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Doctoral Dissertations on the Himalayan Region
Compiled and Edited by Frank Joseph Shulman

Social Science

AGGARWAL, Safia.

Supernatural Sanctions in Commons Management: Panchayat Forest Conservation in the Central Himalayas. University of Hawaii [United States], 2001 (Ph.D. in Geography). Chairperson/Adviser: Brian Murton. xix, 300p. DAI 62, no.2 (Aug. 2001): 709-A; UM 3005192.

This dissertation examines a dynamic process of sanctification of forests in the Central Himalayan region of northern India, where villagers are placing village (*panchayat*) forests under divine supervision for conservation. Using the political ecology, common property, and spiritual ecology perspectives, the study analyzes the reasons for forest sanctification. The study investigates the changes in local resource use patterns, and the inter- and intra-village variations in household adaptations resulting from forest sanctification. The study assesses the ecological impacts in the region by focusing on the collateral impact of sanctification.

The study suggests that the decision to sanctify village forests emerged from multiple reasons relating to the problem of enforcement of rules of forest use. Integration of villages into the market economy is leading to shortage of labor for household and community activities. Political economic integration and state policies are also leading to weakening of legal and social sanctions important in community resource management. Lacking effective secular solutions to these problems, villagers have resorted to the customary use of the supernatural to enforce forest rules.

The study shows that supernatural sanctions have resulted in significant shifts in resource use patterns and regeneration in sanctified forests. However, long-term success of this strategy is limited by the greater risk-taking behavior of households better linked with market economy. Moreover, regional success of supernatural sanctions is limited by excessive pressure on secular forest in the vicinity.

This research confirms that problems of natural resource degradation are embedded in social factors and in peoples' belief systems. It suggests that local *solutions* to resource degradation are limited by increasing social differentiation, and gap between forest users and decision-makers. Therefore, local institutional change is needed, more suited to the changing social, political, and economic circumstances.

From the theoretical perspective, the research emphasizes the importance of social and spatial heterogeneity in understanding a phenomenon. It suggests that evolutionary models of socio-economic change are insufficient in explaining the complex coexistence of contradictory patterns observed. The continued emergence of sacred in an increasingly secular world presents one such phenomenon that it opens up for further research.

Contents: 1. Introduction. 2. The Study Area, Human Environment Relations, and Social, Economic and Political Change. 3. Changes in Government and Local Institutions of Forest Management. 4. Appealing to the Goddess of Justice for *Panchayat* Forest Conservation. 5. Local Adaptations to Forest Sanctification. 6. Historical Ecology and Regional Ecological Change since Forest Sanctification. 7. Conclusion: Future of Sanctified Forests and Some Theoretical and Practical Implications. 26 figures. 13 tables. Appendix: pp.263-65. Bibliography: pp.267-300.

ARDLEY, Jane.

Resistance, Religion and Politics: The Tibetan Independence Movement in Comparative Perspective. University of Keele [United Kingdom], 1999 (Ph.D. in Politics). AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.50, pt.1, entry no.50-33.

Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DXN028823.

The thesis seeks to examine the role of resistance, religion and politics in the Tibetan independence movement, and compares and contrasts the course and tactics of the movement with those of India. The justification for this comparison is the admiration that the Tibetan leader, the Dalai Lama, holds for Mahatma Gandhi. The ambition of the thesis is to rectify the problem that the Tibetan independence movement is not taken seriously from a political perspective. The thesis is particularly concerned with the relationship between Buddhism and Tibetan politics and resistance, and compares this with the relationship between Hinduism and Gandhian political thought, and the impact of religion upon the Indian nationalist movement. It also seeks to expand on the limited literature concerning violent resistance in Tibet.

The relationship between religion and politics in the Tibetan state prior to the Chinese invasion in 1950 is examined, as is the influence that religion continues to have on the Tibetan government in exile. Two case studies of Tibetan resistance are analyzed: guerilla resistance from the 1950s to 1970s, and a hunger strike by the Tibetan Youth Congress in 1998. The success of each case is evaluated, as are the implications that each case holds for the future of Tibet. There is also an examination of the movement toward democracy by the Tibetan government in exile.

The thesis then examines the Indian nationalist movement, focusing in particular on the development of Gandhian methods, the progress of the movement and the importance of religion. The lessons which India can offer Tibet are analyzed, and conclusions regarding the role of religion in the Tibetan independence movement are drawn. The thesis concludes that democratization and secularization must be the principles, learnt from India, on which the future success of the Tibetan independence movement rests.

AGHA, Sameetah.

The Limits of Empire: British-Pukhtun Encounter, 1897. Yale University [United States], 2001 (Ph.D.). Chairperson/Adviser: Paul Kennedy. xii, 208p. DAI 62, no.3 (Sept. 2001): 1162-A; UM 3007301.

The subject of this dissertation is the 1897 Pukhtun revolt in the North-West Frontier of British India. The Frontier occupies a unique place in the history of British colonialism. The British were unable to conquer this region or subdue its inhabitants—the Pukhtun tribes—despite over a hundred bloody confrontations between 1849-1904, and despite fighting some of the hardest and biggest campaigns in the history of colonial warfare.

This revolt is an important episode in the history of the British-Pukhtun encounter. It was unprecedented in the magnitude of the area involved and saw for the first time in the Frontier, the combination of 200,000 “warlike tribes” that the British regarded as among the best fighters in the world.

No study of this revolt exists since the colonial period. Challenging the official colonial narrative, through which this revolt has been seen till now, this dissertation brings forth a new interpretation. This study is mainly based on previously unconsulted records contained in archives in London, India, Pakistan, and the Frontier, and on Pukhtun oral tradition. This study, for the first time, introduced the Pukhtun voice on the British-Pukhtun encounter.

Following the introduction, in Chapter 1, the dissertation is divided into five chapters: Chapter II surveys the official view of three of the major outbreaks of this revolt—The Tochi Disaster, the Uprising in Swat, and the loss of the Khyber. Chapters III, IV, and V bring forth a new interpretation of these three outbreaks. Chapter VI places the implications of this study within the larger imperial framework.

Contents: 1. Introduction. 2. The 1897 Revolt as Seen Till Now. 3. The Tochi Disaster: A Case of Black Treachery? 4. The Uprising in Swat. 5. The Deliberate Creation of the “Blackest Day”. 6. Conclusion. 13 figures. 2 tables. Appendix: pp.181-93. Bibliography: pp.194-208.

BEINE, David Karl (1963-).

Ensnared by AIDS: Cultural Models of AIDS and Underlying Cognitive Illness Schemata in Nepal. Washington State University [United States], 2000 (Ph.D. in Anthropology). Chairperson/Adviser: Linda Stone. xv, 554p. DAI 61, no.10 (Apr. 2001): 4060-A; UM 9988951.

The way people make sense of illness is, in part, culturally determined. Existing beliefs and presuppositions shared by a community (cultural knowledge) regarding illness plays a significant role in shaping an

understanding of newly emerging illnesses in any given culture. This cultural knowledge is organized as cultural modes, which are utilized to “make meaning” of new situations such as the HIV/AIDS epidemic. These cultural constructions (cultural models) of illness can also contribute to the spread of the epidemic. HIV/AIDS is a relatively new and rapidly growing problem in Nepal. Little is known about how the populace of Nepal understands the illness, locally known only as *AIDS rog* or about the process by which the development of a cultural model of HIV/AIDS is occurring.

This research, utilizing a cognitive anthropological approach in tandem with a discourse analysis approach, focuses on the meaning of HIV/AIDS in Nepal, examining emerging cultural models and proposing underlying illness schemata that inform these cognitive models. The results may have practical application for HIV/AIDS prevention programs in Nepal as well as theoretical implications by testing the cross-linguistic validity of the narrative analysis mode. It may also be theoretically important for providing a better understanding of how people incorporate new ideas into their established cognitive systems.

Contents: Section One: Background and Theoretical Underpinnings. 1. Introduction. 2. Nepal. 3. AIDS. 4. AIDS in Nepal. 5. Cultural Models, Schema Theory, and Cognitive Methodologies. Section Two: The Projects. 6. Saano Dumre Revisited: Changing Models of Illness and Cultural Models of HIV/AIDS in a Rural Nepali Village of Central Nepal. 7. HIV and Me: A Discourse Analysis of HIV/AIDS Narratives. Section Three: Wrapping It Up. 8. Nepali Cultural Models of HIV/AIDS and Underlying Illness Schemata. 9. The Making of a Cultural Model. 10. Conclusions. 34 figures and maps. 8 tables. Appendices [A-D]: pp.326-554. Bibliography: pp.304-25.

BHANDARI, Ravi (1966-).

Land and Labor Markets among Paddy Producers in the Nepalese Tarai. University of Massachusetts at Amherst [United States], 2001 (Ph.D. in Economics). Chairperson/Adviser: James K. Boyce. xiv, 334p. DAI 62, no.1 (July 2001): 272-A; UM 3000298.

A central concern of this study is to confront both neoclassical and Marxist interpretations of two “semi-feudal” institutions—bonded labor and sharecropping—which are regarded as either inert and inefficient, by neoclassical economists or as repressive and exploitative, by Marxists. Both interpretations believe the demise of these institutions to be inevitable and welcome, and explain their prevalence and persistence by situating these institutions in a “prolonged transition” from feudalism to capitalism. Both interpretations are united in their assumptions that non-wage relations such as bonded labor and sharecropping (and the multitude of contractual arrangements they encompass) are *static, homogenous*, and an *obstacle* to technological change and economic development.

This dissertation seriously questions whether these contracts are less “advanced” than fixed-rent or wage contracts, and challenges these assumptions both theoretically and empirically. In particular, I challenge the common perception that both bonded labor employment contracts in the labor market and sharecropping contracts in the land rental market are undifferentiated categories. Part I highlights the importance of taking labor heterogeneity into account, and develops a disaggregated approach to do so. Important quality variation in different labor-employment types is found to lie in the different incentives and wage characteristics each type of labor faces. Part II explores differences within sharecropping contracts, in which the labor and land markets overlap. We differentiate sharecropping contracts by the social distance that keeps tenants and landlords apart. This new variable proves to be statistically significant in explaining productivity differentials among share tenants in the Nepalese Tarai.

Contents: 1. Problems in the Analysis of Farm Labor Quality and Effort. Part One: Quality Considerations in the Labor Markets. 2. Farm Operations and Labor Quality. 3. Review of Economic Literature on Labor Contracts. 4. Labor Quality in Production Decisions: Theory. 5. Description of the Study Area and Sample Characteristics. 6. Empirical Models for Labor Quality Analysis. 7. Estimation of Empirical Models and Analysis of Results. Part Two: Land Tenure in Nepal: A Constraint to Growth? 8. Land Tenure in Historical Context. 9. Social Distance in Sharecropping Relations. 10. Sharecropping in the Study Villages. 11. Estimation of Empirical Model and Analysis of Results. 12. Summary and Conclusions. 13 figures. 55 tables. Appendix: pp.304-10. Bibliography: pp.311-34.

BHATTARAI, Keshav.

Household Landownership and the Use of Forests in Bara District, Central Tarai Region of Nepal.

Indiana University [United States], 2001 (Ph.D. in Geography). Chairperson/Adviser: Dennis Conway. xxiii, 400p. DAI 62, no.8 (Feb. 2002): 2844-A; UM 3024194.

This dissertation examines the patterns of peasant landownership and the use of forests as a dual strategy of survival and livelihood in the *Bara* district of the Central *Tarai* region of Nepal. Utilizing a peasant ecology theory developed by Shrestha and Conway (1996), this dissertation examines the social, political, ecological, and cultural relations of production that are expected to influence a peasant households's subsistence livelihood in the *Tarai* frontier region of Nepal.

In this research, peasant ecology relations at the frontier are the focus, and an empirical examination is undertaken to establish the relative importance of a variety of household attributes, such as migration and settlement history, and geographical location, and how they might influence peasant households' ecological relationships with farmland and forest-use. Peasant households are differentiated according to their household characteristics, their migration experiences, and settlement and locations choices. An unordered multinomial logistic regression model is used to analyze primary data collected from 230 household respondents of hill migrants and *Tarai* long-time residents of five Village Development Committees (VDC) and one municipality of the *Bara* district. The major findings are that caste and cultural divisions differentiate approaches to resource management of forests and land, with upper caste hill communities benefiting from institutional favors, while *Tarai* communities don't. Peasants with small land parcels care more for common lands and forests than those with land titles, while the higher educated families invest more resources in their private lands and forests. Off-farm employment is important for many of these frontier families, regardless of hill and *Tarai* origins.

Contents: 1. Introduction. 2. Historic, Geographic, Socio-Economic, Demographic, and Land Use Information about Nepal. 3. Historic, Geographic, Socio-Economic, and Demographic Information about the Bara District. 4. Review of Literature: Households' Land Tenure and the Use of Forests. 5. Research Methodology and Description of Variables. 6. Model Specification and Result Interpretations. 7. Conclusions: Summary of the Major Findings. 43 figures. 86 tables. Appendices [8]: pp.379-400. Bibliography: pp.350-78.

BOULAY, Marc Guy.

Change in Social Networks, Information-Seeking, and Contraceptive Adoption among Women in Rural Nepal. Johns Hopkins University [United States], 2000 (Ph.D.). Chairperson/Adviser: Thomas W. Valente. x, 209p. DAI 61, no.10 (Apr. 2001): 5257-B; UM 9993080.

There is growing evidence that women's social networks regarding family planning are influential in their decisions to use a contraceptive method. It is unclear, however, how discussions with peers facilitate contraceptive use or what role information-seeking strategies may play in determining the composition of these networks. Identifying the reciprocal influences between individuals and their social environment may foster a greater understanding of the process by which innovations diffuse throughout a community and may inform community-based approaches to behavior change. The present study examined changes in the composition of women's family planning discussion networks over time to assess both the role of discussion networks in promoting contraceptive use and the role of individual motivations in constructing one's social environment. Data were collected at two points in time from women living in three villages in Dang District, Nepal using structured surveys (N = 281) and semistructured in-depth interviews (N = 12). Sociometric data were collected to identify discussion networks. Cross-sectional and longitudinal logistic regression models were used to test the research questions. Adoption of family planning was associated with positive changes in the composition of one's social network. Women who added a long-term user or recent contraceptive adopter or who had dropped a non-user from their network were all more likely to have adopted a contraceptive method. The use of these multiple pathways to contraceptive adoption suggested that a number of mechanisms mediate the relationship between social interaction and individuals' behavior. Individual-level characteristics were associated with these changes. Women with low levels of knowledge were more likely to have added long-term users to their network. Women with positive attitudes towards family planning were often more likely to have made positive changes to their network. Perceptions of spousal disapproval and son preference were associated with a lower use of Positive changes strategies. Cognitive dissonance was used to explain the role of these changes as strategies to minimize one's exposure to information dissonant with one's existing attitudes and beliefs. The present findings support current the use of

family planning programs focusing on community-based activities aimed at women's empowerment.

Contents: 1. Introduction. 2. Literature Review and Conceptual Framework. 3. Methodology. 4. Results from the Survey Data. 5. Results from the In-Depth Interviews. 6. Discussion. 4 figures. 15 tables. Appendices [A-C]: pp.143-197. Bibliography: pp.198-208.

DALAL, Brinda.

Gujjars in Garhwal: Parallel Lives: Situational Identity and Exchange. University of Cambridge [United Kingdom], 1996 (Ph.D. in Social Anthropology). AB: *Index to Theses With Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-10163. Contact Cambridge University Library (West Road, Cambridge CB3 9DR, United Kingdom) regarding the purchase of a microfilm or paper copy.

The 'practice' of identities, the central theme of this thesis, is addressed through an ethnographic discourse of Gujjars referring to themselves simultaneously as 'forest-dwellers', transhumant water-buffalo herders, and Sunni Muslims in the Garhwal Himalayas (India). I explore this in the context of two issues: the significance of space and landscape on the one hand and exchange (*badli*) on the other. Questions of self-definition are examined through concepts of space as cognisant place, as well as in spatial relationships between persons. Mobility and 'place', discussed in chapter two on seasonal migrations, and in chapter four on marriage and clan alliances, elicit particular perceptions of landscape, livelihood, and identity.

I illustrate further in chapter three how specific relations between people and/or goods (primarily milk products) determine when products are bartered, bought, or sold: additionally, how potential conflict, based on the politics of 'administrative territoriality', perceived boundaries of ethnicity, religion and resource use, is arbitrated and ameliorated through relationships of barter, trade, and credit. Finally, I argue that underlying ideas of extensive 'brotherhood' (described as a 'a *jali*, spider's web—covering everything') and preferential cross-cousin exchange marriages, rest upon the implicit knowledge of the individual's biological agnates and his or her matrilineal ties.

DOLMA, Karma Choepel (1962-).

Construction of Social Identities: An Ethnographic Study of Tibetan Student Discourses in Higher Education. University of Massachusetts at Amherst [United States], 2001 (Ed.D.). Chairperson/Adviser: Jerri Willett. xiii, 255p. DAI 62, no.4 (Oct. 2001): 1304-A; UM 3012127.

Working within the framework of critical postmodern perspectives, and based on fifteen sources of ethnographic data, and two methods of data analysis, this research explores how Tibetan students construct a variety of social identities through their discourses. The postmodern concept of a variety of social identities is coded here as an individual construction of «a portfolio of social identities,» which facilitates the negotiation and mediation of intercultural tensions and identity differences.

Five key themes that emerged were tensions and intercultural challenges in the field of scholarship and socialization, specifically in (1) negotiating access and opportunity for higher education in forming specific student identities through university and program access and affiliation, (2) accommodating bicultural learning and teaching approaches, and future professional identities, (3) constructing a network of academic support, (4) accommodating change in gender social identities, and (5) negotiating core and intercultural social identities.

Research findings indicate that individual ideologies, goals, and intercultural salience or difference plays a major role in the construction of social identities, as students, as Tibetans, and so on. Tibetan women, and to a lesser degree, Tibetan men respondents expressed greater sense of self-empowerment through acquisition of student and professional identities, financial independence, and intercultural competency. Participants negotiated and accommodated social identities that were biculturally valued by American and Tibetan societies, but these sites were also contested individually, due to differences in ideologies, goals, and so forth. Generally, student and professional identities were more easily accommodated, while other group social identities, such as gender and cultural identities presented more tension and identity contestations. Students strategically negotiated intercultural tensions by foregrounding salient, and backgrounding contested social identities, while at the same time, maintaining and reaffirming core cultural and intercultural social identities, as Tibetans, as Buddhists, and as western, educated students and professionals.

