn from this research. First, resource mobilization is appropriately considered as a component of cost recovery. Second, in-kind resource mobilization can be analyzed through application of standard principles of tax analysis. Third, five incentives are important factors for effective resource mobilization in irrigation systems: farmers must have some degree of direct decision control within their system; systems must be tailored to meet farmers' needs; farmers must receive reliable water deliveries; system rules must be clear; and systems must be operated primarily as production inputs rather than as political entities.

Three theoretical contributions of the research are: explicit linking of resource mobilization and cost recovery; measurement of an irrigation system effective rate of taxation which incorporates in-kind contributions; and provision of a framework for comprehensive (institutional and fiscal) analysis which can be applied across irrigation systems.

Dissertation Abstracts International vol. 52, no.10, April 1992, p. 3721-A

Jamspal, Lozang

The range of the bodhisattva: A study of an early Mah y na s tra, " ryasatyakaparivarta", Discourse of Truth Teller. Ph.D., Columbia University, 1991. 465 pp., Order No. DA9209864

The present study is designed to introduce the previously untranslated middle length Mah y na s tra ryasatyakaparivarta, an early Mah y na work, which was widely cited by many ancient Indian and Tibetan authors, Satyav din, a non-Buddhist teacher, is the bodhisattva and main hero of the s tra who expounds the Buddhist teachings.

The text of the s tra deals with all the major Buddhist subjects on both conventional and ultimate truths as well as integrating these teachings with advice on state policy. The s tra describes the stages of practice of the path to enlightenment, starting with the ten virtuous and non-virtuous actions and their results, upward to the universal compassion of the bodhisattvas and the Buddha, and includes the six perfections, the skillful means of the bodhisattvas and the Tath gata, the Buddha vehicle as the ultimate vehicle, the Buddha body adorned with the thirty-two auspicious characteristics and eighty distinctive marks, the thirty-two compassions of the Tath gata, the thirty-seven wings of enlightenment, the four confidences of the Buddha, and ultimate truth as an inexpressible reality.

gives extensive advice on state policy to the king and discusses the flaws and virtues of some of his contemporaries. At the sutra's conclusion the Buddha prophesies Satyavadin's future perfectly full enlightenment.

The introduction deals with plausible evidence to date this sutra prior to other well-known Mahayana sutras. It also discusses the meaning of nirgantha in analyzing Satyavadin's non-Buddhist guise, and contrasts Satyavadin's advice on state policy, in particular on punishments and war, with other ancient Indian non-Buddhist and Buddhist scriptures.

Furthermore, it describes the use and expansion of Satyavadin's ideas by later Indian and Tibetan authors.

The appendices explain the sutra's teachings on karma, the thought of enlightenment, the meaning of prajñāpāramitā, and other topics based on later Indian and Tibetan sources.

Dissertation Abstracts International vol. 52, no.11, May 1992, p. 3932-A

Kanel, Nav Raj

Life-cycle Analysis of Household Composition and Family Consumption Behavior. Ph.D. University of Hawaii, 1991, 143 pp. Supervisor: Andrew Mason, Order No. DA9129681

This study examines the demographic impact of changing household size and composition on the consumption behavior of Nepali households over the family life-cycle, employing consumer demand theory. Household size and household composition are distinguished, and particular attention is focused on changing household composition and life-cycle consumption. Other factors examined are future household composition, demographic scaling, effects of different lifetime discount rates, and bequest motives.

A sample of 614 households from Kathmandu was taken during the winter of 1987-88 to represent the demographic structure and income-expenditure pattern of Nepali households. HOMES, A Household Model for Economic and Social Studies, is applied to project a family of curves of future household membership. This information is used to estimate the life-cycle consumption function that explicitly incorporates expected lifetime household membership. Equivalence scales are estimated to measure the effect of household age-sex composition on consumption.

The findings confirm the importance of demographic variables in household consumption. The estimated equivalent adult units for children, teenagers and adult females are respectively 0.94, 1.46, and 0.92, assuming that the equivalent adult unit of an adult male is one. These large values of the equivalent units suggest that children have a stronger effect in Nepal than typically found in the literature. The demographic variables are jointly, but not individually significant. This study is limited by a small sample size. Therefore, no firm conclusions could be drawn.

An alternative specification to examine the validity of the general model and variables therein suggests that the relationship between demographic variables and consumption is not simple. The equivalent scale for teenagers is significantly different from one. This model also rejected the hypothesis that the bequest parameter is equal to zero. This confirms that the bequest motive is important and should be incorporated in the life-cycle model.