The individual construction of a «portfolio of social identities» can be grouped into three social identity

schemas, consisting of modern social identities as individuals, students, and future professionals, political social identities based on negotiated gender and group cultural identity constructs, and thirdly, identify support networks consisting of academic and life-long support sources which facilitate identity constructions.

Contents: 1. Construction of Social Identities. 2. A Theoretical Framework. 3. Research Design and Methodology. 4. Data Analysis. 5. Research Findings and Recommendations. Bibliography: pp.243-55.

GRAWE, Nathan D.

Intergenerational Mobility in the US and Abroad: Quantile and Mean Regression Measures. University of Chicago [United States], 2001 (Ph.D. in Economics). Chairperson/Adviser: Casey B. Mulligan. xii, 225p. DAI 62, no.7 (Jan. 2002): 2514-A; UM 3019920.

This paper provides an international comparison of rates of intergenerational income mobility. Age-dependence of income persistence estimates (explained and quantified in this work) suggests that comparisons of multiple studies using different selection rules will result in erroneous conclusions. What little difference is found in the rate of mean regression between industrialized countries, mobility among exceptional sons is found to be much faster in the US and Canada than in Germany or the UK. I also provide a first look at mobility in five developing and underdeveloped countries—Ecuador, Malaysia, Nepal, Pakistan, and Peru. In general, it appears that mobility is slower in these countries. All of these findings are similar to results found in the occupational mobility literature. In addition to these empirical findings the thesis develops a new test for binding intergenerational credit constraints based on quantile regression. And a method is created to correct quantile regression estimates for the bias resulting from measurement error. A variation of this method allows for a quantile regression analogy to the two-sample instrumental variables estimator.

Contents: 1. The Land of the Free? 2. How Is Opportunity Measured? 3. A Model of Intergenerational Earnings. 4. Determinants of Mobility Rates and Shapes. 5. Measuring Lifetime Income. 6. Opportunity in North America. 7. Opportunity in Europe. 8. Opportunity in Malaysia. 9. First Evidence from Other Nations. 10. Conclusion. 41 figures. 55 tables. Appendices [A-H]: pp.141-218. Bibliography: pp.219-25.

GUPTA, Hemant Kumar.

A Study of Factors Influencing Participation in Joint Forest Management in the Northwest Himalayas, India. University of Aberdeen [United Kingdom], 1999 (Ph.D.). AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-11601. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DXN031020.

The study analyzes the evolution of Joint Forest Management (JFM) in India. The influence of historical, social, economic, and cultural factors on participation in JFM is discussed with reference to the Northwest Himalayas. The history of forest use and management in the eras of Pre-British rule, British rule, and post-independent period is discussed.

The household level differences in six case study level village, with regard to size of landholding, livestock, and trees are compared. The influence of family size, caste, literacy, and occupation for its dependence on forests for timber, fuelwood, fodder, livestock grazing, and non-wood forest products is analyzed for implications for participation in JFM.

Variation between villages due to altitude, distance from markets, socio-economic characteristics of households all influence dependence on forests. The opinions of households in villages with regard to decrease in forest and forest resources, in relation to forest management option vary. The protection and management of forest areas need to be clearly defined in relation to multiple use rights of many villages.

The existence of institutions of cooperative labor, local village gods, women and youth groups, and of sacred forest groves provide examples of potential cooperative development for increasing mutual understanding between communities. These can be utilized for formation of rules for forest use and forest management by Village Forest Development committees.

Forest staff have different perspectives with regard to implementation of JFM. They recognize a need for re-training of front-line forest functionaries particularly «Forest Guards.» Social, economic, and political complexities necessitate that JFM must be a process where these factors are incorporated into Forest Department

activities and monitored in order to evolve effective institutions for forest use and management. The new forest policy has to be flexible and needs to be amended on the basis of efforts at implementing JFM.

HANGEN, Susan Irene.

Making Mongols: Ethnic Politics and Emerging Identities in Nepal. University of Wisconsin at Madison [United States], 2000 (Ph.D. in Anthropology). Chairperson/Adviser: Kirin Narayan. xiii, 315p. DAI 61, no.8 (Feb. 2001): 3230-A; UM 9983789.

This dissertation examines the processes by which identity is constructed in ethnic political movements through an ethnographic study of the Mongol National Organization (MNO), a political party that has organized marginalized ethnic groups in order to end centuries of domination by high-caste Hindus in Nepal. Through their involvement in the MNO, people from numerous, diverse ethnic groups have begun to identify themselves in a new, unified way, as «Mongols.» By demonstrating how a Mongol identity has emerged along with the mobilization of the MNO, the dissertation argues that the construction of identity is a central part of the mobilization of ethnic political movements.

Drawing on three years of research in rural Ilam district, the MNO's stronghold in eastern Nepal, this dissertation documents a movement that has mobilized a largely rural population on the basis of identity politics. The dissertation focuses on the emergence of identity both through the MNO's cultural productions and through the party's operations as an organization. Though the party is informally and erratically organized, and headed by charismatic leaders, party activities effectively create a political community and disseminate a critical discourse in rural Ilam. The MNO seeks to establish a unified Mongol identity by representing Mongols as racially and culturally distinct: Mongols are «not Hindu,» they have their own languages, cultures, and religions, and a common history. In attempting to define Mongols in cultural terms, the MNO faces the same dilemmas encountered by all nations in the making: how to represent a heterogeneous population as a unified homogenous group? MNO efforts to represent Mongols reveal the fragility of Mongol identity, which is constantly cross-cut by other competing and overlapping identities.

Identity, the dissertation illustrates, is shaped by both transnational and national discourses. The racial term «Mongol,» which hails from 19th century ethnology, appeals to MNO supporters because they see it as an internationally recognized term that refers to a global political stage, and are acutely aware of the currency of identity politics in the international political arena.

Contents: 1. Introduction, Methodology, and Background. 2. The Production of Difference: Nationalism and Ethnic Politics in Nepal. 3. Structure and Struggles in the MNO. 4. «Our Own Heartbeats»: Representing Mongols. 5. Contradictions in Local Politics: The MNO in Maidel. 6. Becoming Not Hindu: A Gurung Community's Shift to Buddhism. 7. Concluding Thoughts. 7 figures and maps. Bibliography: pp.302-15.

HEGEWALD, Julia Anna Barbara.

Water Architecture in South Asia: A Study of Types, Developments and Meanings. University of London [United Kingdom], 1998 (Ph.D. in Archaeology, School of Oriental and African Studies). 712p. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.6, entry no.49-12017. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DXN030292.

This dissertation is a study of architectural structures relating to water in India, Nepal, and Sri Lanka, mainly between the ninth and the nineteenth centuries. The structures under examination are divided into five main types: *ghats* (steps into water), tanks, *kundas* (deep stepped basins), wells, and ornamental pools in palaces and water gardens. The dissertation shows how water structures signify both practical and metaphysical importance; it investigates the various forms and parts of water monuments, and it traces their development from simple to more complex forms of architecture. In particular, it is concerned with the shapes of the structures, which favor both secular and religious activities, express sacred and royal meanings, and provide a setting for the re-enactment of mythical events.

The brief general information summarizes the present state of research, discusses the sources and explains the chosen approach to the material. This is followed by an introduction to the religious meanings and cultural associations connected with water in the main religious traditions of South Asia. The five following chapters each deal with one of the five types of water architecture, and contain the main findings of the author's fieldwork.

It is argued that the architectural framework of each of the principal types of water architecture is common to the entire subcontinent, that regionalism has considerably less influence on them than has hitherto been assumed, and that no type is exclusive to any one context. Each chapter analyzes the main characteristics and the constituent architectural parts of the type, its variations, the border cases, and developments. The final chapter summarizes the main results, examines common themes in water architecture, and outlines modern continuity in South Asia.

Published as *Water Architecture in South Asia: A Study of Types, Development and Meanings*, by Julia A.B. Hegewald. Leiden and Boston, Mass.: Brill, 2002. xiii, 266p. and 112p. of plates (Studies in Asian art and archaeology, vol.24).

HOSSAIN, Farhad.

Administration of Development Initiative by Non-Governmental Organisations: A Study of Their Sustainability in Bangladesh and Nepal. Tampereen Yliopisto [University of Tampere] [Finland], 2000 (Ph.D.). 276p.

Published as *Administration of Development Initiative by Non-Governmental Organisations: A Study of Their Sustainability in Bangladesh and Nepal*, by Farhad Hossain. Tampere: University of Tampere, 2001. 276p. (Acta Universitatis Tampereensis, 822).

JACOBSON, Eric Emil.

Situated Knowledge in Classical Tibetan Medicine: Psychiatric Aspects. Harvard University [United States], 2000 (Ph.D. in Anthropology). Chairperson/Adviser: Byron J. Good. xi, 687p. DAI 61, no.9 (Mar. 2001): 3631-32-A; UM 9988621.

This study provides (i) an analytic description of the methods by which classical Tibetan physicians and their patients produce situated medical knowledge, i.e. knowledge of specific, immediately experienced instances of illness and therapy, and (ii) textual and ethnographic material descriptive of classical Tibetan medicine in general. Methods include the original translation of portions of the tradition's central classic ethnographic observation of several hundred clinical encounters between classical physicians and their patients in contemporary northern India, and semi-structured interviews with patients on their life history, illness history, symptomatology, explanatory discourse and narrative styles.

A discussion of the training of classical physicians covers its ethical, religious, intellectual and practical dimensions. The analysis is framed in terms of the interdigitation of a deliberative rationality which is applied to clinical examination, diagnosis and treatment planning on the one hand with iconographic elements and ritualized activities which constitute a mode of «participation» in transcendental healing powers on the other. This is supplemented by descriptions of the historical, ethnographic, bureaucratic, architectural and religious contexts within which the clinical encounter and illness experience occur. A model is given of the «script» which enables physicians and patient to collaborate in the efficient execution of the clinical encounter's medical tasks. Other more variable aspects of clinical encounters are also described.

Next discussed is a series of case studies of patients who were diagnosed by their physicians as suffering from «life-wind,» an illness in which psychiatric symptoms are prominent, and who had also been observed in clinical encounters. Results include the relative frequencies and significance of the subjects' own testimony in the following areas: (i) distressing events identified as causes of their illness, (ii) symptomatology, (iii) modalities of treatment, (iv) etiological, pathomechanical and therapeutic explanations, and (v) the «narrative style» of the subjects' testimony. In addition to this an extended narrative of an exemplary case is given.

The final chapter summarizes the features of classical Tibetan medicine and methods of situated knowledge production which the study has documented. Appendices include (i) selected materia medica, (ii) selected formulary, and (iii) five additional case study narratives.

Contents: 1. Encountering Tibetan Medicine. 2. The Problem of Situated Knowledge. 3. Buddhism and Healing. 4. Pedagogy, Authority and Mnemonics. 5. Ethical and Spiritual Training. 6. Medical Theory. 7. Instructions for Clinical Practice. 8. Darjeeling and the Tibetan Diaspora. 9. Modes of Healing. 10. Normative Social Typification, Interaction and Bodily Department. 11. Contexts of Clinical Life. 12. The Organization of the Clinical Encounter. 13. Case Studies of Life-Wind Illness. 14. The Case of Chimay. 15. Case Study Results. 16. Summary and Conclusion. Appendices [1-3]: pp.542-619. Bibliography: pp.620-87.

JIAO, Ben.

Socio-Economic and Cultural Factors Underlying the Contemporary Revival of Fraternal Polyandry in Tibet. Case Western Reserve University [United States], 2001 (Ph.D. in Anthropology). Chairperson/Adviser: Melvyn C. Goldstein. xii, 206p. DAI 62, no.9 (Mar. 2002): 3095-A; UM 3027295.

This dissertation presents the first data on Tibetan fraternal polyandry (two or more brothers sharing a wife) based on fieldwork in Tibet per se. Based on 2 months of anthropological fieldwork and conducted in a village in Benam county in Shigatse prefecture of Tibet Autonomous Region, China, this dissertation examines the revival of polyandry in rural Tibet using a multifaceted research strategy that included a mix of traditional anthropological methods.

Despite the illegality of polyandry in the People's Republic of China and its virtual demise during the commune era, China's post-1978 economic reforms created a new set of socio-economic conditions that has led a substantial number of Tibetan families to choose the traditional Tibetan marriage pattern of polyandry over monogamy. At present, 33% of households in the study village practice polyandry. The dissertation examines why villagers are choosing polyandry in such numbers and what the consequence of selecting it is for them.

The reasons provided by villagers for practicing polyandry were economic and fell into three categories: concentration of male labor in households, greater potential to exploit off-farm economic opportunities, and the preservation of a household's land intact across generations. These reasons were borne out in reality as polyandrous households were found to be significantly more successful economically than monogamous and polygynous households. Households who practiced polyandry had significantly more males earning off-farm wages, had a higher total value of animals owned, and critically, had 43% higher per capita income than monogamous and 208% higher income than polygynous households. Polyandrous households also were significantly higher proportions of the upper socio-economic strata.

The dissertation examines the two major alternative explanations for polyandry found in the literature on polyandry in Tibetan society—the socio-economic versus the cultural. The findings of this study confirm the «socio-economic» explanation of Tibetan polyandry. Tibetans were clearly not deciding to marry their sons polyandrously because of a deep-seated cultural value that prescribes that form of marriage. Rather, they utilize polyandry because of materialistic, means-end factors that they perceived made polyandry more advantageous to the subsistence of their household and thus their stature and standing in the locality.

Contents: 1. Introduction: Theories and Debates. 2. Research Design and Research Methods. 3. Taxation, Marriage System, and the Family in Dechen Village before 1959. 4. Agriculture Reform and Village Composition. 5. The Family and Marriage in Dechen Village. 6. Fraternal Polyandry in Dechen Village. 7. Individual Relations and Attitudes Regarding Fraternal Polyandry. 8. Conclusions. 1 figure. 25 tables. Bibliography: pp.201-06.

KANTHA, Pramod Kumar (1959-).

Partisan Competition and Democratic Transition and Consolidation in South Asia: A Comparative Study of Democracy in India, Pakistan and Nepal. University of Missouri at Columbia [United States], 2000 (Ph.D.). Chairperson/Adviser: Paul Wallace. ix, 343p. DAI 61, no.9 (Mar. 2001): 3752-A; UM 9988674.

This dissertation is a comparative examination of the rise of political competition emphasizing competition between and within political parties in India, Nepal and Pakistan. The study investigates how multiparty competition has emerged, the impact of multiparty dynamics on intra-party competition, and in broader terms, how such competition affects government actors, institutions, and the democratic process. It is an historical-analytical study focusing on three country-specific cases. The central thesis of this dissertation is that the expansion of political pluralism in its current form between and within political parties in all three countries is a substantially new stage of political competition that conditions the nature of democratic transitions underway. As anticipated, the study finds that the new stage of multiparty political competition characterized by competitive electoral contestation combined with frequent alternations of power has emerged as a common trend in all three countries primarily during the 1990s. The growing ability on the part of previously marginalized political parties and groups to form electoral alliances and coalitions opened access to political participation. Governmental control required governing coalitions that, in turn, increased the shared stake in democratic transitions underway. Contrary to what might have been expected, the study

found that while alternation of power was a necessary condition, too large a victory can be dysfunctional due to South Asian political culture and negative experiences with personalism during period of hegemonic party rule. In addition, this new stage of multiparty competition led to demands for intra party democracy as well as changing the relationship of formerly dominant and opposition parties with each other and governmental institutions. As expected, the power of the executive branch in all three countries decreases vis-à-vis parliaments that allowed increased scope for disagreement and policy initiatives. Meanwhile, greater pressures for performance, transparency and accountability confront political actors in all three countries. This has led to an important unanticipated finding: the judiciary is taking a more assertive role in the adjudication of political conflicts and spearheading investigations against corruption or misuse of power. Although democracies in the three countries are far from consolidated, as is most evident in the Pakistani case, combination of a new stage of political competition in the domestic milieu and widening international support for democracy has rendered attempts to reverse the process of democratic transformations more risky than before.

Contents: 1. Political Competition and Democratic Transition in South Asia: A Comparative Study of Political Developments in India, Nepal and Pakistan. 2. The Trajectory of Political Competition and Democracies in South Asia: A Retrospective Analysis. 3. Changes in Party Structure and Transformation of Indian Democracy. 4. Continued Uncertainty of Democratic Transition in Pakistan. 5. Nepal's Swift Journey to Democracy: Strength and Weaknesses of Nepal's Democracy. 6. Conclusion. 2 figures. 9 tables. Bibliography: pp.326-42.

LaMACCHIA, Linda Jean.

Women's Religious Expression in Tibetan Buddhism: Songs and Lives of the Jomo (Nuns) of Kinnaur, Northwest India. University of Wisconsin at Madison [United States], 2001 (Ph.D. in Languages and Cultures of Asia). Chairperson/Adviser: David M. Knipe. viii, 437p. DAI 62, no.7 (Jan. 2002): 2455-A; UM 3020820.

Jomos are nuns, celibate women devoted to the practice of Buddhism; Kinnaur is a Himalayan tribal district on the Tibet bordering Himachal Pradesh, India. This dissertation, a first study of Kinnauri jomos, draws on fifteen months of field research focused on the songs and self-narrated lives of these Indian women in the context of village Buddhism in Kinnaur. Buddhism is known for its ability to integrate local beliefs and traditions, and this ability is one of its greatest strengths. While Mumford (1989) and Ortner (1978) have studied the encounter between Buddhism and local traditions by focusing on lama-shaman relationships and rituals, this dissertation focuses on nuns' lives and oral traditions. It argues that jomos have been major agents of Buddhism's assimilation in Kinnaur. The jomos have accomplished this in two ways. First, they compose and/or sing songs in Kinnauri vernacular (*githang*) and in Tibetan (*mgurma*) that present Buddhist narratives, history, and ideology in local formats, language, and contexts. For example, some of the jomos' songs represent indigenous «Hindu» village gods as supporters of Buddhist projects. Secondly, jomos have created (or inherited) lifestyles and identities that are liminal, neither fully lay nor fully renunciant; and their life stories reveal their struggles to balance these two sides: on the one hand, their need to work (for family, temple, or survival) and on the other hand, their devotional and intellectual ambitions to study and practice Buddhism. This dissertation argues that because or in spite of their ambiguous position, jomos are key figures in embodying and expressing the process by which Buddhism is reproduced and given meaning locally. Chapter 1 is an overview of jomos' lives; chapter 2 looks at ideal and actual gurus and disciples; chapter 3 compares the two song genres; and chapter 4 examines jomos' self presentations in songs and stories and asks why jomos as a rule do not sing about jomos.

Contents: Introduction. 1. *Jomos* of Kinnaur. 2. Gurus and Disciples. 3. Song in Kinnauri Buddhism: *Githang* and *Mgurma*. 4. Kinnauri Nuns' Self-Presentation in Song and Life Story. 5. Conclusions. plates: pp.394-406. Appendices [1-5]: pp.299-393. Bibliography: pp.407-37.

LAVINE, Amy B.

The Politics of Nostalgia: Social Memory and National Identity among Diaspora Tibetans in New York City. University of Chicago [United States], 2001 (Ph.D., Divinity School). Chairperson/Adviser: Bruce Lincoln. vi, 226p. DAI 62, no.10 (Apr. 2002): 3439-40-A; UM 3029515.

This dissertation focuses on the community of diaspora Tibetans living in and around New York City, and

their quest to imagine their homeland as a kind of Buddhist utopia separated from the political and economic hardships that mire Tibet today. Such a quest can be seen in the emergence of narratives of nostalgia generated by Tibetans living in exile. The production of an idealized site within the diasporic imaginary is a crucial element in any displaced people's attempts to reproduce culture in the absence of important aspects of its physical basis. Integral to such strategies is the development of narratives that portray life in the homeland in idyllic or utopian terms so that it is possible to achieve and maintain the impetus necessary to re-inhabit it with full claims to independence. An important component of this collective attempt to generate such ideal images of the homeland is the arousal of a desire to remain faithful to a particular image of the past and ultimately to return to it. Dialectically, exile politics are also influenced by the emergence of narratives in the refugee community. Any discourse concerning life in Tibet, present or past, which is cultivated by Tibetans living in exile must negotiate with the repressive measures taken by the Chinese against the Tibetan people. Further, diaspora removes people from spaces they regard not merely as «home,» but as «sacred ground.» Tibetans consider the Tibetan plateau to be the ground on which their entire cultural and religious heritage was established. But exile creates situations in which the very bases of social memory and collective identity are necessarily reshaped. With each successive generation born into exile, the remnants of Tibetan culture are being gradually diffused; with the impossibility of imminent return, the narratives which link the people to their past are becoming increasingly intertwined with the complex nuances of their present. Although many Tibetans living in exile believe that diasporic conditions are having largely negative effects on Tibetan culture, the creativity and invention that distinguish Tibetan efforts to reconstitute their culture in exile suggest to me a remarkable resilience.

Contents: Introduction. 1. Diaspora. 2. An Ethnographic Sketch. 3. Buddhist Memory and the Role of Nostalgia in the Reconstruction of Tibetan Identity. 4. Religious Discourse and the Ideal: Time, Space, and Nostalgia. 5. Nationalism: Nostalgia for a Pure Land. Bibliography: pp.222-26.

LAWSON-McDOWALL, Bruce John.

Handshakes and Smiles: The Role of Social and Symbolic Resources in the Management of a New Common Property. University of Bath [United Kingdom], 2000 (Ph.D.). DAI 62, no.1 (Spring 2001): Section C—page 36. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DXN037097.

The thesis looks at why sustainable and equitable institutions of common property resource management take root in some socio-political environments and not others. Almost 50 jointly owned micro-hydel schemes in Pakistan and Nepal were visited. Micro-hydel's relatively low skill input, high demand for electricity from rural populations and its suitability for village wide participation suggest that it should be an economically sustainable and equitable intervention. However, the jointly owned micro-hydel schemes studied varied considerably in terms of economic sustainability and in the access poorer households had to electricity. The dominant schools of thought on common property, new institutional economics and game theory, would suggest that the answers to these variations were to be found in an analysis of material costs and benefits of action. However, these approaches were of limited use in explaining these behaviours at the majority of schemes. As a result, sociological and anthropological approaches were adopted which stressed the role of non-material resources such as trust, honour, duty and status as goals motivating action and socio-political context. It is argued that non-material resources, such as social or symbolic capital, cannot be given content outside of the specific context in which they are employed. Joint owners applied to micro-hydel the kind of inclusive norms invariably associated with traditional common property regimes when: the new resource was viewed as essential and thus seen as something akin to a basic entitlement; electrical lighting was associated with improved education (especially where religiously sanctioned); where «progress» was understood to be progress only if inclusive of the community as a whole; facilitating agencies promoted equity and, finally, institutions such as kinship, patron-client relations or shared religion operated to encourage a sense of responsibility for the poor among better off households. It was the combination and interaction of these values and expectations that determined whether offering concessions to poor households resulted in a gain of symbolic capital for electricity committee members through an enhancement in their reputation for capable leadership. Exemption behaviour for micro-hydro electricity could not, therefore, be attributed to a single set of values, but to their interaction and mutual reinforcement. The need of actors to

consider the range of social norms that apply just to the issue of concessions on electricity should have given the lie to any assumption that common property is somehow, of itself, intrinsically equitable. Regarding sustainability, the lack of trust (social capital), in the relationships between joint owners and the democratically elected local government members who sat on most Nepali schemes meant that joint-owners were not willing to let their leadership control the savings required to make hydel sustainable. This has important implications for discourses on governance that assume «community management of resources» and «political decentralisation» are complementary processes. Village representatives in Nepal enter a political world whose values encourage politicians to concentrate on climbing the party political hierarchy and to engage in corrupt practices. Villagers are all too aware that the norms of the political world encourage behaviour that conflicts with their interests and desire to protect the local resources they rely on.

MALIK, Iffat Sanna.

Ethnicity and Politics in the Kashmir Valley. University of Hull [United Kingdom], 1999 (Ph.D. in Politics). 370p. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.50, pt.2, entry no.50-3043. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DX209392.

This thesis is concerned with the relationship between ethnic identity and politics in the context of the Kashmir Valley. Its aim is to one, establish that such a relationship exists and two, assess what kind of relationship it is.

The thesis begins in chapter one by looking at the various theories of ethnicity, highlighting its subjective nature, and focussing on the likely factors that can influence ethnic identity and ethnic consciousness. It then looks at the likely links between ethnicity and politics: how ethnic identity can determine political choices, and how political considerations can shape ethnic perceptions.

The context chosen for this thesis, the Kashmir Valley, is introduced in chapter two. The traditional perceptions of ethnic identity of the two main population groups there are outlined. It is established that Pandits and Kashmiri Muslims formed a harmonious plural (multi-ethnic) society. Furthermore, they had the potential to evolve a shared ethnic identity, Kashmiriyat, or to evolve distinct communal identities. All the chapters after this look at how various political developments influenced Kashmiri Muslims and Pandits to evolve along either of these lines.

Chapters three to six look at development within Jammu and Kashmir, focussing on the actions of state and central governments. Chapters seven to nine look at external developments: domestic politics in India and Pakistan, and the contemporary Islamic resurgence. Throughout, along with political developments, corresponding changes in ethnic identification among Kashmiri Muslims and Pandits are described.

The thesis concludes that both Kashmiri Muslims and Pandits have become far more conscious of the religious part of their identity. Though this has not always happened at the expense of being Kashmiri, it has resulted in the gulf between the two communities being immensely widened. The political developments identified as most influential in bringing about this increased communal identification are Indian and State government policies, notably the failure to allow autonomy and democracy in Kashmir; the rise of political Hinduism in India; and the Islamic resurgence—specifically the Afghan ‘jihad’. In view of this it concludes that there is a strong correlation between ethnic identity and politics in Kashmir. The main implication of these findings for the theoretical literature reviewed in chapter one is the importance of looking at ethnic groups *in context*.

Published as *Kashmir: Domestic Insurgency, International Dispute*, by Iffat Sana Malik. Karachi and Oxford, Eng.: Oxford University Press, 2001. 105p.

McGRANAHAN, Carole.

Arrested Histories: Between Empire and Exile in 20th Century Tibet. University of Michigan [United States], 2001 (Ph.D. in Anthropology and History). Chairperson/Adviser: Nicholas Dirks and Ann Stoler. xvii, 401p. DAI 62, no.10 (Apr. 2002): 3457-A; UM 3029394.

This dissertation is an ethnohistorical study of twentieth century Tibet as experienced and narrated by Khampa Tibetans. It is based on ethnographic participant-observation and interviews with Tibetan refugees in multiple communities in South Asia, and archival research with Tibetan and British colonial documents.

My focus is on three interrelated histories: first, a series of boundary disputes between the governments of Tibet, China, and British India in the eastern Tibetan region of Kham; second, the story of a Khampa trading family, the Pangdatsangts, members of which challenged social, political, and economic aspects of the Tibetan status quo; and third, the Tibetan resistance movement, begun in Kham as a series of independent uprisings, and later transformed into an organized guerilla army supported by the CIA.

I focus on the Tibetan region of Kham in order to explore the “arrest” of regional pasts from national Tibetan history as produced in exile. Despite the exclusion, Tibetan refugees continue to remember and narrate marginalized pasts, and do so as part of a national history, not just as local or personal histories. These narrations comprise a new historical genre in exile—the “new *lo rgyus*,” which combined with the Tibetan practice of “historical arrest” raise questions regarding the weaknesses in hegemonic political projects (such as the nation), the flexible parameters of historical truth, and the always contested nature of “shared” cultural formations. Tibet also offers the opportunity to rethink the idea of history as a modern project from the edges of nation and empire: Tibet was not quite a modern nation-state at the time of the Chinese invasion, and in exile is but a virtual nation-state. In addition, while Tibet was never colonized by Europe, it did have relations with agents of British India, was colonized by the People’s Republic of China in the 1950s, and was drawn into U.S. imperial politics through the CIA’s cold war support of the Tibetan resistance. In sum, this dissertation is about Tibetan attempts to forge a modern nation-state as constrained by external conditions of empire and exile, and internal problems of the place of the region within the nation.

Contents: Introduction. Part One: Khampa Histories of Tibet. 1. The New Lo-Rgyus: Telling and Writing Lay Histories in Exile. 2. Kham and the Making of Modern Tibet. Part Two: The Rise and Fall of a Khampa Family. 3. Lightning Strikes: Murder, History, and Social Politics in 1920s Lhasa. 4. Tycoon, Revolutionary, Khampa Chief: Finding a Place in History for the Pangdatsang Brothers. 5. Empire, Memory, Archive: A Rebel Tibetan Nationalist in British India. Part Three: The Tibetan Resistance: History in the Time of Arrest. 6. The River Ran Red and the Sky Wore Yellow: Tibetan Resistance to the Chinese Communist Invasion. 7. Chushi Gangdrug: The Tibetan Resistance Army. 8. Soldiers’ Stories: Mustang, Colorado, and India, 1959-1974. 9. *Me long gsal po mi ‘dug* (The Clouded Mirror): Regional Politics and Historical Arrest in Exile. Conclusion. 5 figures. 5 maps. Appendices [A-C]: pp.368-79. Bibliography: pp.380-401.

MICHAEL, Bernardo Ammedeus.

Separating the Yam from the Boulder: Statemaking, Space, and the Causes of the Anglo-Gorkha War of 1814-1816. University of Hawaii [United States], 2001 (Ph.D. in History). Chairperson/Adviser: Jagdish P. Sharma. xix, 647p. DAI 62, no.10 (Apr. 2002): 3524-25-A; UM 3030188.

This dissertation locates one of the many historical junctures at which the modern state emerged as a geographically discernible, and territorially circumscribed entity in colonial South Asia. I achieve this by pursuing historical inquiry at two levels. First, I examine the disputes over territory and revenue administration that surrounded the Anglo-Gorkha War of 1814-1816—a war fought between the English East India Company and the Himalayan state of Gorkha (present-day Nepal). For long, the nationalist, diplomatic, and military accounts of the war have ignored the crucial significance of these territorial disputes. Through an examination of processes of statemaking along two sections of the Anglo-Gorkha frontier, I show that at the heart of the disputes were questions pertaining to the geographical construction of the state. That is, the territorial disputes actually encoded arguments about the precise location and layout of districts that lay along the common frontier of the two states. Company officials given their notions of territorial sovereignty, and the geographical integrity of a state, viewed these districts as well-bounded, with clear-cut, and non-overlapping sub-divisions. Gorkhali and other indigenous rulers on the other hand, recognized the presence of a complex hierarchy of political, taxation, and tenurial relationships that prevented the formation of well-defined blocks of territory. These shifting relationships left most districts a loose collection of patches of territory possessing fuzzy boundaries, and with people often ending up as subjects of two or more overlords. Such forms of territorial organization posed serious dilemmas to effective governance by the colonial state. This leads me to my second line of inquiry. I set out to discover the spatial qualities of precolonial administrative divisions, and then locate the cartographic and non-cartographic modes by which the colonial state and Gorkha rearranged their territories after the Anglo-Gorkha War. Through an examination of hitherto unexamined map collections and archival records, in India, Nepal, and England, I discuss the slow, staggered, and ill-coordinated manner in which older precolonial administrative districts were reshuffled and

redefined to create the geographical template of the modern state in South Asia—occupying a definite portion of the earth's surface, and divided into non-overlapping divisions and sub-divisions.

Contents: Part One: Statemaking, Spatiality, and the Anglo-Gorkha War of 1814-1816. 1. Approaching Statemaking and Spatiality. 2. Historiographies of Statemaking in South Asia and Rethinking the Anglo-Gorkha War of 1814-16. Part Two: Explorations in Spatial History: Cultures of Governance and Illegible Landscapes on the Margins of Empire, 1730-1814. 3. The Illegible Landscapes of the Champaran-Tarriani Frontier. 4. The Production of Territory on the Gorakhpur-Butwal Frontier. Part Three: Towards a Geography of the State. 5. Cultures of Governance and the Organization of Territory in Precolonial North India. 6. Enframing the Modern State: Projects of Spatial Legibility and Simplification. 7. Conclusion. 42 maps. 9 plates. 32 tables. Appendices [1-5]: pp.525-87. Bibliography: pp.598-647.

MISHRA, Charudutt.

High Altitude Survival: Conflicts between Pastoralism and Wildlife in the Trans-Himalaya. [With a summary in Dutch.] Landbouwniversiteit Wageningen [Agricultural University of Wageningen] [The Netherlands], 2001 (Dr.). v, 131p. Printed copies are available at the Center for Research Libraries in Chicago, Illinois, and at the National Agricultural Library in Beltsville, Maryland.

Printed with a summary in Dutch as *High Altitude Survival: Conflicts between Pastoralism and Wildlife in the Trans-Himalaya*, by Charudutt Mishra. Wageningen: s.n., 2001. v, 131p.

NEIDELL, Shara Gayle.

Agency from Within: The Power of Relationships and Women's Influence on Contraceptive Use in South Asia. University of Pennsylvania [United States], 1999 (Ph.D. in Sociology). Chairperson/ Adviser: Robin Leidner. xiv, 423p. DAI 60, no.7 (Jan. 2000): 2694-A; UM 9937764.

In this research, I investigate the ways that women maneuver for power in the household and the village setting and I examine empirically the relationship between women's power and use of contraception. I began this study because I found the measures of women's autonomy being used by demographers unsatisfactory. Instead, I wanted to invoke the feminist conception of women's agency in order to examine how women maneuver for power in patriarchal societies in which women's access to both information and decision-making arenas is limited. Based upon extensive ethnographic fieldwork conducted in Sunsari District, Nepal, I argue that women have neither the skills necessary to informed decisions nor the power or confidence to break away from their traditionally inferior and subordinate roles. What power women do have comes largely from their relationships with men. Demographic analyses have overlooked these bases of women's power. While previous demographic research in South Asia has used ethnic/religious group identity as the basis for many analyses, I show that assumptions of within ethnic/religious group homogeneity are mistaken. Moreover, I find that individual measures of women's autonomy are not necessarily positively related to use of contraception. Using data from the Women's Autonomy and Fertility Survey (Nepal) and the Status of Women and Fertility Project (North India and Pakistan), I employ multilevel logistic and multinomial logistic analyses to show that measures of women's autonomy and agency are, on average, related to both overall use of contraception and method-specific use. Nevertheless, an examination of three-way cross tabulations reveals that these relationships do not hold across villages. Thus, I suggest that in addition to examining the relationship between measures of women's autonomy, agency and contraceptive use in a statistical format, the researcher must also consider the history and context of the local setting. Using results from my quantitative and ethnographic work to graph each Nepali village along two continua, village well-being and women's power, I find that certain combinations of conditions increase women's use of contraception.

Contents: 1. Introduction. 2. The Submissive Role of Nepali Women. 3. The Concepts: Patriarchy, Purdah, Status, Autonomy, Agency and Empowerment. 4. Study Overview. 5. An Overview of Nepal. 6. The Nepali Settings. 7. Beyond Autonomy. 8. Women's Agency. 9. Women's Autonomy, Agency and Use of Contraception in Nepal. 10. North Indian and Pakistani Comparisons. 11. Conclusion. 9 figures. 53 tables. Appendices [A-C]: pp.364-86. Bibliography: pp.387-423.

NIGHTINGALE, Andrea Joslyn.

A 'Trialectic' of Community Forestry Management in Mugu District, Western Nepal: Power, Cultural

Meanings and Ecology. University of Minnesota [United States], 2001 (Ph.D. in Geography). Chairperson/Adviser: Eric Sheppard. x, 362p. DAI 62, no.3 (Sept. 2001): 1157-A; UM 3010574.

Those debating the “environmental crisis” in Nepal agree that Himalayan ecosystems are constantly changing on both short and long time scales, creating a lot of variation between places. Thus, forest degradation is a locally specific phenomenon and one that is not easily generalized over large areas of the hills. This research seeks to understand how community forestry (CF) projects and ecological conditions change in relation to each other. The author theorizes a dynamic ‘trialectic’ between social and power relations, cultural beliefs and practices, and ecological conditions to investigate their mutually constitutive influence in community forestry. This framework allows for a systematic investigation of whether CF both promotes equitable decision making processes and distribution of resources, and sustains the ecological resilience of forest ecosystems.

An extended case study of a CF user-group in Mugu District of northwestern Nepal examines internal dynamics within and external threats to the user-group. Conflicts and consensus over meanings of land and land use practices, and the ecological conditions that result, are analyzed with the goal of elucidating the processes that contribute to and those that act as barriers against sustainable land management in this particular locality. The interdisciplinary research design includes: interviews and participatory methods including focus groups and trans-sect walks; oral histories; aerial photo interpretations; and vegetation sampling.

Overall the picture that emerges from this analysis is of a user-group that functions reasonable well with minimal outside support. Contestations within the group are fierce, often reinforcing pre-existing power relations. Yet in the face of external threats, the group pulls together to successfully resist them. Internal disputes often result in violations of the CF rules, but allocating control over the resource to a defined group of people has limited harvesting pressure. Finally, the group does distribute resources equitably, but has a mixed record on giving all members access to decision-making. This research suggests that detailed analysis of social relations and axes of difference within communities is necessary to understand the impact and effectiveness of development projects in localities. It also demonstrates the importance of incorporating ecological conditions into an analysis of social-political change.