Dissertation Abstracts International vol. 52, no.5, November 1991, p. 1831-A

Laston, Sandra Lee

Risk Factors For Diarrheal Disease in Village Children in Nepal. Ph.D., Case Western Reserve University, 1992, 428 pp. Supervisor: Debra A. Schumann, Order No. DA9220048

This study examines the risks for diarrheal disease in young children with particular emphasis given to the behavioral determinants of diarrhea morbidity. Anthropological and epidemiological approaches provided the framework for the qualitative and quantitative methodologies employed in data collection. Diarrhea morbidity, nutritional status and the occurrence of certain behaviors within the household unit associated with increased risk for diarrhea were assessed during the 6 month study period. The sample was comprised of 349 high caste village children in Nepal.

This study uses an analytical framework assessing the underlying, intermediate and outcome variables as proposed by Mosley and Chen (1984) and operationalized in the Cebu study (1991). Analysis procedures include Poisson and multiple linear regression to examine determinants of diarrhea morbidity and the

pathways through which these variables operate.

Three additive risk scales constructed from groups of variables related to hygiene and ingestion behaviors and environmental risks are examined to determine their interrelationships and association with diarrhea morbidity. Results indicate a relationship between socioeconomic status and quality of the household environment. As parental education and family wealth increases, the level of environmental contamination in the household decreases. Parental education remains a strong determinant of environmental quality after controlling for household wealth. Household environment is significantly associated with ingestion behaviors observed in the study children which, in turn, affect diarrhea incidence. Handwashing activity is not related to socioeconomic status but is significantly associated with ingestion behaviors. While neither the household environment nor handwashing activities are directly related to diarrhea incidence, they are strongly associated with ingestion behaviors.

Nutritional status, age of the sample children, and the observed ingestion behaviors are important determinants of diarrhea incidence. Specific risk behaviors that are associated with diarrhea include consumption of leftover food, putting fingers in the mouth and the cleanliness of the child.

This study suggests that parental education is associated with the quality of the household environment which is related to ingestion behaviors. Ingestion behavior, in turn, is a determinant of diarrhea morbidity. Parental education is also associated with nutritional status, a strong determinant of diarrhea incidence.

Dissertation Abstracts International vol. 53, no.2, August 1992, p. 542-A

Mansberger, Joe Robert

Ban yatra: A Bio-cultural Survey of Sacred Forests in Kathmandu Valley. Ph.D., University of Hawaii, 1991, 343 pp. Supervisor: Brian Murton. Order No. 9129689

This study documents and interprets the collective store of traditional knowledge concerning the manifestation, protection and preservation of sacred forests in Kathmandu Valley, Nepal. It essentially investigates the phenomenon of "sacred forests" through a cognitive study of its associated cultural tradition and religious belief system. A biological examination of natural components in the light of cultural findings provides a bio-cultural perspective of the subject.

Oral interviews and on-site observations at 45 selected sacred forest sites form the basis of collected data. A combined historico-cultural/religio-geographic approach, documenting oral tradition, iconographical and ethnobotanical evidence, contributes to an analysis of sacred forests as bio-cultural landscape units representing a religio-cultural tradition of nature preservation. Present preservation attitudes and initiatives, along with circumstantial evidence of the physical condition of sacred forest sites, are considered in the analysis of the present status of sacred forest preservation and the relative importance of traditional prohibitions, values and beliefs.

The combined evidence suggests that the sacred forests of Kathmandu Valley are bio-cultural landscape units of biological, cultural, religious and historical significance.

Dissertation Abstracts International vol. 52, no.5, November 1991, p. 1858-A

Martin, Daniel Preston

The Emergence of Bon and the Tibetan Polemical Tradition. Ph.D., Indiana University, 1991. 324 pp., Order No. DA9134813

Using an approach that is basically philological (combining language with literary and historical study), an attempt is made to shed light on one of the more obscure periods in Tibetan history (the eleventh through twelfth centuries) and the history of one of Tibet's least-known religious traditions (Bon), meanwhile uncovering evidence of still more obscure religious movements of those times. It centers especially on the figure Gshen-chen Klu-dga' (996-1035), whose followers were responsible for the founding of Bon institutions during those centuries. The broadest aim is to find a historically consonant etymology for the sectarian differentiation between Bon and Chos, the primary religious split in Tibetan history.

The body of the dissertation consists of five parts. The first part, supplying background for arguments to follow, deals with tantra and 'excavations' (*gter-ma*). The second part provides specific arguments for a reassessment of the historical transmission of Bon, including comparative textual studies of a few of the

excavations of Gshen-chen Klu-dga'. Part three covers the history of Tibetan polemical literature, especially as these have a bearing on eleventh and twelfth century religious movements, on *gter-ma*, and on Bon in particular. Part four introduces and translates an early thirteenth century anti-Bon polemic contained in the *Dgongs-gcig Yig-cha*. Besides being the most influential statement about Bon for its future critics, and a source of scholarly commonplaces about Bon and Gshen-chen Klu-dga' until the present time, it supplies a few pieces of valuable confirming evidence about Gshen-chen Klu-dga'. The fifth and final part concerns the Bon sources on the life of Gshen-chen Klu-dga', leading into the conclusion, suggesting an alternative etymology of Bon tradition and its scriptures, and a reassessment of its relevance, especially for historians of Buddhism.