Contents: 1. Background on Nepal, Mugu District and Forests. 2. Human-Environment Interactions as a ‘Trialectic’: Power, Culture and Ecological Change. 3. Methodology and Research Design. 4. Ban Devi at Work? A History of Political and Environmental Change. 5. The Embodiment of Power: Social Relations, Work and Spatial Practices in Mugu. 6. The Daily Functioning of Pipledi User-Group. 7. A Monkey House, Rifles, Bombs and Water: Conflict and Consensus in Community Forestry. 8. Conclusion. 2 figures. 10 maps. 3 tables. Appendices [1-10]: pp.284-362. Bibliography: pp.271-83.

REGMI, Narayan Prasad.

Currency Devaluation and Trade Balance: Policy Issues in Nepalese Economic Perspective. Saint Louis University [United States], 2000 (Ph.D.). Chairperson/Adviser: Jack K. Strauss. ix, 116p. DAI 62, no.1 (July 2001): 256-A; UM 3000693.

This dissertation is first of its kind in analyzing the relationship between devaluation and the trade balance in Nepal’s economy. As a part of the Structural Adjustment Program in the early 1980s, the Nepalese government devalued its currency several times, but Nepal’s real trade balance hasn’t shown any major improvement.

Several research methodologies, such as variance decomposition, impulse response function, the Johanson method, the ARDL, and the FM-OLS, are used to analyze the short-term and long-term effects of devaluation sheds light on a number of important issues. (i) In the short-run, the majority of variance in trade balance is due to its own innovation, while little comes from the innovation in variables such as effective real exchange rate, money supply and income. (ii) The long-run results are more revealing than the short-run results. The long-run results indicate: first, the relationship between the effective real exchange rate and trade balance is negative and mostly significant; second, domestic money supply plays a strong negative role to trade balance as compared to domestic GDP; third, foreign variables (income and money supply) play a lesser role in improving Nepal’s trade balance. (iii) The impulse response function clearly distinguishes the responses of trade balance between one standard deviation shock in both the effective real and nominal exchange rates. The results suggest that prices adjust within a shorter rather than longer period.

To sum up the results, either inconclusive (short-run) or negative (long-run) relationships between effec-

tive real exchange rate and trade balance raise doubts about the usefulness of devaluation for Nepal's economy. As Krugman and Taylor (1979) suggest, policies other than devaluation, such as the encouragement of private investment through subsidies, can more effectively improve the balance of trade. Therefore the Nepalese government should focus on further economic reforms, decentralization, and effective growth-oriented macroeconomic policies to improve the trade balance rather than continuing to devalue its currency.

Contents: 1. Introduction. 2. Literature Review. 3. Theoretical Analysis of Devaluation. 4. Research Methodology. 5. Results. 6. Conclusions and Recommendations. 10 figures. 30 tables. Appendices [A-C]: pp.103-10. Bibliography: pp.111-15.

SAKYA, Anil Man.

Newar Marriage and Kinship in Kathmandu, Nepal. Brunel University [United Kingdom], 2000 (Ph.D. in Human Sciences). 372p. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.50, pt.2, entry no.50-2957. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no. DXN036348.

This thesis presents a descriptive and analytical study of Newar marriage and kinship in Kathmandu. Essentially, this is a study about caste and the role that it plays in Newar life, in particular, the way that caste is expressed through marriage patterns and kinship rituals. This study also shows that although the link between one's caste and one's traditional caste occupation is breaking down, one's caste identity is still maintained through one's choice of marriage partner and one's participation in kinship rituals which occur at the various levels of caste organization.

Newar caste organizations are also undergoing a process of transformation. In addition to the traditional caste organizations, there are also new intercaste organizations which cater to the ritual needs of those in increase marriages. This recent phenomenon coincides with the professionalization of other caste organizations, which, in addition to performing their ritual duties, have also taken on the role of social and economic guardians to their caste members. It could be argued that although some forms of caste are no longer applicable, in other ways, caste in Newar society has never been stronger or more important. Despite the claim that intercaste marriages are on the rise, the data shows that the majority of Newars still practice caste endogamy. Membership into a caste organization—which is through the initiation ritual—is so important to Newar identity that intercaste couples have started their own caste organization to ensure that their offspring will officially be a part of a caste group.

In sum, this study shows that despite the fact that caste is no longer recognized in the Nepalese constitution, caste is still the main vector of Newar identity, and this is seen most clearly through the analysis of Newar marriage and kinship.

SHERPA, Lhakpa Norbu.

Human Impacts on High-Altitude Forest Structures in the Nangpa and Hinku Valleys, Sagarmatha and Makalu-Barun National Park, Nepal. University of Washington [United States], 1999 (Ph.D. in Forest Resources). Chairperson/Adviser: Chadwick Dearing Oliver. xiv, 157p. DAI 60, no.4 (Oct. 1999): 1368-B; UM 9924133.

This study attempts to develop a better understanding of the role of human disturbances in shaping forest patterns in the Sagarmatha National Park. The Nangpa and Hinku valleys were selected as study sites to provide examples of a heavily disturbed and a less disturbed area respectively. The two main aspects of the study include reconstructing the settlement and forest/land use history and determining the present forest patterns. The study compared human use and forest structures at three different levels. Firstly, a comparison between aspects (warm and cool) was made within the Nangpa and Hinku valleys. Secondly, variations in forest cover on the same aspects of the Nangpa valley were compared and causes for their variation were explored. Thirdly, stand level structural variations were examined and discussed. The study showed that the warm and cool aspects of Hinku have similar forest composition and basal area coverage whereas similar comparison within the Nangpa found distinctly different forest structures. The variation in forest structure and composition on the same aspect of the Nangpa valley could not be explained entirely through variations in climate and site factors. Thus, it was concluded that much of the variation in forest structures in Nangpa

Valley were caused by human modifications, and forests on warm and cool aspects could potentially develop to be similar in the absence of human disturbances. The variations in forest structures within warm aspect of Nangpa may be caused by a changes in land use pressure because settlements, which initially begun in the lower valley had later moved towards the head valley. Similarly, the variations in forest cover on across the cool aspect of the valley appear to be related partly to variations in collection and harvesting pressure. The study suggests that humans disturbances became a significant forest influences in the Nangpa Valley mainly after the height of the Little Ice Age, which occurred about 250-300 years ago. Human-induced forest changes include substantial increase in *stand initiation* structure and decrease in old growth. These changes have led to mitigation responses such as establishment of the indigenous *nawa* forest protection system and introduction of modern conservation concepts such as protected areas establishment in Khumbu. The conservation measures coupled with alternative energy and off-farm employment opportunities appear to be causing a trend towards forest recovery. A forest management system responsive to for multiple objectives of the Park, including habitats for biodiversity, resources for the resident people and aesthetic qualities for tourism is needed. Since, different forest structures are capable providing different values, one way to achieve these multiple objectives is to maintain the landscape in a variety of structures.

Contents: Introduction. 1. The Study Area. 2. Field Procedures. 3. Migration and Settlement History. 4. Land Use Changes within Nangpa and Hinku. 5. Natural and Human Disturbances. 6. Forest Structures on Warm and Cool Aspects. 7. Physical and Human Factors and Forest Structural Variation in the Nangpa Valley. 8. Forest Stand Development Patterns. 9. Conclusion and Recommendations. 39 figures. 13 tables. Appendices [A-C]: pp.151-57. Bibliography: pp.134-50.

SHRESTHA, Neeru.

Forest Control, Development and State Formation in Nepal. Dalhousie University [Canada], 2000 (Ph.D., Interdisciplinary Studies Program). Chairperson/Adviser: Tania Murry Li. xxii, 317p. DAI 62, no.2 (Aug. 2001): 621-B; UM NQ57370. A microfiche copy may also be borrowed on interlibrary loan from the National Library of Canada in Ottawa, using the ISBN number 0-612-57370-2.

This thesis analyses processes of state formation and intensification in Nepal, taking community forestry as a point of entry. Both the state and communities are seen as disaggregated entities, separated by a blurred and shifting boundary. The state coordinates and multiplies power relations, while communities make claims on state services, cooperate with state projects or sabotage, manipulate and resist state regulations, as diverse interests dictate. State formation and intensification is therefore a two way process. On the one hand, the state attempts to regulate, order or intervene in village resource and population matters through planning, legislation and bureaucratization; on the other hand, communities are compelled into the web of bureaucratic relations, but also, at times, elect to forge closer relations with state agencies for their own ends. Grounded in theories of state-society relationships, especially those proposed by Ferguson, Migdal, Peluso and Vandergeest, the study argues that state formation and intensification occurs through two modes—control over discourse and territorialization—both of which can mask the political nature of state actions. Following Ferguson, the study argues that state intensification does not necessarily result in people and resources being coordinated or ordered more effectively. Going beyond Ferguson, it argues that intensification of the territorialized and bureaucratized state may arise—not through extension of control—but by intensifying the state's presence, most significantly of its regulatory reach reconfigure the division between state and communities. Organized into nine chapters, the study emphasizes that resource control should be seen in the context of the history of relationships between state, land, and people. It discusses decentralization, legislation, planning, the bureaucratization of resource use, the ambivalent role of forest bureaucrats, and presents three village case studies of community forestry. Sources of data include observation, formal and informal interviews with government officials and villagers, and documents, including legal texts. The study shows that state resource control in Nepal has shifted, since the 1950s, from control through people to a territorial mode; the development of an intensified, bureaucratic, territorialized regime of resource control is continuing. Community forestry laws—as with territorialization initiatives elsewhere—have functioned ambiguously in Nepal. However ineffective the forest bureaucracy in implementation, whatever the conflicts or collaborations between politicians and bureaucrats—and the support, resistance and manipulation by villagers, including adoption of gendered strategies by the villagers—the community forestry program has nevertheless become a point of coordination and multiplication of power relations. Communities wish-

ing to maintain a stake in their village forests must place themselves within state bureaucratic channels. Forest villagers and the state, both interested in the natural resource, have no option but to engage with one another through the medium of constantly evolving community forestry policy.

Contents: 1. Introduction. 2. Imprints of the Past: Relations between State, People and Land in Nepal. 3. State Intensification through Decentralization: 1960s-1990s. 4. Forest Laws and State Intensification: 1960s-1990s. 5. State Intensification through Forest Information and Planning. 6. Working with Limited Power: Organization and Differentiation of Forest Bureaucracy. 7. Staff Deployment, Forestry Projects and Foresters' Attitudes towards Community Forestry. 8. Communities in Community Forestry: Case Studies of Three Forest User Groups in Chaughare VDC, Lalitpur District. 9. Summing up the Study. 14 boxes. 7 figures. 14 tables. Appendices [1-2]: pp.295-98. Bibliography: pp.299-317.

SHRESTHA, Niva.

Women as Formal and Informal Workers in the Context of Transitional Economy: The Case of Nepal. University of Chicago [United States], 2001 (Ph.D. in Sociology). Chairperson/Adviser: Mary C. Brinton. ix, 286p. DAI 62, no.2 (Aug. 2001): 806-A; UM 3006554.

This dissertation examines the labor force participation and its outcomes among women, particularly married women in Nepal. By taking into consideration a society that is at the early stages of industrialization, the study also analyzes the implications that such an economic context has on the informal sector and those who are informally employed. Given that a majority of the labor force participate in non-regular, non-formal types of employment, this study pays specific attention to workers in various employment statuses including those in self-employment, piece/daily wage labor, and unpaid family work.

Specifically, this dissertation addresses three main issues. First it examines the various forces that determine married women's employment behavior and earnings across different employment categories. Second, it explores how their status within the household is affected as a result of their work and income earning capacity. Third, it evaluates the earnings and socioeconomic characteristics of formal and informal sector workers and determines whether it is advantageous for individuals to enter formal versus informal forms of employment.

The study demonstrates the following: (a) Supply side variables such as individual and familial attributes have a greater impact on married women's employment behavior and earnings than demand forces such as labor market conditions; (b) It is difficult to trace a direct causal link between women's work outside the household and their status within. In fact, one needs to work outside the household and their status within. In fact, one needs to consider the distinct influences of intervening factors that operate at the sociocultural context as well as factors that are specific to the household level when determining such outcomes; (c) Informal workers are not uniformly disadvantaged as compared to formal employees in terms of earnings and socioeconomic characteristics. Informal forms of work, in fact, should be considered as a viable option especially for women, who face greater barriers in the formal sector than their male counterparts.

Contents: 1. Introduction. 2. Review of Literature: Perspectives on Women's Labor Force Participation and Its Outcomes. 3. The Setting: Female Workers in the Nepalese economy. 4. Data and Measurement of Sector. 5. Labor Supply of Married Women. 6. Earnings of Married Women as Formal and Informal Workers. 7. The Outcome of Women's Work: Their Status within the Household. 8. Conclusion. 52 tables. Bibliography: pp.268-86.

TAMANG, Seira.

Gender, State and Citizenship in Nepal. American University [United States], 2000 (Ph.D. in International Relations). Chairperson/Adviser: Mustapha Kamal Pasha. viii, 384p. DAI 61, no.9 (Mar. 2001): 3757-58-A; UM 9984827.

This dissertation explores the relationship between citizenship and gender in Nepal. Using a historical material approach, the process of state formation in Nepal and the political, economic and social ramifications that Nepal's status of «non-postcoloniality» has for the structuring of state and society relations is traced. Revealing the manner in which it has been elite, Hindu men who have historically held state power, discourse analysis is used to focus on their constructions of «the Nepali woman» during the period of Panchayat rule in Nepal (1961-1990) and the implications this has for the formation of citizenship in Nepal. More specifically, amendments in law pertaining to women and the family are shown to result in a transformation

from «family patriarchy» to «state patriarchy.» It is argued that such legal changes facilitated direct state interventions into women's lives in order to shape them according to needs of the Nepali state and nation as imagined by male, Hindu, state elites. By analyzing development training strategies and family planning policies, it is argued that the homogenization of identities and the construction of the feminine, domestic, «Nepali woman,» was concomitant with, and dependent on, the active de-politicization of women in Nepal. Thus it is shown that it is the passive «subject» and not the active «citizen» which is being created in Nepal. Furthermore, this dissertation makes clear the importance of not only understanding the class and ethnic dimensions of the construction of citizenship. It reveals the manner in which gender informs citizenship and citizenship informs gender. In other words, it is argued that without an understanding of the gendered dynamics of citizenship, the full implications of citizenship cannot be understood. In conclusion, this dissertation shows that the concept of citizenship is not only inherently gendered, but in the juncture of global initiatives of the project of development and the national imperatives of nation-building and *bikas*—development as it plays itself out in Nepal—citizenship in the context of Third World countries in the late capitalist period holds much more ambiguous and contradictory implications.

Contents: Introduction. 1. The Creation of a Hinduized, Masculinist Narrative for Nepal. 2. Gender and Development or Developing Gender? 3. The Politics of Non-Post-Coloniality? 4. Legislating the Nepali Woman. 5. Developing Nepali Women. 6. Women, Population and Family Planning. Conclusion. Bibliography.

TROTT, Julia Bronson.

„*One Turn of Pitch & Toss*“: *Curzon, Younghusband, and the Gamble for Lhasa, 1903 to 1904.*

University of Hawaii [United States], 2000 (Ph.D. in History). Chairperson/Adviser: John J. Stephan. xix, 437p. DAI 61, no.10 (Apr. 2001): 4135-A; UM 9990281.

The British Expedition to Tibet of 1903 to 1904 was a minor military enterprise by the standards of late Victorian Imperialism. It had no results of political importance. It derives its historical and cultural interest from the fact that, owing to the policy of exclusion that had been imposed for the past century by China as Tibet's suzerain, foreigners' perceptions of the isolated country were romanticized and their curiosity about the 'mysteries' of Lhasa, its capital, was intense. Therefore the experience of penetrating the Himalayan barrier and forcing entry to the capital had a more than military or diplomatic meaning for everyone concerned.

As explorers and as Imperialists who favored an adventurist frontier policy, the instigators of the invasion—Lord George Curzon, Viceroy of British India from 1898 until 1905, and Colonel Francis Younghusband, the Political Agent chosen as Commissioner to Tibet—were determined to go to Lhasa and had to find political ploys to justify their action. However, the study of their personalities (and of their background in British culture) suggests that pragmatic arguments merely served to promote their much simpler purpose. They wanted Britain to reach Lhasa first; they needed a small army to overcome the Tibetans' resistance; and Curzon had the power to send one to escort his representative.

This dissertation considers the British bid for Lhasa as a gamble and as a cultural odyssey, as an encounter between people with extremely divergent perspectives, and as an exercise of the imagination. In particular, it is seen as a chase or hunt for a chimerical beast, the Tibetan Grand „Llama', the god-king about whom outsiders could learn nothing except bazaar (band bizarre) rumors. Those rumors, literary and journalistic stereotypes, and the preconceptions brought into Tibet by the invaders are examined here as intangible aspects of the event which have previously been underestimated.

Contents: Introduction: The Gamble for Lhasa. Part One: *Game*. 1. *Game*: A Metaphor Afoot. 2. A Chance of *Game*, or the Imperial Sport of Soldiering. Part Two: A *Game* of Chance, or „One Turn of *Pitch & Toss*“. 3. A *Pitch* for Prestige: George Curzon. 4. A *Toss* for Tibet: Francis Younghusband. Part Three: A Chase in „The Mind's Thibet“. 5. „The Mind's Thibet“, or Tibetan Stereotypes. 6. „The Landscape of a Dream“: Lost Lamaseries & Lhasa. Conclusion: „Those Two Imposters“. 20 figures. Appendix: pp.410-14. Bibliography: pp.415-37.

TSOMO, Karma Lekshe (1944-).

Into the Jaws of Yama, Lord of Death: Death and Identity in China and Tibet. University of Hawaii [United States], 2000 (Ph.D. in Philosophy). Chairperson/Adviser: Eliot Deutsch. xvi, 320p. DAI 61, no.10 (Apr. 2001): 4029-A; UM 9990282.

Recent advances in biomedical technology have stimulated a surge of interest in death and bioethical issues such as abortion, cloning, euthanasia, organ transplantation, and assisted suicide. As the human lifespan lengthens and the time between old age and death increases, these issues take on renewed urgency. In this crosscultural study, these issues are examined from Chinese and Tibetan Buddhist perspectives.

Questions regarding death and the ephemeral nature of life and individual identity have been preeminent in Buddhism for centuries. The interpretation of Indian Buddhist ideas in the cultural and philosophical environments in China and Tibet produced unique ideas about consciousness, death, and moral personhood.

This study examines Indian, Chinese, and Tibetan Buddhist attitudes toward death, rebirth, and the intermediate state between death and rebirth; and then (a) discusses bioethics from a Buddhist comparative perspective and (b) suggests ways that these ideas can enrich and expand contemporary bioethical dialogue.

Contents: 1. Toward an Ontology of Death. 2. Buddhist Perspectives on Death and Identity. 3. Vicissitudes of Emptiness: Mahâyâna Theories of Self. 4. Death and Identity in Chinese Culture. 5. Death and Identity in Tibetan Culture. 6. The Transition between Life and Death. 7. The Ethical Urgency of Death. 8. Buddhist Perspectives on Euthanasia. 9. Conclusion. Bibliography: pp.302-20.

UPADHYAY, Samrat.

Maya [Original Novel]. University of Hawaii [United States], 1999 (Ph.D. in English). Chairperson/ Adviser: Ian MacMillan. v, 368p. DAI 60, no.5 (Nov. 1999): 1569-A; UM 9932054.

Maya depicts a divorced woman's struggle between desire for love and duty towards society in middle-class urban Nepal. The word „Maya“ means „illusion“ in Sanskrit and „love“ in Nepali. The protagonist Shoblia's narrative is punctuated with the narrative of her past life when she was a young village girl, Maya, who gets married to a much older man at the age of fifteen. Thus the story is a dual narrative that fuses the two lives of a woman, with the short 2-5 pages section on village girl Maya occurring after every chapter or so, and shows how Shobha's past life impinges upon her present, perpetuating a pattern of incidents that the protagonist must battle in order to arrive at an understanding of herself and her environment. Shobha is an intelligent, articulate woman who, despite her prestigious position as an English lecturer at Kathmandu's government university, cannot escape the stigma of being a divorcee. When a young student Aditya starts showing interest in her, she becomes attracted. Shoblia's ex-husband Madan stalks her and wants her back in his life, and Shobha keeps rejecting his advances. Aditya proposes to her, but Shobha is forced to marry the father of childhood friend Bharati, who, after her face gets damaged by a crazy admirer, wants Shobha to marry her doctor father so that he would not feel lonely. Two days after their wedding, Bharati commits suicide. As the novel progresses, Shobha also starts getting flashes of her past life as Maya, but she doesn't understand what is happening to her. A spiritual guru, Swami Nityananda, keeps telling Shobha that she needs to shatter the illusion of love which traps her soul on a lower level of existence. Shoblia's ex-husband Madan rapes her and she, disillusioned, wishes to abandon everything and become Swami Nityananda's disciple. But in the end, she decides to live her karma with her old husband and her family.

Environmental/Natural Sciences

ACHARYA, Bijnan (1963-).

Forest Biodiversity Assessment: A Spatial Analysis of Tree Species Diversity in Nepal. [With a summary in Dutch.] Rijksuniversiteit Leiden [Leiden University] [Netherlands], 1999 (Ph.D.). 199p. Copies are available at the National Agricultural Library in Beltsville, Maryland, as well as at several other research and academic libraries in the United States.

Published with a summary in Dutch as *Forest Biodiversity Assessment: A Spatial Analysis of Tree Species Diversity in Nepal*, by Bijnan Acharya. Enschede, The Netherlands: International Institute for Aerospace Survey and Earth Sciences, 1999. 199p. (ITC publication).

AHMAD, Imtiaz.

Collision Tectonics in NW Himalaya: Structure, Stratigraphy, and P-T-t Path of the Indian Plate, Lower Swat, North Pakistan. University of South Carolina [United States], 1999 (Ph.D. in Geological Sciences). Chairperson/Adviser: John W. Shervais and Allen J. Dennis. xv, 230p. DAI 60, no.4 (Oct.

1999): 1486-B; UM 9928275.

Rocks exposed south of the MMT in the lower Swat terrane, Pakistan represent the northernmost margin of the Indian plate. These rocks comprise Precambrian-Cambrian(?) basement gneiss (Swat Gneisses) and Paleozoic cover-sequence (Alpurai Group metasediments). Anatectic tourmaline-bearing leucogranite gneiss (Amlukdara leucogneiss) is present as sills and dikes, and is interpreted as Eocene in age. At the base of Swat Gneisses the Manglaur Thrust Zone (MTZ) comprises highly strained and mylonitic rocks units of the Alpurai Group, Swat Gneisses and country rocks. Rocks of the lower Swat terrane correspond to the High Himalayan Crystalline Zone (HHCZ), thus the MTZ must be equivalent to the Main Central Thrust Zone (MCT) of Kaghan, Nepal, and India. In the south, the lower Swat terrane is separated from the low-grade to fossiliferous rocks of the Swabi terrane by the Nikanai Ghar Fault (NGF)-normal fault with down to the south offset. The Swabi terrane represents a relatively complete Paleozoic and Mesozoic shallow marine stratigraphic succession that is distinct from the lower Swat terrane. The Swabi terrane as a whole represents the Tethys Himalayan Zone. Structurally, rocks of the lower Swat terrane are exposed as uplifted basement-cored duplexes framed by normal and tear faults. North-South convergence of the Indian plate and the Kohistan island arc terrane resulted in the South-directed internal imbrications of Alpurai Group and Swat Gneisses. Changes in the movement direction and the further convergence of the Indian plate have caused East-West shortening that results in North-South striking duplexes at the base of Swat Gneisses (MTZ), WSW-vergent large-scale fault-propagated recumbent folds, and several blind thrusts underneath the Swat Gneisses. Thickening by duplexes and movement on the blind thrusts result in the formation of structural domes in the lower Swat terrane. Petrography, microprobe-generated X-ray maps of chemical zoning in garnets, and garnet zoning profiles all indicate a multi-stage garnet growth history in rocks of the lower Swat terrane. Thermobarometry calculations show that the rocks in MTZ (schüppenzone) are metamorphosed at higher P-T conditions than the structurally overlying Alpurai Group metasediments.

Contents: 1. Tectonostratigraphy of the Indian Plate Lower Swat-Swabi, South of Main Mantle Thrust, NW Himalaya, Pakistan. 2. Basement-Cover Decollement, Basement Duplexes, and Normal Faults along the Edge of Suture Zone, Lower Swat, NW Himalaya, Pakistan. 3. Collision Tectonic of the Indian Plate: Evidence from Garnet Growth History and P-T-t Paths in the Lower Swat Terrane, NW Pakistan. 4. Tectonostratigraphic Zonations of Indian Plate Rocks between (MMT and MBT), NW Himalayas of Pakistan: Synthesis: Correlation, and Implication. 59 figures and maps. 2 tables. Appendices [1-6]: pp.153-222. Bibliography: pp.223-30.

ALLENDORF, Terilyn Delphi.

Local Residents' Perceptions of Protected Areas in Nepal: Beyond Conflicts and Economics. University of Minnesota [United States], 1999 (Ph.D. in Conservation Biology. Chairperson/Adviser: James L. D. Smith and Dorothy H. Anderson. xi, 98p. DAI 60, no.7 (Jan. 2000): 3039-B; UM 9937829.

Research and management concerning relationships between protected areas and local residents have followed an economic approach, emphasizing identification of sources of conflict and descriptions of the extractive relationships between people and protected areas. Little has been done to understand residents' perceptions, both positive and negative, of protected areas. Using a qualitative approach based on open-ended surveys and in-depth interviews, this study explores residents' perceptions of three protected areas in Nepal: Bardia National Park, a "natural park"; in Surkhet, and a newly-created wildlife sanctuary located within the Lumbini Development Project area. This study identifies and describes the positive and negative attributes that residents associate with the park and connects those perceptions to the broader structural (historical, political, and social) context. A model based on attitude theory from social psychology is proposed to conceptualize residents' relationships with protected areas. This study has direct implications for the management of protected areas in developing countries and for broader issues which must be discussed by communities if protected areas, biodiversity, and human cultures around the world are going to survive in a sustainable manner.

Contents: 1. Local Residents' Perceptions of Three Protected Areas in Nepal: Beyond Conflict and Economics. 2. Residents' Perceptions of Wildlife in Protected Areas in Nepal. 3. Residents' Perceptions of Royal Bardia National Park. 4. Conceptual Framework for Relationships between Protected Areas and Local Residents. 9 figures. 15 tables. Appendices [A-B]: pp.96-98.

BARAL, Hem Sagar.

Community Structure and Habitat Associations of Lowland Grassland Birds in Nepal. Universiteit van Amsterdam [University of Amsterdam] [The Netherlands], 2001 (Dr.). x, 235p. A printed copy is available at the Center for Research Libraries in Chicago, Illinois.

Printed as *Community Structure and Habitat Associations of Lowland Grassland Birds in Nepal*, by Hem Sagar Barat. S.l.: s.n., 2001. x, 235p.

BENDICK, Rebecca Odessa.

Dynamics of the Himalayan Tensile Arc. University of Colorado at Boulder [United States], 2000 (Ph.D. in Geophysics). Chairperson/Adviser: Roger Bilham. vii, 133p. DAI 61, no.4 (Oct. 2000): 1837-B; UM 9969344.

The geometric curvature of the Himalayan front has long been described, and plays an important role in governing stress and deformation fields throughout the Indo-Asian collision. Here, the arc is modeled as the result of a minimum-energy interface between rigid Indian crust and more ductile Asian crust. We find that the surface trace of this interface is best described as a small circle of radius 1745 plus or minus 55 km, centered at 91.2 degrees East plus or minus 1 degree and 42.9 degrees N plus or minus 1 degree. We also find that, according to an analogy with surface thermodynamics at smaller scales, such an interface should generate along-arc tensile stresses on the order of 10-20 MPa, which may be responsible for observed along-arc extension of 14 plus or minus 2 mm/year along the 1000 kilometer central region of the arc, and that such an interface should maintain a stable curved form over long periods of time. These along-arc tensile forces are presumably responsible for strain in many collision zones. They initiate the curvature of subduction zones and island arcs early in their formation and maintain their curved form for very long periods of active deformation.

Contents: 1. Introduction. 2. The Geological Setting. 3. The Velocity Field of the Central Himalayan Arc from GPS Geodesy. 4. GPS Techniques and Measurements on the Northern Edge of Tibet. 5. Defining an Interface for the Tibetan Plateau. 6. Thermodynamic Models of Finite-Width Interfaces. 7. A Computational Stress Field for the Himalayan Boundary. 8. Discussion and Summary. do figures and maps. 8 tables. Appendix: pp.132-33. Bibliography: pp.122-31.

BLUME, Frederick (1960-).

Determination of Source Parameters of the Great 1934 Nepal Earthquake Using Historic and Modern Geodesy. University of Colorado at Boulder [United States], 1999 (Ph.D. in Geophysics). Chairperson/Adviser: Roger Bilham. xviii, 205p. DAI 60, no.12 (June 2000): 5989-B; UM 9955258.

The precise location of the 15 January, 1934 Bihar-Nepal earthquake has been the topic of debate ever since the occurrence of the event, and no determination has been done to date using geodetic data of any kind. High precision gravity data acquired by the author in the rupture zone are inverted using genetic algorithm techniques to constrain the location and downdip length of the rupture to 5% uncertainty (80 plus or minus 5 km). The existence of a steeply dipping (30 degrees) mid-crustal ramp beneath the high Himalaya is also confirmed by this modeling procedure. Historic coseismic leveling data in Bihar, India are used to constrain the along strike location and geometry of the fault plane to 20% uncertainty (250 plus or minus 50 km). Then, using a triangulation survey performed by the Survey of India in 1950 to accurately measure the height of Mt. Everest in comparison with GPS remeasurements in the rupture zone done by the author, the slip magnitude and mantle viscosity are estimated using viscoelastic modeling techniques. Slip magnitude on the 1.75 plus or minus .25 degrees dipping fault is constrained to between 3.6 and 12.0 meters based on mantle viscosities of between $0.5 - 5 \times 10^{19}$ pa-sec, corresponding to a permissible range of seismic moments between 2.8 and 8.8×10^{21} N-m. A likely value of 5.8 meters of slip based on a mantle viscosity of 2×10^{19} pa-sec corresponds to a seismic moment of 4.5×10^{21} N-m, and a recurrence interval of 275 years for great Himalayan earthquakes. The comparison of data in different frames of reference required the eccentricity between the Everest Spheroid and WGS84 reference frames to be determined: $T_x = -286.6$ plus or minus 1.9 m, $T_y = -710.0$ plus or minus 2.9 m, $T_z = -247.3$ plus or minus 4.1 m. The errors of historic triangulation are found to be 7 ppm, suitable for use in crustal deformation study in tectonically active areas, and no significant strain was found using this technique in the stable south Indian craton.

Contents: 1. Introduction. 2. The Great Trigonometrical Survey of India: 190 Years of Crustal Deforma-

tion in the Indian Subcontinent. 3. Geodetic Constraints on the Geometry and Location of the 1934 Bihar-Nepal Rupture Zone: Gravity and Coseismic Leveling Data and Modeling. 4. Historic Triangulation and GPS Data in the 1934 Rupture Zone Area: Velocity and Reference Frame Analysis. 5. Viscoelastic Theory and Modeling of the 1934 Bihar-Nepal Earthquake. 6. Summary and Conclusions. 77 figures and maps. 41 tables. Appendix: pp.187-205. Bibliography: pp.180-86.

BUCKTON, Sebastian Timothy.

Spatio-Temporal Patterns in the Distribution Ecology of River Birds. University of Wales, College of Cardiff [United Kingdom], 1998 (Ph.D.). 119p. AB: *Index to Theses With Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.4, entry no.49-8454. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DX209577.

Although they are widespread and numerous, river birds have been neglected in applied and fundamental river ecology, particularly outside Europe. Their distribution and ecology were therefore assessed at a global scale, and at catchment and reach scales in the Himalaya.

At the global scale, species richness was greatest in mountainous regions at low latitudes. Conforming to species-area and energy theories, family richness increased significantly with measures of productivity and land relief. Family richness in turn was a major predictor of genus and species richness, although there were additional significant effects by productivity.

In the Himalaya, the most diverse river avifauna in the world probably reflects marked radiation among chats (Turdidae), high productivity and high drainage density. Winter surveys of 182 Himalayan streams showed that bird distribution was strongly latitudinal, with habitat structure also an important correlate. Relationships with invertebrate abundances and stream chemistry were weak.

Several species migrated seasonally between altitudes. Possible explanations include monsoon conditions and low invertebrate abundance at low altitude in summer, coupled with adverse climate at high altitude in winter.

Distributions in all species were patchy, probably reflecting marked resource heterogeneity between sites. Some species—notably the larger Forktails *Enicurus*—were particularly scarce for reasons that are currently unclear. However, five other species co-occurred frequently.

At the reach scale, niche-use in these five co-occurring species revealed marked segregation: Brown Dipper *Cinclus pallasii* and Little Forktail *E. scouleri* foraged exclusively in aquatic habitats, while River Chat *Chaimorrornis leucocephalus* and Plumbeous Redstarts *Rhyacornis fuliginosus* foraged either terrestrially or aerially within the river channel. Spotted Forktail *E. maculatus* foraged in the aquatic/terrestrial ecotone. Further niche-differentiation between these and other species involved morphology, diet, prey size, foraging behavior and micro-habitat use.

These results are discussed in terms of human impacts on Himalayan rivers.

CATLOS, Elizabeth Jacqueline.

Geochronologic and Thermobarometric Constraints on the Evolution of the Main Central Thrust, Himalayan Orogen. University of California at Los Angeles [United States], 2000 (Ph.D. in Geochemistry). Chairperson/Adviser: T. Mark Harrison. xx, 345p. DAI 61, no.11 (May 2001): 5761-B; UM 9993054.

The Main Central Thrust (MCT), which juxtaposes high-grade Greater Himalayan Crystallines over the lower-grade Lesser Himalaya Formations, is the dominant crustal thickening structure of the Himalayan orogen. Initiation of MCT movement, the origin of footwall inverted metamorphism, and the relationship of the thrust with other geologic elements remains speculative. *In situ* Th-Pb monazite ages and thermobarometric information were obtained from rocks collected along four MCT transects (Bhagirathi River, NW India; Marysandi River and Darondi Khola, central Nepal; Dudh Kosi-Everest, eastern Nepal). An ion microprobe method to determine Th-Pb allanite ages with plus or minus 10% accuracy was developed to address geologic questions, including those from the Himalaya. The geochronologic data indicate a striking lateral continuity of tectonic events across the range. Early Miocene monazite inclusions are found in garnets immediately beneath the MCT, whereas Late Miocene/Pliocene ages characterize rocks from the apparent inverted metamorphic sequence. The youngest, more precise monazite age and growth conditions deter-

mined is 3.3 plus or minus 0.1 Ma from a central Nepal sample near the garnet isograd. The age indicates this portion of the MCT shear zone accommodated a minimum of minus 30 km of slip over the last 3 Ma. Matrix monazites beneath the MCT in NW India yield an age of 5.9 plus or minus 0.2 Ma, supporting widespread Late Miocene MCT activity across the collision front. Pliocene $^{40}\text{Ar}/^{39}\text{Ar}$ muscovite ages from Darondi Kholra rocks suggest rapid exhumation of the MCT shear zone. The absence of 7-3 Ma monazite ages in eastern Nepal may reflect a different nappe structure and one that obscures the reactivated ramp equivalent exposed elsewhere. Garnets from the MCT hanging wall and footwall display unique major element zoning, useful in constraining the location of the MCT thrust system that is otherwise difficult to discern. MCT footwall rocks in central Nepal show apparent inverted thermal and pressure gradients of 18 degrees C/km and 6 km/kbar. P-T paths estimated for Lesser Himalaya samples in central and eastern Nepal indicate the presence of a previously unseen structural break. Geochronologic and thermobarometric data from these transects support a model in which the inverted metamorphism underlying the MCT formed by the transposition of right-way-up metamorphic sequences during Late Miocene/Pliocene shearing.

Contents: 1. Introduction: The Himalayan Orogenesis in Perspective. 2. Geologic Overview of the Himalaya: Emphasis on Previous Work. 3. Models for the Origin of Himalayan Inverted Metamorphism and Magmatism. 4. The Himalayan Inverted Metamorphism Problem. 5. *In Situ* Methods of Analysis. 6. Th-Pb Microprobe Dating of Allanite. 7. Geochronologic and Thermobarometric Constraints on the Evolution of the MCT, Central Nepal, Himalaya. 8. Geochronologic and Thermobarometric Constraints on the Evolution of the MCT, Eastern Nepal and NW India. 9. Implications for Evolutionary Models of the Himalaya. 119 figures. 36 tables. Appendix: pp.300-13. Bibliography: pp.314-45.