Dissertation Abstracts International vol. 52, no.6, December 1991, p. 2145-A

Mathema, Madhuri

Improving rural women's lives: A case study in Nepal. Ph.D. Stanford University, 1992. 292pp., Order Number DA9302258

My dissertation is an ethnographic case study of "Production Credit for Rural Women" (PCRW), a Women-in-Development project in Nepal that attempts to improve the lives of poor rural women by involving them in income generating activities. I studied a village where PCRW has been operating since 1882, examining the project from the point of view of the rural women who participated in it. My purpose was two-fold: to find out what rural women considered improvements, and to analyze whether the project met women's expectations.

In the village I studied, the project provided loans for women to buy buffaloes for milk production. Planners hoped that women who sold milk could generate an independent income for improving children's nutrition and raising women's status. The planners were wrong, however, to assume that women retained control of money they earned marketing. Although women controlled resources they acquired in secret by exploiting household grain supplies, men appropriated publicly earned cash. Moreover, women who accepted loans had to deprive their children of milk in order to sell it to repay the debt. And the project unintentionally perpetuated women's dependence and subordination, because overworked mothers kept their daughters out of school, thus depriving the next generation of women of educational opportunities. However, the project holds promises provided its education components are strengthened by grounding its pedagogy on women's own 'critical tradition' of songs, drama and poetry. Daughters who are neglected up to this time must be the part of the project which might open up new possibilities in their lives.

Because the rural women I interviewed knew that buffaloes might die, leaving women with debts they were unable to pay, many of the women who accepted loans to buy buffaloes actually invested the money in land, which they hoped would produce crops to fill their granaries. The PCRW project may have failed to understand the sources of rural women's subordination or power, but because rural women understood their situation, they were able to use project resources for their benefit. My research suggests that rural women may be the best designers of their own programs.

Dissertation Abstracts International, Vol. 53 no. 9 March 1993.p. 3128-A

Miller, Sarah Elizabeth

Twice-born Tales From Kathmandu: Stories That Tell People. Ph.D., Cornell University, 1992. 500 pp., Order No. DA9211339

This thesis explores the uses of gossip and everyday tale-telling in the context of marriage negotiations among high-caste Hindus in Kathmandu Nepal. It argues that words construct reality dialogically, that the meaning of events and the narratives of what happened are constructed dialogically, as a collaborative work among related people. Relying on cultural anthropology and textual analysis, the thesis studies everyday speech, conversation, anecdotes, multiple versions of stories and the circulation of information in a complexly interconnected network of kin. The final chapter raises questions about the relation between the circulation of words and the circulation of goods in an exchange system as enacted in marriages in Kathmandu, Nepal. The research is based on over a year of participant observation in Nepal.

Dissertation Abstracts International vol. 52, no.12, June 1992, p. 4385-A

Phillips, David A.

Economic Development, Accounting Prices and Technology: A Case Study in the Estimation of Accounting Prices and Their Application to Economic and Distributional Analysis of the Choice of Technology in the Nepal Textile Industry. Ph.D., University of Bradford (United Kingdom), 1989, 484 pp. Order No. BRD-93849 (Available from UMI in association with The British Library)

This study is concerned with the applicability of accounting prices in project appraisal. It carries out a detailed empirical analysis of the estimation of accounting prices, against the general economic development experience of Nepal. The application of accounting prices is analysed in relation to the problem of the choice of technology in textiles.

In addition to the development experience and constraints on the Nepal economy, the study covers the estimation of the value of domestic currency, shadow wage rates, income distribution weights, discount rates, and valuation of public and private income. A semi input output table is constructed to derive direct and indirect factor input combinations for the estimation of accounting price ratios.

The analysis examines in detail the impact of both economic and distributional parameters on optimum choice in textiles, including the interrelationship of procong parameters and the effects of uncertainty on the ranking of investments.

On the basis of this case study, the conclusions are, principally, the following. Complex approaches to economic and social analysis of projects, under the conditions of uncertainty which apply in many planning environments, are not justifiable. This is because firstly it is questionable whether the quality of investment decisions is improved, and secondly, given uncertainty in development objectives, because the interrelationships of distributional parameters may lead to an ambiguous identification of optimal investment. These conclusions raise questions concerning the validity of generalisations about optimal techniques, either across countries or across regions within a country.

In the final analysis socially efficient investments are likely to require emphases more on obtaining accurate basic data, and carrying out economic analysis by careful approximation, and distributional analysis by valuation of unweighted income flows.