CORFIELD, Richard I.

Origin and Emplacement of the Spontang Ophiolite and Crustal Shortening Processes in the Ladakh-Zaskar Himalaya, NW India. University of Oxford [United Kingdom], 1998 (D.Phil. in Earth Sciences). x, 168p. and 112p. of plates, maps, diagrams and tables. AB: *Index to Theses With Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-10762. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.D203835.

Field, petrological and geochemical evidence show the Spontang ophiolite preserves a full oceanic crust and mantle sequence formed in the Jurassic (174 ± 2 Ma), probably at a normal mid-ocean ridge. The Cretaceous Spong island-arc (91 ± 3 Ma) developed over this Neo-Tethyan basement above a north dipping subduction zone at which an accretionary complex (Photang thrust sheet) formed.

Based on detailed mapping and balanced cross-section construction, three phases of deformation (D_{1-3}) resulting in >85 km shortening have been identified in the north Indian continental margin of the Zaskar Himalaya. D_1 (late Cretaceous) involved obduction of the Spontang ophiolite, Photang thrust sheet, late Cretaceous base of slope deposits (Photok Unit) and Mesozoic continental slope deposits onto the outer passive margin due to collision with the Spong arc/subduction system. Passive margin subsidence, derived by backstripping restored stratigraphic sections closely fits a model of 120% stretching ($\beta=1.2$) during 270-220 Ma rifting followed by exponential decay of the associated thermal anomaly. An increased rate of subsidence in the outer margin upsets this trend in the late Cretaceous interpreted as D_1 flexural loading. Maastrichtian limestones deposited over the Yulchung thrust and allochthonous continental slope deposits provide a minimum age limit for D_1 . Palaeocene faunal assemblages indicate open marine conditions prior to the onset of India/Asia collision (D_2) in the early Eocene.

The D_1 thrust beneath the Photok unit was re-activated by D_2 , cutting up-section through the early Tertiary shallow marine cover and controlling the Eocene depositional environments. Thrusting also propagated down-section causing thickening and Barrovian metamorphism at depth. D_3 back-thrusting and break-back thrusting in the late Tertiary formed a pop-p structure at the northern edge of the passive margin, an inverted structures in the Indus Suture Zone. South of Spontang, re-activation of D_2 thrusts as late D_2/D_3 normal faults was associated with gravitational collapse of the High Himalaya to the south.

DENNISTON, Rhawn Flavell.

Holocene and Younger Dryas Speleothem-Based Paleoclimatic Reconstructions from the Northern

Midwest, U.S.A., the Ozark Highlands, U.S.A., and the Pokhara Valley Region, Nepal. University of Iowa [United States], 2000 (Ph.D. in Geoscience). Chairperson/Adviser: Luis A. González. xi, 131p. DAI 61, no.6 (Dec. 2000): 2948-B; UM 9975651.

Chapter 1 demonstrates the potential impact of pre-infiltration evaporative effects on the oxygen isotopic composition of speleothem calcite while simultaneously demonstrating the consistency of carbon isotopes in preserving vegetation signals. Stalagmite growth rates determined from radiometric dating suggest that the middle Holocene prairie period (6000 to 3500 years before present) may have been marked by an increase in cool season infiltration and/or precipitation. Chapter 2 is a comparison of the timing of the arrival of prairie into different areas in the northern Midwest using the carbon isotopic compositions of speleothems from four caves. A pronounced and sharp boundary between prairie and more mesic elements remained constant for approximately 1000 years during the middle Holocene suggesting that the eastward advance of Pacific air masses responsible for stabilizing prairie was stalled. Chapter 3 is an attempt to relate the paleoenvironmental information preserved within speleothems from the Ozark Highlands to the limited paleoclimatic datasets currently documented for the region, namely a limited number of pollen spectra and vertebrate sequences. Chapter 4 includes some of the speleothem data from Chapter 3 but also introduces analyses of speleothems collected from three other Ozark caves. Examination of this larger data set illuminates several small-scale isotopic shifts that may represent regional climatic trends including an early Holocene cool period that overlaps chronologically with a rise in global sea level. Chapter 5 is an analysis and modeling study of a Younger Dryas-age stalagmite from the Ozark Highlands. Oxygen and carbon isotopic shifts indicate that the North American continental interior underwent significant climatic deterioration during the Younger Dryas with mean annual temperatures approximately 3-5 degrees C cooler than present. Chapter 6 is an attempt to reconstruct changes in the precipitation associated with Indian summer monsoon in the Pokhara Valley, central Nepal over the past 2300 years. In caves hosted by dolomite, aragonite is favored during times of a weakened monsoon while calcite is more likely to crystallize during wetter intervals. Uranium concentrations approaching 25 ppm allow for extremely precise age determinations using U-series mass spectrometry techniques.

Contents: Introduction. 1. Evidence for Increased Cool Season Moisture during the Middle Holocene. 2. Speleothem Evidence for Behavior of the Prairie-Forest Ecotone in the North-Central U.S.A. 3. Integrating Stalagmite, Vertebrate, and Pollen Sequences to Investigate Holocene Vegetation and Climate Change in the Southern Midwestern USA. 4. Speleothem Carbon Isotopic Records of Holocene Environments in the Ozark Highlands, USA. 5. A High-Resolution Speleothem Record of Climatic Variability during the Allerød-Younger Dryas Transition in Missouri, Central United States. 6. Speleothem Evidence for Changes in Indian Summer Monsoon Precipitation over the Last 2300 Years. 19 figures and maps. 8 tables. Bibliography: pp.120-31.

DÈZES, Pierre.

Tectonic and Metamorphic Evolution of the Central Himalayan Domain in Southeast Zaskar (Kashmir, India). Université de Lausanne [University of Lausanne] [Switzerland], 1999 (Dr.). iii, 149p.

Published with an abstract in French as *Tectonic and Metamorphic Evolution of the Central Himalayan Domain in Southeast Zaskar (Kashmir, India)*, by Pierre Dèzes. Lausanne: Section des sciences de la terre, Université de Lausanne, 1999. iii, 149p. (Mémoires de géologie, Lausanne).

GODIN, Laurent (1968-).

Tectonic Evolution of the Tethyan Sedimentary Sequence in the Annapurna Area, Central Nepal Himalaya. Carleton University [Canada], 1999 (Ph.D. in Earth Sciences). Chairperson/Adviser: Richard L. Brown and Simon Hanmer. xv, 280p. DAI 60, no.9 (Mar. 2000): 4475-B; UM NQ42791. A microfiche copy may also be borrowed on interlibrary loan from the National Library of Canada in Ottawa, using the ISBN number 0-612-42791-9.

The Annapurna detachment is part of the orogen-parallel extensional South Tibetan detachment system, which extends along most of the length of the Himalaya. It crops out in the Kali Gandaki area of central Nepal, where it juxtaposes the Tethyan sedimentary sequence in the hanging wall with rocks of the Greater Himalayan metamorphic sequence in the footwall. A five-phase structural evolution for the Tethyan sedi-

mentary sequence is proposed. The first phase is characterized by southwest-verging isoclinal folds (D1). The second phase is represented by northeast-verging megascopic tight folds (D2). These first two phases are transposed in a 1,500 meter-thick high-strain zone (Dt) affecting the lowermost part of the Tethyan sedimentary sequence and the uppermost part of the Greater Himalayan metamorphic sequence. The high-strain fabrics are associated with down-to-the-northeast normal shear-sense indicators, which are linked to initial ductile shearing along the Annapurna detachment. The fourth phase is post-peak metamorphic, and marks a return to southwest-vergent thrusting and folding (D3). During this phase, parts of the Tethyan sedimentary sequence and the high-strain zone were reactivated as localized thrusts. The fifth phase (D4) is a brittle event associated with east-west extension along the Thakkhola graben structures. Late top-to-the-northeast brittle normal faults also disrupt rocks within the high-strain zone during this phase and could mark the present-day southern termination of the Thakkhola graben. U-Pb and $^{40}\text{Ar}/^{39}\text{Ar}$ dating of monazite and muscovite from footwall and hanging-wall rocks of the Annapurna detachment are presented. Early Oligocene crustal thickening led to Eohimalayan kyanite-grade metamorphism between 35 and 32 Ma. The resulting thermal event affected the Early Ordovician Formation III augen gneiss and produced kyanite-bearing leucosomes in the upper part of the Greater Himalayan metamorphic sequence. A weakly deformed leucogranitic dike intruding the immediate hanging wall yielded reversely discordant monazite ages between 23 and 22.5 Ma, which suggest that the ductile strain in the Annapurna detachment zone terminated at ca. 22 Ma. Based on a $^{40}\text{Ar}/^{39}\text{Ar}$ muscovite age, the D3 deformation phase is interpreted to occur at ca. 18 Ma. Rapid exhumation cooled the entire Greater Himalayan metamorphic sequence through the muscovite Ar closure temperature (330-430 degrees C) between 15 and 13 Ma. Muscovites from the immediate hanging wall of the Annapurna detachment yielded slightly younger ages, between 13 and 11 Ma, testifying to late hydrothermal activity in the Annapurna detachment zone. This thermal event could be linked with the initiation of brittle faulting related to the Thakkhola graben system. The hanging wall of the Annapurna detachment is characterized by regional-scale, northeast-verging folds, classically interpreted as gravity-induced structures developed during down-to-the-north extensional shearing along the detachment system. Results from this thesis support an alternative interpretation. The northeast-verging folds developed before ductile extensional shearing along the detachment system, thereby recording some of the earliest contraction of this part of the orogen. Accordingly, a new model is proposed in which the northeast-verging folds of the Kali Gandaki area represent the northern part of a Late Eocene to Oligocene contractional fan structure.

Contents: 1. General Introduction. 2. The Annapurna Detachment and the Structural Evolution of the Tethyan Sedimentary Sequence in Its Hanging Wall, Central Nepal, Himalaya. 3. Crustal Thickening, Melt Production and Exhumation of the Himalayan Metamorphic Core of Central Nepal: Insight from U-Pb Geochronology and $^{40}\text{Ar}/^{39}\text{Ar}$ Thermochronology. 4. Backfolds in the Core of the Himalayan Orogen: An Alternative Interpretation. 5. Concluding Statement. 40. figures. 3 maps. 5 tables. Appendices [A-E]: pp.190-280. Bibliography: pp.176-89.

HILDEBRAND, Peter Rustin.

The Hindu Kush of Pakistan: Mountain Range Evolution from Active Margin to Continent-Continent Collision. University of Oxford [United Kingdom], 1998 (D.Phil. in Earth Sciences). 117p. and 71p. of plates, figures and diagrams. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-10765. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.D203780.

Geological mapping was carried out in the eastern Hindu Kush located to the northwest of Chitral, northern Pakistan. The resultant map provided the basis for acquiring structural, metamorphic, geochronological, and geochemical data which reveal some interesting aspects of the age and origin of this relatively poorly studied part of the great central Asian mountain ranges.

U-Pb geochronology on monazite from staurolite schists and on monazite, xenotime and uraninite from leucogranites and pegmatites, combined with a knowledge of the relative timing of structural and metamorphic development, suggests that major orogeny took place as long ago as the Jurassic. This deformation was characterized by crustal shortening and metamorphic mineral growth under high geotherm conditions and

probably multiple exhumation stages, possibly in association with granitoid intrusion. In general, the data argue for a major mountain range along the southern margin of Asia, supporting the hypothesis that it was similar to the present day Andes prior to the ca. 50 Ma collision with India.

A major phase of crustal melting at ca. 24 Ma generated migmatites, leucogranite dykes and the Gharm Chasma leucogranite pluton. This age is comparable to that of the Baltoro pluton in the Karakoram to the east, confirming the regional importance of crustal melting along the southern margin of the Asian plate during the earliest Miocene.

Stretching lineations oriented sub-horizontally indicate a phase of strike-slip deformation that probably began during the Miocene, and continues today. It is thought to have been associated with anti-clockwise rotation of the regional foliation strike from E to NE and N, in response to the northward-indenting Indian plate.

JOSHI, Samudra Lal.

Ecology and Management of the Red Ant, *Dorylus orientalis* Westwood in Nepal. University of London [United Kingdom], 1998 (Ph.D. in Biology, Imperial College of Science, Technology and Medicine). 194p. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-11042. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DXN028864.

Dorylus orientalis Westwood is an important pest in Nepal and occurs in all climatic zones where potatoes are grown except the High Mountains. The severity of its damage to potatoes and other crops is greatest in the Middle Mountains. It was usually more active in fields in April, May and October than other months. It nests underground in chambers and tunnels at over 1m depth. Trails from the nest originate from terrace walls, bunds or outer boundaries of a field, and the ants feed on cultivated crops like potatoes, brassicas and other underground vegetable parts, and suitable baits. Moist bread was particularly attractive as were some oily baits. Animal protein was not very attractive. The ants attacked both freshly harvested immature and mature potato tubers but old stored mature tubers were unattractive. Besides vegetables they also seemed to prey on some insects and annelids.

The ant, *Pheidologeton diversus* (Jerdon) competed with *D. orientalis* for food baits in the field. The bird, hill mynah (*Gracula religiosa*) preyed on *D. orientalis* workers. Similarly, an entomopathogenic fungus, *Paecilomyces fumosoroseus* (Wize) Brown and Smith was found as a potential biocontrol agent. None of the tested potato varieties were resistant to *D. orientalis* in field conditions though local varieties with small tubers such as Chisapani Rato and Sabet local were less damaged than improved varieties. Even slight damage to growing potato tubers can markedly retard tuber growth. Ant incurred tuber loss per unprotected potato plant ranged from 21.6 to 61.8%. Soil drenching near plant stems of chlorpyrifos (0.04%), azadirachtin (0.00045%) in aqueous solution or tobacco dust suspension in water-diluted cow urine (in a ratio of one part cow urine and five parts water) effectively controlled ants with minimum tuber damage.

KAPP, Paul Andrew (1974-).

Tectonic Evolution of the Qiangtang Terrane and Bangong-Nujiang Suture Zone, Central Tibet.

University of California at Los Angeles [United States], 2001 (Ph.D. in Geology). Chairperson/Adviser: An Yin. xxi, 409p. DAI 62, no.11 (May 2002): 4998-B; UM 3032850.

Constraining the timing and the mechanisms of the formation of the Tibetan plateau is significant for understanding how the continental lithosphere deforms during collision and for addressing potential relationships among tectonics, climate, and ocean-water chemistry. Models assume that the Tibetan crust is homogeneous and that it thickened northward during the Cenozoic Indo-Asian collision by the same mechanisms that are observed to be active along the plateau margins. Testing these assumptions is hindered by our poor geologic understanding of the Tibetan interior. The goal of my research has been to constrain the crustal structure and thickening history of central Tibet through a combination of field-based structural, geochronologic, and petrologic studies. Deeply-exhumed rocks in the central Qiangtang provide windows into the deeper crust of central Tibet. They consist of blueschist-bearing melanges and occur in the foot-walls of Late Triassic-Early Jurassic domal, low-angle normal faults. Thermochronologic studies coupled with the application of a new titanite-rutile barometer suggest that the melanges were exhumed directly

from >30 km depth by detachment faulting. As the melanges are structurally beneath Paleozoic-Mesozoic continental margin strata, they likely underplated central Tibet during early Mesozoic low-angle oceanic subduction and represent the central Tibetan deeper crust. This crustal structure contrasts sharply with that inferred for southern Tibet; this difference may help explain why Cenozoic crustal shortening and magmatism were localized >100 km north of the India-Asia suture zone, and why the central Tibetan crust exhibits anomalously high Poisson's ratios. Geologic mapping and geochronologic studies elucidate the style, magnitude, and dominant mechanism of crustal thickening in central Tibet. The Bangong-Nujiang suture zone between the Lhasa and Qiangtang terranes was significantly modified by Cretaceous-Tertiary upper-crustal shortening subsequent to ocean closure. This shortening was coeval with the growth of a >200-km-wide east-plunging anticlinorium in the central Qiangtang. A possibility is that the Qiangtang anticlinorium formed above a thrust ramp at depth, while the Lhasa terrane underthrust northward beneath the Qiangtang terrane along the reactivated Bangong-Nujiang suture. This underthrusting began before and continued during the Indo-Asian collision. This hypothesis raises the provocative possibility that the Tibetan plateau was formed from the «inside-out» and that its formation began prior to the Indo-Asian collision.

Contents: 1. Introduction. 2. Tectonic Evolution of Qiangtang Blueschist-Bearing Metamorphic Rocks, Central Tibet. 3. Barometry of Epidote-Bearing Amphibolites and Blueschists Using Titanite-Rutile Equilibrium, with Application to Qiangtang Metabasites, North-Central Tibet. 4. Mesozoic and Cenozoic Tectonic Evolution of the Shiquanhe Area, Western Tibet. 5. Crustal Thickening of Central Tibet by Northward underthrusting of Lhasa beneath Qiangtang prior to and during the Indo-Asian Collision. 72 figures. 15 tables. Appendices [A-B]: pp.376-409.

KHAN, Shuhab Danishwar (1967-).

Field Relations, Geochemical, Isotopic and Age Studies of the Teru Volcanic Formation, Northern Kohistan Terrane, Pakistani Himalaya. University of Texas at Dallas [United States], 2001 (Ph.D. in Geosciences). Chairperson/Adviser: Robert J. Stern. xx, 132, 4p. DAI 62, no.3 (Sept. 2001): 1281-B; UM 3007116.

This research presents new field, structural, geochemical, isotopic and geochronology data for the Teru Volcanic Formation (previously known as the Shamran Volcanics) exposed west of Gilgit in the Kohistan terrane of the Pakistani Himalayas. The Teru Volcanic Formation comprises a 3-km thick sequence of subaerially-erupted mafic to felsic lavas and associated volcanoclastic rocks. The Shunji Pluton bounds this sequence to the south and the sequence is overthrust to the north by the mid-Cretaceous Chalt Volcanic Group (intra-oceanic arc phase) along the south-verging Ghizer Thrust. These volcanics are lithologically comparable to similar-age suites elsewhere in the Himalayas. These lavas are dominated by a typical convergent margin assemblage of clinopyroxene, amphibole, plagioclase and magnetite. The Teru Volcanic Formation ranges from basalt through rhyolite, and has tholeiitic, calc-alkaline, and shoshonitic affinities. Trace element features also suggest subduction-related patterns which is also supported by isotopic studies. Isotopic and trace element studies show that these lavas originated from a mantle source which experienced a combination of variable subduction components added to a variable mantle wedge composition. Mixing calculations performed on $87\text{Sr}/86\text{Sr}$ versus $143\text{Nd}/144\text{Nd}$ specify that the addition of 0.2-0.6% of Indus margin sediments and/or 2-4% of Indus margin sediment fluids can generate Teru volcanics composition. $40\text{Ar}/39\text{Ar}$ studies of Teru Volcanics show well-defined plateau age of 43.8 plus or minus 0.5, and 32.5 plus or minus 0.4 Ma. These ages makes the Teru Volcanics the youngest reported volcanics in the Kohistan terrane. The country rock for these volcanics, the Shunji Pluton, shows a 65 Ma Rb-Sr whole rock age.

Contents: 1. Introduction. 2. Field Relations and Structural Constraints for the Teru Volcanic Formation, Northern Kohistan Terrane, Pakistani Himalayas. 3. Petrology, Mineral Chemistry, and Major Element Composition of Calc-Alkaline and Shoshonitic Teru Volcanic Formation, Kohistan Terrane, Pakistani Himalayas. 4. Geochemical and Sr-Nd-Pb Isotopic Constraints for Mantle Source Characteristics and Petrogenesis of Teru Volcanics, Northern Kohistan Terrane. 5. Conclusions. 45 figures. 10 tables. Appendix: pp.131-32. Bibliography: pp.4, 34-38, 78-82, and 120-27.

LOWE, Andrew T.

Runoff Modelling from Large Glacierised Basins in the Karakoram Himalayas Using Remote Sensing of the Transient Snowline. University of Manchester [United Kingdom], 1999 (Ph.D. in Geography).

270p. AB: *Index to Theses With Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.4, entry no.49-8369. Contact the John Rylands University Library, University of Manchester (Oxford Road, Manchester M13 9PP, United Kingdom) regarding the availability of copies.

Much of the flow of the Upper Indus River where it leaves the Karakoram Mountains is derived from the melting of snow and ice in glacierised sub-basins. Records of discharge of the tributary Hunza River for the 11-year period 1971–1981 indicate year to year fluctuations in flow that are considerable by comparison with those in glacierised high mountain basins elsewhere.

Low-cost, wide swath, visible spectrum sensors on satellites with daily repeat cycles (AVHRR and DMSP) provide frequency of update of clear-sky scenes and resolution appropriate to the scale of the large glacier basins of the Karakoram in which field measurement programmes are modest. Relationships between position of the transient snowline and basin hypsometry determine the area of ice exposed to melting and, together with energy input, influence the seasonal pattern of runoff formation.

The aim has been to develop a glacier runoff model with a view to forecasting discharge from large remote glacierised basins in the Karakoram Himalayas. In the model, energy inputs are represented by positive degree-days, determined at various elevations from lapse rates, and the depletion of snowcover and the subsequent rise of the TSL during summer is determined from close interval satellite monitoring by the AVHRR or DMSP sensors. Coupled with a digital elevation model, movement of the TSL is used to partition glacierised areas into snow-covered and bare-ice portions to which differential melt rates are then applied; degree-day factor applied over bare ice is substantially higher than that over snow. Model performance evaluation based on correlation coefficient, Nash-Sutcliffe coefficient and percentage volume deviation indicated a reasonably good simulation between measured and simulated runoff for the Hunza River for the spring and summer of 1989. Both the model and the spatial and temporal resolution of the satellite platforms are well suited and appropriate at the scale of the large glacierised high mountain basins of the Himalayas.

MURPHY, Michael Andrew.

Tectonic Evolution of Southwest Tibet. University of California at Los Angeles [United States], 2000 (Ph.D. in Geology). Chairperson/Adviser: An Yin. xxi, 212p. DAI 61, no.8 (Feb. 2001): 4045-B; UM 9981708.

Through an integrated field-based approach, this research attempts to constrain the deformation history of rocks within the Tibetan-Himalayan orogen in southwest Tibet. Specifically, structural, sedimentologic, geochronologic, geochemical, and thermobarometric data are used to both test existing kinematic models of the Tibetan-Himalayan orogen and develop more accurate models that incorporate the new data. Restoration of a 111 km-long traverse from the junction between the India, Nepal, and China borders to Mt. Kailas in southwest Tibet indicates a total of 176 km of north-south horizontal shortening within the Tethyan fold-thrust belt and Indus-Yalu suture zone. A sequential restoration shows that the locus of shortening prior to the late Oligocene occurred significantly south (>60 km) of the Indus-Yalu suture zone within the Tethyan fold-thrust belt and that oceanic lithosphere was present south of the suture until the middle Miocene. An implication of this result is that post-collision high-K, calc-alkaline magmatism may be readily explained by melting due to active subduction of oceanic lithosphere beneath Tibet until the middle Miocene. The net slip on the Karakoram fault system is estimated by restoring a piercing line defined by the South Kailas thrust system. Assuming the thrust system is planar across the Karakoram fault, we calculate 66 plus or minus 5.5 km of normal right slip. Documentation of the activity on the South Kailas thrust at 13 Ma implies that the Karakoram fault in southwest Tibet did not initiate until after the cessation of motion on the thrust. However, field investigations of the central portion of the Karakoram fault system show that the fault was active at 17 Ma and has accumulated a maximum of 150 km of right slip since that time. I suggest that these along strike variations in the magnitude of slip and timing constraints are best explained by southward propagation of the Karakoram fault system. Field mapping, geochronologic, geochemical, and thermobarometric analysis of the Gurla Mandhata area reveal major east-west extension along the Gurla Mandhata detachment system. The maximum fault slip occurs along a pair of low-angle normal faults, resulting in the juxtaposition of low-grade Paleozoic rocks and Tertiary sediments in its hanging wall over amphibolite-facies rocks and variably deformed leucogranite bodies in its footwall. Shear-sense indicators in the footwall mylonitic rocks define a 2.1 km-thick ductile shear zone. $^{40}\text{Ar}/^{39}\text{Ar}$ mica data from the footwall rocks indicate that

they cooled below 400 degrees C ca. 9 Ma. Pressure/depth estimates of the footwall rocks are used to constrain a total slip estimate on the detachment system between 66 and 35 km. The slip estimate, timing constraint, and kinematics on the detachment system correlate to those on the right-slip Karakoram fault system, and support that the two are linked. This implies that the Karakoram fault extends to mid-crustal depths and extends as a major crustal right-slip shear zone into the High Himalaya of far-western Nepal.

Contents: 1. Introduction. 2. Structural Evolution and Sequence of Thrusting in the Tethyan Fold-Thrust Belt and Indus-Yalu Suture Zone, Southwest Tibet. 3. Southward Propagation of the Karakoram Fault System into Southwest Tibet: Timing and Magnitude of Slip. 4. Structural and Thermal Evolution of the Gurla Mandhata Detachment System, Southwest Tibet: Implications for the Eastward Extent of the Karakoram Fault System. 5. Conclusions. 47 figures. 5 plates. 8 tables. Appendices [A-C]: pp.174-212. Bibliography: pp.11-13, 45-53, 69-71, 159-70.

SCHNEIDER, David A.

An Investigation on the Evolution of a Himalayan Gneiss Dome: Nanga Parbat-Haramosh Massif, Western Syntaxis. Lehigh University [United States], 2000 (Ph.D. in Earth and Environmental Sciences). Chairperson/Adviser: P. K. Zeitler. xiv, 135p. DAI 61, no.8 (Feb. 2001): 4045-B; UM 9982858.

Localized high-grade metamorphic terranes exposed within orogenic belts offer a unique opportunity to examine rocks which were once at great depths and which have enjoyed the various orogenic phases. Many of these terranes are thought to have developed rapidly, exhumed during the late- to post-orogenic stages. The Nanga Parbat-Haramosh massif, western Himalayan syntaxis, exemplifies such a feature. A multidisciplinary approach, with an emphasis on geo- and thermochronology and field observations, allows the tectonic evolution of the massif to be tightly constrained. The Indian plate rocks which constitute the Nanga Parbat massif initially underwent Eocene metamorphism and Miocene anatexis as a result of collision between India, a juvenile island arc, and Asia at about 60 Ma. Indian plate metasedimentary rocks across the western syntaxial region, near Nanga Parbat and Hazara, yield Oligocene mica cooling ages suggesting these rocks were in the shallow crust by that time. Crustal-scale transpression as a result of India-Asia collision and dextral slip along the Karakorum fault created a series of off-stepping domes in the western syntaxial region, upwarping Indian crust and forming the beginnings of the present-day massif. Not only manifested as structural domes, the Late Miocene occurrence is also observed in isotopic signatures. U-Th-Pb crystallization ages on accessory minerals from metamorphic and plutonic sequences along the flanks of Nanga Parbat and at Haramosh indicate heating and related anatexis from 13 Ma to 9.5 Ma. Ar-Ar analyses on medium-closure temperature silicates indicate cooling was concurrent with doming; these patterns are preserved at Haramosh and in the Karakorum, to the north and east. The Nanga Parbat massif, however, has been subsequently overprinted by a distinct high-grade petrologic and structural event. This Plio-Pleistocene episode appears to be spatially restricted to Nanga Parbat (*sensu stricto*) and has resulted in the formation of 3 Ma migmatites, 1 Ma granites, and recent, rapid exhumation and cooling. Granites are suggested to have formed by vapor-absent crustal melting as a result of this rapid decompression as well as local melting via fluid infiltration through shear zones. Exhumation is dominated by erosion, with an apparent lack of any crustal-scale, normal-motion detachment. Structural modification of Nanga Parbat is primarily accomplished through a pair of conjugate thrust-displacement shear zones, defining a crustal scale antiformal «pop-up structure», consistent with models predicting doubly-vergent orogen structures/geometries. The shear zones have a spatial and temporal association with magmatism, beginning probably with the Late Miocene doming event and continuing today. The evolution suggested here for Nanga Parbat indicates that, although the most recent episode has significantly overprinted signatures of previous events, the massif has had a protracted tectonic history, characterized by at least three episodes involving melting and deformation, and is not the product of a single, late-orogenic event. Other gneiss dome-type structures in orogenic belts may have an analogous evolution and should be evaluated in a similar manner.

Contents: 1. Tectonics of Nanga Parbat, Western Himalaya: Synkinematic Plutonism within the Doubly Vergent Shear Zones of a Crustal-Scale Pop-Up Structure. 2. Early Miocene Anatexis Identified in the Western Syntaxis, Pakistan Himalaya. 3. Mazeno Pass Pluton and Jutlal Pluton, Pakistan Himalaya: Age and Implications for Entrapment Mechanisms of Two Granites in the Himalaya. 4. Evolution of a Himalayan Gneiss Dome at Nanga Parbat, NW Himalaya. 21 figures and maps. 12 tables. Bibliography: pp.120-31.

SHAKYA, Lokesh R.

Revision of the Genus Oberonia Lindley (Orchidaceae) in the Himalayas. Tribhuvan University [Nepal], 1999 (Ph.D.). xii, 227, 40p.

SHRESTHA, Dhruva Bahadur Pikha (1953-).

Aspects of Erosion and Sedimentation in the Nepalese Himalaya: Highland-Lowland Relations. [With a summary in Dutch.] Rijksuniversiteit te Gent [University of Gent] [Belgium], 2000 (Dr. in geologie). xv, 220p.

Published with a summary in Dutch as *Aspects of Erosion and Sedimentation in the Nepalese Himalaya: Highland-Lowland Relations*, by Dhruva Pikha Shrestha. Enschede, The Netherlands: ITC, 2000. xvii, 265p. (ITC publication).

UPRETI, Bishnu Raj.

Conflict Management in Natural Resources: A Study of Land, Water and Forest Conflicts in Nepal.

Landbouwwuniversiteit Wageningen [Agricultural University of Wageningen] [The Netherlands], 2001 (Dr.). xviii, 195p. A printed copy is available at the Center for Research Libraries in Chicago, Illinois.

Printed as *Conflict Management in Natural Resources: A Study of Land, Water and Forest Conflicts in Nepal*, by Bishnu Raj Upreti. S.l.: s.n., 2001. xviii, 195p.

VARUGHESE, George (1965-).

Villagers, Bureaucrats, and Forests in Nepal: Designing Governance for a Complex Resource. Indiana University [United States], 1999 (Ph.D. in Public and Environmental Affairs and Political Science).

Chairperson/Adviser: Elinor Ostrom. xii, 229p. DAI 61, no.2 (Aug. 2000): 755-A; UM 9962740.

This study addresses the question of how institutions, together with various physical and socioeconomic attributes, affect the performance of forest resource systems in 18 locations in the middle hills of Nepal. Specifically, it investigates the impact of local institutions on forest resource management to gain a better understanding of how such institutions shape the actions of individuals at the community level. Drawing upon recent research in the analysis of cooperation, the study focuses upon the relationship between the institutional design of the governance of forest resources and (1) population change; (2) differences among users or heterogeneity; and (3) patterns of association seen as forms of social capital. The findings from this study indicate that (1) change in forest conditions is not markedly associated with population growth but, rather, is strongly associated with local forms of collective action; (2) differences among users do pose challenges for groups of forest users in overcoming the incentives to free ride and shirk but not in a determinant fashion; and (3) levels of deliberate, long-term interaction do have a systematic relationship with levels of collective activity. Successful groups cope with perceived changes in resource condition and user population and overcome stressful heterogeneities by crafting innovative institutional arrangements well-matched to their local circumstances. In the more successful cases, arrangements for identifying genuine users, determining harvest amounts and timing, and active monitoring by users themselves emerge as important factors in managing forest resources. This study suggests that development policy aimed at preserving the environment with local participation must recognize the significance of institutional arrangements at the local level to forest resource conditions at that level. Ultimately, the benefits and costs associated with forest resource conditions at the local level have considerable bearing on larger environmental issues. Furthermore, the study suggests that government policy on participatory resource management will be more successful if it facilitates institutional innovation and adaptation at the local community level.

Contents: 1. Forest Governance and Management in Nepal. 2. The Analysis of Forest Resource Systems. 3. Population Growth, Group Size, and Collective Action. 4. Differences among Forest Users and Collective Action. 5. Interaction, Trust, and Collective Action: The Role of Enterprising Individuals and Nonlocal Forestry Organizations. 6. Designing Governance for a Complex Resource: Conclusions. 3 figures. 26 tables. Appendix: pp.221-28. Bibliography: pp.207-20.

WALKER, Christian Bryan.

The Tectonothermal Evolution of the High Himalayas in the Suru Valley, NW Zaskar, with Constraints from Metamorphic Modelling. University of Oxford [United Kingdom], 1999 (D.Phil. in Earth

Sciences). x, 165p. and 105p. of plates. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.50, pt.2, entry no.50-3566. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.D207964.

This thesis attempts to construct an integrated model for the tectonothermal evolution of the Suru valley region of the High Himalayan Crystalline unit of north-west India, and combines detailed field mapping, petrographic and micro-structural analysis, thermobarometric techniques and metamorphic modelling.

This work confirms that the metasedimentary lithologies of the Suru valley correspond to the Palaeozoic-Mesozoic Tethyan shelf sediments found in Kashmir and Zaskar and that the meta-igneous bodies correlate with Permian rift-related igneous units. This demonstrates that all the metamorphism in the Suru valley is Himalayan in age. Subsequent to India-Asia collision at ~54 Ma the units of the Suru valley underwent a polyphase deformation and metamorphic history. The large scale structure of the area is that of kilometre-scale, SW-vergent recumbent folds that are domed by a later structure, the Suru Dome. Barrovian metamorphism resulting from collision and burial reached a maximum of kyanite grade, and is believed to be syn- to post-kinematic with respect to the formation of the large folds. Thermobarometric analysis indicates that peak conditions relating to this Barrovian event were of the order of 9.5-10.5 kbar and 620-650 °C. A later metamorphic event associated with doming throughout the Zaskar Himalaya and crustal anatexis in the core of the High Himalaya caused re-equilibrium of deeper Suru Dome rocks to conditions of 8.7-9.7 kbar and 630-640 °C.

Metamorphic modelling, involving phase diagram construction and P-T path determination using Gibbs method calculations, suggests that metamorphic garnets grew under conditions of burial and heating. Rapid exhumation of the High Himalayan Crystallines on the Main Central Thrust and the Zaskar Shear Zone occurred shortly after peak metamorphism. The results suggest that phase diagram construction and P-T path calculation should be used in conjunction in order to confidently model metamorphic rocks.

WALKER, James David.

The Structural and Metamorphic Evolution of the High Himalayan Slab in SE Zaskar and NW Lahaul. University of Oxford [United Kingdom], 1998 (D.Phil. in Earth Sciences). 158p. and 146p. of plates. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-10772. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.D203937.

This thesis attempts to unravel the complex thermal and structural history of part of the High Himalayan Slab in NW India and combines reconnaissance-style field structural mapping of an area covering ~10,000 km² with petrography, microstructural analysis, thermobarometry and geochronology techniques.

The results of this work show that the oldest protoliths of the High Himalayan Slab are at least Cambrian in age and that they may have experienced a major pre-Himalayan metamorphism at c.500 Ma. The youngest protoliths are Mesozoic in age (the Tandi Group) and demonstrate that the High Himalayan Slab represents the metamorphosed equivalents of the Tibetan Sedimentary Series. Metamorphism was achieved via substantial crustal shortening and thickening following the India-Asia collision at 50-54 Ma ago. Phase relationships demonstrate that metamorphism was a regional Barrovian-type event associated with the growth of biotite-, garnet-, staurolite-, kyanite- and sillimanite-bearing assemblages in metapelites.

Exhumation of the High Himalayan Slab was achieved through a combination of extensional unroofing along major detachments (namely the Zaskar Shear Zone), thermal doming, thrusting along the Main Central Thrust and surface erosion. Exhumation is closely associated with the growth of sillimanite- and cordierite-bearing assemblages in pelites and the generation and emplacement of crustal melt leucogranites in the upper parts of the slab. U-Pb dating of accessory phases from one of the crustal melt leucogranites (the Gumburanjon leucogranite) constrains its crystallisation and emplacement age at c.21-22 Ma. This is only slightly older than its ⁴⁰Ar/³⁹Ar muscovite and biotite cooling ages of c.20-21 Ma, which is attributed to the emplacement of the Gumburanjon leucogranite into the immediate footwall of the ZSZ. Field and geochronological data therefore support a strong temporal and spatial relationship between upper crustal melting and extension in a convergent orogen.

Religion

APPLE, James Boyd.

Twenty Varieties of the Saṃgha: Tson kha pa's Soteriological Exegesis. University of Wisconsin at Madison [United States], 2001 (Ph.D. in Buddhist Studies). Chairperson/Adviser: John D. Dunne. viii, 363p. DAI 62, no.4 (Oct. 2001): 1446-47-A; UM 3012558.