Dissertation Abstracts International vol. 52, no.7, January 1992, p. 2655-A

Sah, Jaysingh

Analysis of income distribution by caste and farm size for a panchayat (village system) in the Tarai region of Nepal by means of a social accounting matrix. Ph.D. Oklahoma State University, 1991, 365pp., Adviser: Dean F. Schreiner, Order Number DA9201866

Scope and method of study.

This study was carried out to understand the sources and distribution of income among six castes and two farm size groupings for Kumroj village panchayat in Nepal. Using the Social Accounting Matrix (SAM) framework, the village system was structured in 127 production activities, 26 commodity markets, 38 factor markets, 13 institution divisions, 9 financial markets, and one extra village system account. A matrix of interdependence coefficients was computed where the row totals of the endogenous accounts were made linear functions of the elements in the exogenous account. Using fixed price multiplier analysis, SAM multipliers were used to determine impact on the factor and institution accounts for (1) the marginal unit of land in selected activities; (2) the marginal unit of capital returns in eight selected production activities; (3) marginal changes in commodity demand; (4) the marginal unit of employment; and (5) the marginal unit of credit.

Findings and conclusions.

Household incomes varied significantly by caste and farm size and depended upon resource ownership, resource productivities, and mix of activities. Large farm households depended more on land and capital returns. Small farm households depended more on labor returns and hired labor. Making available additional land and capital resources to small farms, in general, was found to have greater impact on total village system factor returns and incomes than did the same resources made available to large farms. Trickle down effects (through land leasing and labor hiring) from large farms to small farms are significant but are not expected

to have significant impact on small farms because of the importance of resource ownership in determining incomes. Trickle up effects (through commodity and credit markets) from small farms to large farms existed but with lesser magnitude than trickle down effects. Large farms participated more in financial markets and thus benefited more on a per household basis than did small farms. Livestock credit targeted to small farms through the Small Farmers Development Program increased overall village income by 12.2 percent but increased small farm household income by 13.5 percent.

Dissertation Abstracts International, vol. 52 No. 8, February 1992, p.3011-A.

Shrestha, Sheel Manju

Historical analysis of vocational education in Nepal. Ed.D. Virginia Polytechnic Institute and State University, 1991, 138pp. Chair: Penny L. Burge, Order Number DA9204649

The purpose of this research was to analyze the vocational education plans of Nepal through an historical study by identifying their successes and failures. The specific objectives of the study were (a) to provide an historical background of general education and vocational education, (b) to analyze the strengths and inadequacies of the vocational education systems implemented in Nepal since 1950, (c) to review vocational education components implemented in other developing countries, and (d) to provide implications for Nepal's vocational programs. Relevant historical documents were the basis of this research. The publications of the Ministry of Education of Nepal, Tribhuvan University of Nepal and its numerous colleges, international organizations, and authors knowledgeable in the Nepalese education field served as primary and secondary sources.

The development of formal vocational education in Nepal was traced, beginning with its origin in the traditional occupational and social structure. Descriptions, salient features, and objectives of three different education plans implemented since 1950, namely, (a) the basic education system, (b) the multipurpose education system, and (c) the national education system, were compiled. Each of these systems increasingly emphasized vocational education and produced many significant results, yet each of these systems was abandoned because of its limited successes. The strengths and weaknesses of these systems were identified and analyzed. Aspects of female education were separately studied because of their special relevance of vocational education in developing countries. The reasons behind the adoption and the failure of these systems were also discussed. External influence in the formulation of the programs, dependence on foreign financial assistance, ambitious expansion, lack of qualified teachers and educational materials, and the lack of coordination among different agencies were identified as the main problems.

A review of vocational program components in developing countries, including the status of female education, was also conducted in order to investigate patterns of vocational education that might have implications for Nepal. Common aspects among these countries were identified. Based on reviews of these countries' vocational education systems and Nepal's own systems, suggestions for improvement of the systems were presented. Need to (a) cater to endemic needs, (b) improve public perception and enhance public participation, (c) organize coordinated vocational programs, and (d) attend to implementation details, were the major suggestions. Recommendations for specific areas of further research included (a) a thorough needs assessment, (b) detailed study of coordination problems, and (c) investigation of the causes of failures of past education systems.

Dissertation Abstracts International, vol. 52, 8, February 1992, p.2901-A

Singer, Jane Casey

Early Painting in Tibet. Ph.D., Harvard University, 1991, 413 pp., Order No. DA9211748

This study examines over one hundred early Tibetan paintings and manuscripts illuminations, mostly unpublished and dating to ca. 950-1400 A.D. The first chapter briefly surveys the history of relevant literature, beginning with the writings of early missionaries and explorers to the Himalayan region through the efforts of contemporary art historians. The theoretical background and ritual contexts of Tibetan painting, which influenced its formal, iconographic, and iconologic characteristics, are also briefly considered.

The paintings are divided into two broad categories: Central and Western Tibet, a classification based on comparisons with murals *in situ*. Relative chronologies are proposed for each regional style, emphasis placed on the evidence available for assessing chronology (Chapters 2,3). Chapter 4 addresses portraiture, a

subject which constitutes approximately one-fourth of the surviving corpus of pre-fifteenth century paintings. This chapter examines four main questions: What are the essential characteristics of early Tibetan portraiture? What aesthetic and theoretical guides did artists observe in painting historical persons? How do portrait paintings compare with the more familiar Tibetan iconography of Buddhas, bodhisattvas, and other divine beings? In what ways did portraiture reflect social and political conditions in pre-fifteenth century Tibet?

Chapter 5 examines early Tibetan sectarian history and its impacts on contemporary painting. In the absence of a central ruling authority, there arose many small sectarian groups, each led by a charismatic figure. The identity of most sectarian groups was both ill-defined and highly complex. Disciples normally studied with many teachers, often of different "sectarian" affiliations; students frequently dispersed when their master died, some then establishing their own branch of religious instruction. Thus, one should use sectarian nomenclature to describe paintings only when one has information linking a painting with a specific individual, monastery, or sectarian group. Furthermore, even if one is able to associate a painting with a sectarian group, one cannot assume that its style is representative of or exclusive to that sect.

Dissertation Abstracts International vol. 52, no.11, May 1992, p. 3756-A

Suwal, R.L.S.

Attributes and Skills of Chief Executive Officers of Public Enterprises in Nepal That Are Associated With Effective Performance. Ph.D., Cranfield Institute of Technology (United Kingdom), 1990, 322 pp. Order No. BRDX93776 (Available from UMI in association with The British Library)

In an effort to accelerate development, Nepal resorted to government intervention through the establishment of public enterprises in many economic activities of the country. However, their economic performance has been poor. Their performance must be improved if the development of the country is to be accelerated and since the chief executive officer of an organization mainly determines its success or failure, this study aims to determine the personality attributes and skills of chief executive officers in public enterprises of Nepal that are associated with effective performance and to see whether there exists any difference in these attributes and skills between effective and ineffective chief executive officers.

The research accepts the complementary nature of nomothetic and ideographic approaches to research and hence accepts the strategy of using a diverse range of instruments rather than one single instrument so that the main objective of the study can be considered from many perspectives. Three instruments-Edwards Personal Preference Schedule, Myers Briggs Type Indicator and Repertory Grid Technique, are used.

The main conclusion from this study is that effective chief executive officers demonstrate greater need for achievement, dominance, aggressiveness, intraception and exhibition and less need for affiliation than ineffective chief executive officers and that there are a number of attributes and skills such as concern for efficiency, persistency, managing relations, which effective chief executive officers have in common. These attributes and skills are grouped into a primary cluster which are thought to be strongly associated with effective performance and a secondary cluster which aid effective functioning but whose possession is not necessarily associated with effective performance.

The research also indicates that ineffective chief executive officers have high self-confidence whereas effective chief executive officers have only moderate self-confidence. The majority of chief executive officers from both groups have a monolithic cognitive structure and distinguishing them on this basis is not possible.

Following the findings from the study, some practical options such as selection of people possessing the identified attributes and skills for the chief executive officer's job in public enterprises and the means to develop these attributes and skills associated with effectiveness among all chief executive officers were discussed. Two important conclusions were drawn.

The first was that the attributes and skills of chief executive officers of public enterprises in Nepal, identified as associated with effective performance were similar to those identified for managers in the West. The second was that Western concepts and instruments were equally valid in studying chief executive officers in Nepal. This suggests that management of "modern" enterprises in whatever socio-cultural environments, requires similar attributes and skills.

Dissertation Abstracts International vol. 52, no.7, January 1992, p. 2632-A

Teas, Molly Maguire

Gatekeepers and gender equity: An investigation of in-service teacher training in Nepal. Ed.D. Harvard University, 1992, 188pp. Adviser: Noel McGinn, Order Number DA9303098

This paper indicates how to improve equity for women in two in-service teacher training programs in Nepal. Study objectives were to: (1) Identify key factors related to Nepali women's participation in the Radio Education Teacher Training (RETT) project and the Primary Education Project (PEP); (2) Design interventions to increase participation of women in the RETT and PEP projects; (3) Devise and use a methodology for investigating issues related to women and education that might be utilized in other countries; (4) Provide information to other programs and countries where gender equity is sought.

A three phase ethnographic research strategy was used to better understand how and why some women participated in RETT and PEP training and others did not.

Study results show that respondents faced extensive time demands because of their dual household and professional responsibilities. This dual burden was found to be both a cause and effect of their exclusion from activities outside their homes and schools. Because of their exclusion, respondents continued to depend on male relatives, colleagues or family connections to bring them information from the outside world. These men act as *Gatekeepers* of the flow information between respondents and the outside. The type and level of Gatekeeper support was found to be a major factor related to women's participation in training. The paper concludes with a set of policy options likely to (1) reduce the role of Gatekeepers as mediators of Nepali women's professional opportunities; (2) increase women's participation in RETT and PEP, and; (3) improve equity in other programs and other countries where problems are similar to those in Nepal.

Dissertation Abstracts International, vol. 53 no. 9, March 1993, p.3178-A

Upadhyay, Pratima

The Social Assimilation of Nepalese Immigrants in the United States and the Role of Their English Language Training in This Process. Ph.D., University of Connecticut, 1991, 202 pp., Supervisor: Frank A. Stone. Order No. DA9134580

The subjects of this study are forty-five Nepalese immigrants who are twenty-eight years and older and have been residing in the U.S. for at least five years as permanent residents of this country. Techniques of participant observation, questionnaires, field notes, interviews, and tape recordings were used to gather data for this study. The data were analyzed using the system of coding categories described by Bogdan and Taylor.

The results of this study reveal that Nepalese are more culturally assimilated than structurally in the American society. The primary social relationships of most Nepalese immigrants are largely limited to the individuals of Nepalese origin. While secondary contacts with Americans are maintained, primary contacts or intimate relationships with the members of the host society are rare. Lack of primary contact with the members of the host society is not a function of discrimination or prejudice against them; it is rather a function of voluntary withdrawal of Nepalese immigrants from the social/cultural organizations of the host society for the comfort of self-identity and sense of peoplehood.

An additional objective of this study was to examine the role of English language training in the assimilation process. Seven different groups were identified based on their English language training.

While the exposure to and training in English language seemed to help the assimilation process of Nepalese immigrants in the U.S., the various methods by which they learned English seems to have little or no impact in the cultural assimilation process. For example, regardless of the English language exposure and training obtained by the various methods among the subjects of this study, most of them were more culturally than structurally assimilated in the U.S. Most of the members of all groups expressed satisfaction with their life in the U.S., and seemed to have adjusted well to American society. Most subjects spent most of their time with the members of their own national group. However, subjects who had more years of formal English language instruction, were more structurally assimilated than other subjects. The least structurally assimilated were those who had five or fewer years of English language training or no training at all.

Dissertation Abstracts International vol. 52, no.6, December 1991, p. 2052-A

Young, Serinity

Dreams in Indo-Tibetan Buddhist Sacred Biography. Ph.D., Columbia University, 1990, 342 pp., Order No. DA9118667

The focus of this study is on the meanings of dreams in the sacred biographies of four Indo-Tibetan Buddhist heroes: Gautama Buddha (b. 566-486 B.C.E.), Padmasambhava (8th Century C.E.), Milarepa (1040-1123), and Tsongkhapa (1357-1419). It will be shown that, with minor variants, dreams are an accepted mode of cognition in these texts.

This study is divided into three parts. Part One examines modern Western dream theory and Ancient Indian dream theory as it was stated in the texts of Brahmanical Hinduism, Buddhism, and Jainism. Part Two presents the data on dreams that is contained in these biographies. Part Three compares the dreams and other dream related material, such as the interpretation of dreams, which are contained in the earliest biography, that of Gautama Buddha, with the dreams and other dream material contained in the biographies of the three later heroes. This is a two-fold comparison which presents (1) what has remained consistent with regard to dreams throughout these biographies and (2) what innovations have developed over time. The most notable consistency was shown to be the prophetic type of dream which has been divided into subtypes and the most notable innovations were the development of a new genre of dream, teachings dreams, and a new practice called Dream Yoga which has been traced back to the eleventh century Indian guru *ropa*.

Essentially, dreams have been shown to play an important role in the acquisition, validation, and transmission of spiritual knowledge while the persistent inclusion of dreams in these biographies is a demonstration of this as well as evidence for their importance to Indo-Tibetan Buddhism in general. This importance is reflected in other types of doctrinal works such as Buddhaghosa's *Manorathapūrāṇī* and Tsongkhapa's commentary on the six Yogas of *ropa*. The meanings of dreams in the biographical literature enhances their meanings in these doctrinal works and highlights aspects of the Buddhist understanding of consciousness and existence.

Since at present there is no major study of the role of dreams in any of the various forms of Buddhism, this study takes a step toward filling in our knowledge of this important aspect of Buddhism.

Dissertation Abstracts International vol. 52, no.2, August 1991, p. 571-A

Natural Sciences

Baig, Mirza Shahid

Structure and Geochronology of Pre-Himalayan and Himalayan Orogenic Events in the Northwest Himalaya, Pakistan, With Special Reference to the Besham Area. Ph.D., Oregon State University, 1991. 418 pp. Supervisor: Robert D. Lawrence. Order No. DA9130882

In the northwest Himalaya of Pakistan, metamorphism, deformation, and plutonism are the result of collision between the Indo-Pakistan and Asian Plates. The timing of pre-Himalayan orogenic events remains uncertain, due to strong, pervasive Himalayan overprinting.

This study presents new field, structural, and metamorphic data together with $^{40}\text{Ar}/^{39}\text{Ar}$ isotopic age data on hornblende, muscovite, biotite, and K-feldspar for Besham, Manshira, Swat, and Hazara areas of northern Pakistan. These data provide the first detailed record of Early Proterozoic to Late Paleozoic events in the northwest Himalaya and combine with prior U/Pb, Rb/Sr, and fission track data record on orogenic history from the Early Proterozoic to Cenozoic.

The Early Proterozoic orogenic events in the Besham basement complex occurred at (A) $2,031 \pm 6$ to $1,997 \pm 8$ Ma, (B) $1,950 \pm 3$ Ma, and (C) $1,887 \pm 5$ to $1,865 \pm 3$ Ma. These were followed by sodic granite intrusion at $1,517 \pm 3$ Ma.

Subsequently, flysch of the Kurmang, Gandaf, Manki, Hazara, Dogra, and Simla formations was deposited unconformably overlain by the molasse of the Tanawal and Manglaur formations. The area underwent metamorphism and deformation at 664 to 665 Ma, and volcanism and plutonism at 850 to 600 Ma (Hazaran orogeny). Later metamorphism and deformation at $>466 \pm 3$ Ma and plutonism at 550 to 450 Ma record an Early Paleozoic orogeny.

Alkaline magmatism (315 ± 15 to 297 ± 4 Ma), sodic granites ($>272 \pm 1$ Ma), mafic Panjal volcanism

(284 ± 4 to 262 ± 1 Ma), and metamorphism (333 ± 1 Ma), occurred during early rifting of the Cimmerian microcontinent from Gondwana.

The early Himalayan metamorphism and deformation in northern Pakistan occurred between 84 to 64 Ma. $^{40}\text{Ar}/^{39}\text{Ar}$ dates of 51 to 36 Ma, 36 to 30 Ma, and 30 to 24 Ma from shear zones, date successive shearing, and 24 to 5 Ma fission track dates show unroofing and tectonic erosion, during the development of the Indus syntaxis. The presence of active faults, seismicity, and newly recognized 1600 m of uplifted Indus river terraces, show that the Indus syntaxis is an active feature, which has an uplift rate of about 1mm/yr since 5.2 Ma.

Dissertation Abstracts International vol. 52, no.5, November 1991

Islam, Kamal

Evolutionary History and Speciation of the genus *Tragopan*. Ph.D., Oregon State University, 1991, 88pp. Major Professor: John A. Crawford, Order Number DA9220500

A study of the phyletic relationships among five species of tragopans and an outgroup, the Blood Pheasant (*Ithaginis cruentus*), was conducted from 1987 to 1991. Biochemical, behavioral, and external morphologic characteristics were compared. A cladistic approach was used to compare the behavioral, biochemical, and external morphologic data collectively, as different phyletic relationships were obtained when each area of investigation was analyzed separately. Although unlike other pheasant species the genera *Tragopan* and *Ithaginis* molt their tail feathers centrifugally, study results did not indicate that these two groups were closely related. Based on a compilation of 25 characters, seven possible phylogenetic trees were generated. I rejected six of the seven trees based on current geographical distribution, morphology (size and complexity of lappet in males), behavior (wing coordination during the frontal display of male tragopans), and electrophoretic (number of unique alleles among the different species of tragopans) data. I accepted the tree that grouped Satyr and Western as closely related species and grouped Temminck's, Blyth's, and Cabot's tragopans together, with Temminck's and Cabot's being more closely related to each other than either was to Blyth's. I proposed that the prototype of tragopans probably had their origin in the eastern Himalayas. There were probably two major dispersal events; one population dispersed into central and south-east China and the Himalayas provided a corridor for the dispersal of a second population. Due to geological events in the Himalayas and China, these populations further split and eventually evolved into the extant forms.

Dissertation Abstracts International, vol. 53 no. 2, 1992, p. 660-B

Shah, Muqarrab

Taxonomic studies in the genus *Potentilla* (Rosaceae) from Pakistan and Kashmir. Ph.D., University of Aberdeen (United Kingdom), 1990, 324pp., Order Number BRDX96092 (Available from UMI in association with The British Library)

Aims and development of the project. This project has been undertaken to give a detailed taxonomic account of the genus *Potentilla* (Rosaceae) for the Flora of Pakistan, in the first instance, as no floristic work of this kind has been done for the genus from this area. Secondly, where taxonomic problems related to the genus became apparent during the course of the preparation of the Flora, it necessitated more intensive surveys such as multivariate studies of polymorphic groups (*Potentilla pamirica* group and section *Haematochroae*). Thirdly, the genus *Potentilla* proved to be particularly amenable to flavonoid studies and as no previous studies were available from Pakistan and Kashmir, consideration was given to their value as potential taxonomic markers. (Abstract shortened by UMI.)

Dissertation Abstracts International, vol. 53 no.3, September, 1992, p.1148-B

Shivakoti, Ganesh Prasad

Organizational effectiveness of user and non-user controlled irrigation systems in Nepal. Ph.D. Michigan State University, 1991, 162pp. Major Professor: George H. Axinn, Order Number DA9216365

This study, which focuses on the organizational effectiveness of user and non-user controlled irrigation systems in the western hills of Nepal, was conducted with the purpose of assessing the extent to which these systems differ in perceived effectiveness, level of participation and perceptions of equity in meeting the water needs of the farmers being served.

The study design included both survey methodology and rapid appraisal. The conditioning variables included socioeconomic status of household, family structure, and demographic characteristics of the respondents. The dependent variable was organizational effectiveness which was measured by perceived effectiveness, level of participation, and perception of equity.

Several hypotheses were tested. The major one was: Perceived organizational effectiveness will be higher in user controlled irrigation systems than in non-user controlled systems as manifested by higher scores of perceived effectiveness, level of participation and perceived equity.

The findings indicate that leadership patterns for solving problems that relate to dam and canal repair, water acquisition, allocation and distribution of water were significantly different for user and non-user controlled systems. Significant positive relationships were found only between participation and farm size and farm income.

One-way analysis of variance was used to observe the differences in effectiveness, participation and equity among different groups. Only participation mean scores showed a significant mean difference. Also significant differences were observed on the mean response scores by location.

Significant differences were found between effectiveness and participation by control type. Thus, organizational effectiveness was observed more within the user controlled systems as explained by higher effectiveness and participation mean scores.

Important policy implications of the research include: (1) the agency responsible for irrigation system maintenance should reconsider the present policy of creating a dependency syndrome, and should decentralize the decision-making situation to increase system effectiveness; and, (2) to achieve better organizational effectiveness government should turn the system's ownership to the users and provide only emergency back-up services. This may induce higher levels of participation and feelings of fairness among users.

Dissertation Abstracts International, vol. 53 no. 1, July, 1992, 2-B

Stapleton, C. M. A.

A morphological investigation of some Himalayan bamboos with an enumeration of taxa in Nepal and Bhutan. Ph.D., University of Aberdeen (United Kingdom), 1991, 277pp., Order Number BRDX95962 (Available from UMI in association with The British Library)

The taxonomy of Himalayan bamboos has been neglected in the past because of their unpredictable flowering as well as their geographic and political inaccessibility. Recent awareness of the fragility of the Himalayan ecosystem, and the potential economic and conservational role of bamboos has highlighted this neglect. The introduction of various programs by the governments of Nepal and Bhutan to address their environmental problems has allowed the detailed study of many of their bamboos, in order to provide information of use to those implementing such programs. The opportunity to study live plants in their natural environments has allowed detailed morphological investigations to be undertaken, as well as the collection of much new herbarium material.

After investigating the boundaries between the Himalayan genera, it was possible to enumerate the species more effectively. The bamboos encountered in the field constitute a large increase in known Himalayan bamboo taxa. In this work fifty-four taxa from fifteen genera are included from within or close to Nepal and Bhutan. Because many taxa are represented by very few collections, which are often sterile, it is difficult to decide upon the claims of some of them to separate specific status, but it would appear that a surprisingly large number of new species have been encountered. This could be explained by the inaccessibility of the countries concerned, the poor availability of fertile material in these periodically flowering plants, and previously inadequate knowledge of bamboo morphology.

The enumeration includes thirty species from Nepal, and twenty-eight species from Bhutan, with a total of 42 species collected within the two countries. Of the forty-two species encountered, only twenty-eight seem to have published names. There would seem to be fourteen new species. Several other taxa can be satisfactorily placed within well-known species, but it is felt necessary to distinguish them as they differ substantially from the type specimens of those species, and are consequently very difficult to identify. Therefore it is also considered necessary to describe four new subspecies and three new varieties. In addition rationalisation of the genera results in nine new combinations. (Abstract shortened by UMI.)

Dissertation Abstracts International, vol. 53, no. 2, August 1992, p. 649-B.