This work focuses on the special instruction (*dams ngag*) of the Twenty Varieties of the *Saṃgha* Jewel, centered around the interpretation given by Tson kha pa blo bzang grags pa (1357-1419) in his *Blo gsal bgrod pa'i them skas* (= *them skas*), "Stairway for those of Clear Intelligence" and *Legs bshad gser phreng*, "Golden Rosary of Eloquence."

The Twenty Varieties of the *Saṃgha* Jewel are based on two verses from the first chapter of the *Abhisamayālamkāra* (*Ornament for Clear Realization*). These verses present an exhaustive list of the stages through which Noble Beings (*ārya*) may pass in their progress toward enlightenment through various lifetimes in various cosmological realms. This typological list of twenty does not provide a description of any one individual's path to enlightenment; rather, it enumerates all of the possible stages through which any given individual might pass, depending upon factors such as that individual's cosmological circumstances and the acuity of his faculties. As such, the Twenty *Saṃghas*, by presenting the defining characteristics of these individuals, provides a complete picture of all possible states on the path to enlightenment.

Our first chapter outlines our approach to the topic through the rubric of scholasticism, exegesis, constructive postmodernism, and the structural analysis of narratives. The second chapter demonstrates how Tson kha pa's works are the first independent treatises in the Indian and Tibetan commentarial tradition to articulate in detail the technical characteristics and scriptural sources of each of the twenty categories. The third chapter outlines tacit assumptions of path and meditation structures that must precede any understanding of the topic of the Twenty *Saṃghas*. The fourth chapter provides a detailed exegesis of the Twenty *Saṃghas*. Following the Tibetan exegetical tradition, a taxonomic model of the *Allegorical Saṃgha*, or enumeration of *śrāvakas* is given, then the *Actual Saṃgha* of *bodhisattvas* is articulated. This exegesis provides a definitive account of the abstract *Saṃgha* ideal in Mahayana Buddhist scholasticism.

Contents: 1. Introduction. 2. Tson kha pa and the Abhisamayālamkāra Commentarial Tradition. 3. Prelude to a Presentation of the Twenty Saṃghas: Tacit Assumptions. 4. Presentation and Analysis of the Twenty Saṃghas. 5. Conclusion. Bibliography: pp.340-63.

BJERKEN, Zeff.

The Mirrorwork of Tibetan Religious Historians: A Comparison of Buddhist and Bon Historiography. University of Michigan [United States], 2001 (Ph.D. in Asian Languages and Cultures: Buddhist Studies). Chairperson/Adviser: Donald S. Lopez, Jr. vi, 260p. DAI 62, no.1 (July 2001): 211-A; UM 3000921.

This thesis provides an analysis of the historical literature composed by Tibetan Buddhist and Bon writers about the origins and development of their respective religion in Tibet (*bon/chos 'byung*). These texts present competing versions of Tibet's sacred history, for they were written as apologetic works in defense of the writer's own religious tradition. Despite their partisan perspective, Tibetan historians often style their own works as "mirrors" that faithfully reflect past events without any distortion. These texts, however, are not only mirrors of events, but mirrors in which Tibetan writers ponder their own religious identity, and what is more they are mirrors of the "other" religion, in which their differences and symmetries are explained. The purpose of this dissertation is to demonstrate how Buddhist and Bon histories function as mimetic literary narratives, and explore how their distorted images of other religion have been interpreted by western and Tibetan scholars.

The mirror imagery used by Tibetan writers raises questions about how to represent the relationship between Buddhism and Bon. Two common strategies can be detected in the work of Tibetologists: either Bon is marginalized as the historically insignificant "native" religion of Tibet (as "shamanism"), or Bon is assimilated into Buddhism and its doctrines and practices deemed derivative. This dissertation presents a different perspective on their relationship, drawing upon the methods of Hayden White on narrative, Jonathan Z. Smith on comparison, and Homi Bhabha on mimesis. The comparative literary approach adopted here

shuttles back and forth between Buddhist and Bon historical narratives as a dynamic ensemble, and it avoids the fixed perspective that results once one adopts the position of one “tradition” to view the other. This reading technique aspires towards reflexivity by making apparent the stylized symmetries created by Tibetan historians, who rely on similar tropes, categories, and techniques of emplotment. Rather than achieving two distinct monolithic identities, Buddhist and Bon writers create symmetrical subjects, whose hybrid identities are mutually implied, thus blurring the boundaries between the two traditions. These two religions are identified as mutually constituted and mimicking traditions, rather than as authentic and derivative, as they are commonly portrayed.

Contents: Introduction. 1. Stylized Symmetries in Tibetan Historical narratives. 2. Summoning Spirits and Invoking Ancestors: Locating Bon “Shamanism”. 3. Tibetan Nativism and the Quest for Indigenous Bon. 4. Conclusions: Reflexivity and the Comparativist’s Location. Bibliography: pp.239-60.

LIDKE, Jeffrey Stephen (1968-).

The Goddess within and beyond the Three Cities: Śākta Tantra and the Paradox of Power in Nepāla-Manḍala. University of California at Santa Barbara [United States], 2000 (Ph.D. in Religious Studies). Chairperson/Adviser: Barbara A. Holdrege. xii, 419p. DAI 62, no.7 (Jan. 2002): 2459-A; UM 3020289.

In this study I adopt the thematic of “power” as a heuristic tool of interpreting the dyadic nature of Nepalese Śrī Vidyā Śākta Tantra: (1) its esoteric function as a technology for harnessing the ontological power of the Goddess; and (2) its exoteric function as a public discourse intimately linked to sociopolitical productions of power that serve to incorporate, accommodate, and hierarchize the numerous religious, social, and ethnic communities of Nepal. My study seeks to map both the esoteric and the exoteric aspects of the discourse of power in Nepāla-Manḍala. Chapter 1 examines Śrī Vidyā ontology and cosmology, with particular attention to the macrocosmic, microcosmic, and mesocosmic forms in which the divine consciousness-power of the Goddess becomes embodied. Chapter 2 focuses on an analysis of Tantric *sādhana* and the manner in which various mystico-erotic and yogic practices function as technologies of power aimed at harnessing, manipulating, and channeling bodily energies for the sake of both worldly empowerment and liberation. Chapter 3 examines Nepalese constructions of space as instantiations of divine power, in which the *maṇḍala*—and more specifically the Śrī Yantra—functions as a template that reduplicates itself on multiple levels: in the geopolitical landscape of the country, in the layout of the Kathmandu Valley as a whole, in the design of the three most important cities in the valley, and in the structures of the temples in those cities. Chapter 4 investigates the sociopolitical ramifications of the discourse of power as evidenced in the historical interconnections among Nepalese royal lineages, Śākta Tantric traditions, and the institution of the Kumāri, the virgin Goddess.

Contents: Introduction: Tracking the Stories of Devi. 1. The Goddess Embodied: Tripurasundari and the Tricosmos. 2. Tantric *Sādhana*: Harnessing the Powers of Sakti. 3. The *Maṇḍala*-Hologram: Centers, Peripheries and the Dance of Power. 4. The Reverberating Goddess: The Kumāri and the King. Conclusion: Will Devi’s Power Be Enough? Appendices [A-C]: pp.195-394. Bibliography: pp.395-419.

Education

CHUN, Laurianne Shiu Chien.

Asian Studies at the University of Hawai’i: Rhetoric or Reality. University of Hawaii [United States], 2001 (Ph.D. in Education). Chairperson/Adviser: Robert E. Potter. x, 432p. DAI 62, no.6 (Dec. 2001): 2043-A; UM 3017393.

The first stage of this research was the preparation of an annotated bibliography of the more than 2000 Asia-related theses and dissertations completed by graduate students at the University of Hawai’i between 1920 and 1994. It was published separately by the University of Hawai’i Press in 1997 as *Asian Studies in Hawai’i*. The dissertation itself offers a brief discussion of the historic ties between Asia, the United States, and Hawaii, as well as the development of Asian studies as an academic field at American universities and at the University of Hawai’i in particular. The annotated bibliography was analyzed according to country, academic discipline, and topic over five year intervals. The rise and fall of the production of theses and dissertations were correlated to historical events and developments at the University of Hawai’i, and especially by the establishment of the East-West Center in 1960. Completed dissertations at American universi-

ties listed in Frank Joseph Shulman's bibliographies of Asia-related dissertations—including ones on Tibet—from all over the globe were categorized by country and topic. Comparisons were made between the sixteen top-producing American universities and the University of Hawai'i, again over five year intervals, revealing that since 1960, the University has ranked among the forefront of American universities in the production of Asia-related dissertations. Extensive tables on which the analyses were based are included in the appendices.

Contents: 1. Introduction. 2. The Study of Asia in Hawai'i. 3. America's Historical Relationship with East Asia. 4. Theses and Dissertations of East and Southeast Asia. 5. Asia-Related Courses at the University of Hawai'i. 6. The University of Hawai'i in a National Context. 7. Conclusion. 8. The Future of Asian Studies at the University of Hawai'i: A Postscript. 1 table. Appendices [A-G]: pp.265-432. Bibliography: pp.254-64.

LEVIN, Joshua S.

International Education in Nepal: A Qualitative Study of Efforts to Educate across Cultural Contexts. University of Colorado at Boulder [United States], 2001 (Ph.D. in Anthropology). Chairperson/Adviser: Deward E. Walker, Jr. viii, 408p. DAI 62, no.2 (Aug. 2001): 653-A; UM 3005069.

This dissertation utilizes the field of international education in Nepal as a grounded context from which to explore the influence of cross-cultural interaction and culture change on education. Research for this dissertation was conducted as a part of applied efforts to improve the SANN/CUD-IC international education programs in Nepal during the 98/99 school year. Two broad questions resulted from this applied effort: (1) Why is it difficult to utilize a conventional American university classroom model to provide commensurate standards of formal academic education in study abroad programs in Nepal? (2) What are some of the actual patterns in participants' response to international education in Nepal?

In resolving these questions, the following dissertation considers the meaning and function of education in increasingly complex international environments. The convergence of local and global forces, crystallized in the field of international education, functions in this analysis like a two-way mirror with each side alternately reflecting, highlighting, and obscuring the other. The resulting image not only addresses the basic dissertation questions, but it also provides a partial framework for thinking about education in emerging global contexts. This analysis describes how education in an environment characterized by increasing international relationships is distinct from its local counterparts. It is by understanding these distinctions that the practical difficulties involved in applying a conventional American university model are explained. It is also in light of these distinctions that international students' diverse and enthusiastic responses to international study make sense.

SAUNDERS, Kathleen E.

Women and Education in Nepal: Steps towards Equality for Girls and Women in Nepal. University of Wales, College of Cardiff [United Kingdom], 1999 (Ph.D. in Education). 544p. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-10119. Contact Information Services, Graphic Services, Cardiff University (P.O. Box 430, Cardiff, Wales CF10 3XT, United Kingdom) regarding the availability of copies.

The effectiveness of educational policy in promoting equality of access to, and participation in, education and employment for girls and women in rural Nepal is investigated. Education in formal or non-formal sectors is considered necessary for the development of a country as people can learn skills which may contribute to social and economic development. The question of gender awareness in planning and implementing development programmes is raised.

Through fieldwork carried out in the five districts of Karnali (Dolpa, Humla, Jumla, Kalikot, and Mugu) between May 1988 and December 1990, the status of girls and women in rural areas and the effects of educational policy on them are identified.

Questions concern the:

adequacy of steps towards equality of access and participation in education.

effects of the status of women on girls' and women's opportunities in education and employment.

impact of central decisions on girls' education in a remote area.

qualifications and training for teachers of formal and non-formal education.
awareness of gender in education planning.

The research is focused on 44 women trained as girls' non-formal education teachers, 29 of whom were also trained primary school teachers. Also participants in girls' non-formal classes are researched.

Due to insufficient qualifications, trained women teachers were made redundant from their full-time posts and school leavers were unable to pursue primary teacher training courses. Traditional attitudes restrict women's access to tuition for the appropriate qualifications.

Participation in part-time girls' non-formal classes was greater than in full-time formal school as the latter conflicted with girls' and women's economic roles in the home. Redundancies amongst women teachers raised questions amongst local people regarding the purpose of female education.

SHARMA, Aslesha (1951-).

Female Participation in Technical Education in Nepal. Southern Illinois University at Carbondale [United States], 2000 (Ph.D. in Workforce Education and Development). Chairperson/Adviser: Rose Mary Carter and Thomas Stitt. ix, 226p. DAI 61, no.8 (Feb. 2001): 3138-39-A; UM 9982113.

Despite the tremendous efforts of the women's movements for the development of women and the constitutional guarantees for equal rights under the law to all citizens, advancement of the status of women in Nepal is still far from satisfactory. The participation of women in education, including technical education, is low. Recent literature describing education for women in Nepal has indicated that females still need more equality of access to regular and advanced technical education and training. In order to examine the nature of female participation in technical education in Nepal, a study was essential.

The purpose of this study was to identify the factors that influence female participation in technical education in Nepal from the perspectives of female students who are currently enrolled in both technical and non-technical education programs. Eleven technical schools/institutions and 8 non-technical campuses were selected, and 36 female students from the 11 technical schools/institutions and 24 female students from the 8 non-technical schools were identified.

This descriptive and exploratory research analyzed the interview responses of the 60 female students in order to examine their perception of: (a) reasons for low female participation in technical education; (b) the subject areas in technical education that attract females; (c) the subject areas that do not attract females; (d) barriers that impede female participation in technical education; (e) strategies that facilitate female participation in technical education; and (f) initiatives that are recommended to enhance female participation in technical education in Nepal.

Significant recommendations made as a result of this study include: a need to formulate specific strategies, policy and program to promote female enrollment in technical education; female representation in policymaking bodies; encourage females to participate in traditionally male-dominated technical fields; increase number of female instructors; give preference to female students with regard to recruitment and awarding scholarships.

Contents: 1. Introduction. 2. Review of Related Literature. 3. Research Method and Procedure. 4. Results of the Study. 5. Summary, Findings, Conclusions and Recommendations. 1 table. Bibliography: pp.197-206. Appendices [A-G]: pp.207-25.

SHRESTHA, Prakash B.

A Bilingual Study of Spatiotemporal Perspective and Imagery: Graduate Students in Nepal. Columbia University Teachers College [United States], 2001 (Ed.D.). Chairperson/Adviser: Clifford A. Hill. ix, 90p. DAI 62, no.9 (Mar. 2002): 3031-A; UM 3027040.

This study was conducted within a paradigm of cross-linguistic research that has focused on variation in spatiotemporal point of view across a range of settings in West Africa, East Asia, and North America. It was conducted with 207 graduate students at three institutions in Kathmandu, Nepal.

Four tasks were administered: (1) a task that elicited the use of either a deictic or a non-deictic perspective; (2) a task that elicited the use of either mirror or in-tandem imagery; (3) a task that elicited the use of 'front/back' to represent the relations between a higher point and a lower point on a square sheet; (4) a task that elicited the use of bodily orientational terms to represent temporal 'before/after'. The study was bilin-

gual in that students responded to the task in either Nepali or English. In addition to this language variable, a variable of academic major was used: Nepali major or English major.

The study documented that the students tended to use a non-deictic perspective and mirror imagery on the first two tasks. The variable of language medium was significant on both tasks (i.e., students responding in Nepali made significantly greater use of a non-deictic perspective and in-tandem imagery). The variable of academic major did not reach a level of significance, though the results were in the predicted direction (i.e., Nepali majors made greater use of a non-deictic perspective and in-tandem imagery). There was also a significant correlation between the use of a non-deictic perspective and in-tandem imagery, confirming earlier studies that indicate these responses are cognitively related.

As for the third task, the students tended to view the higher point as anterior to the lower point. As for the fourth task, the students tended to select 'front/back' as the orientational pair to represent 'before/after'. Once again, the variable of language medium, but not language major, was significant on both tasks.

On all four tasks explanations for responses were coded and correlated with the responses. On the last task, for example, an explanation based on morphological similarity between *agaadi* 'front'/'*aghi* 'before' and *pachhaadi* 'back'/'*pachhi* 'after' correlated significantly with the choice of 'front/back'.

Contents: 1. Introduction. 2. Review of Literature. 3. Methodology. 4. Results. 5. Conclusions. 6 figures. 32 tables. Appendices [A-E]: pp.79-90. Bibliography: pp.76-78.

YESHI, B. Tsering.

Tibetanization Project: Teachers' Meanings and Perspectives. University of Virginia [United States], 2001 (Ph.D. in Education). Chairperson/Adviser: Bob Covert. xii, 165p. DAI 62, no.6 (Dec. 2001): 2022-A; UM 3017280.

This study investigates meanings and perspectives of Tibetan elementary school teachers with regard to Tibetan medium education termed as the Tibetanization Project. It is a qualitative study in which assertions were generated based on common themes that emerged from the participating teachers' shared perspectives.

The research questions that guided this study were: (a) What does Tibetanization mean to teachers in Tibetan Children's Village (TCV) schools in India? (b) How has the Tibetanization Project changed the instructional methods of teachers? (c) Has the Tibetanization Project made education more relevant for the Tibetan children? If so, how? If not, why not? (d) How do teachers perceive the Tibetan language and cultural acquisition among the children under the Tibetanization Project? and (e) How does Tibetan medium education affect the Tibetan people in exile?

As a result of the research carried out: (1) The Tibetan teachers believe that although teaching of English as a subject is important, instruction solely in a foreign language at the primary school level can deter complete understanding of important concepts, and hinder acquisition of both languages, native and foreign. (2) In order to preserve the Tibetan language and give a quality education to Tibetan children, it is imperative to use the mother tongue as the medium of instruction at the primary school level. (3) The Tibetanization Project has encouraged active participation, critical thinking, and problem solving skills among Tibetan refugee students. (4) The Tibetanization Project has enriched Tibetan vocabulary both Tibetan teachers and students of elementary schools. (5) In spite of the above mentioned benefits, teachers still doubt the practicality of the Tibetanization Project in exile. (6) Teachers believe that a Tibetan medium education would be more practical if Tibet was a free country, but because that Tibetans live in exile, education in English medium is more vital for a successful life.

Based on the teachers' present confusion and conflicts between their patriotic and pragmatic beliefs, some recommendations are provided for future directions of policy issues for the Tibetanization Project.

Contents: 1. Background of the Study. 2. Literature Review. 3. Methodology. 4. Results. 5. Conclusions, Implications, and Recommendations. 7 figures. 5 tables. Appendices [A-F]: pp.160-65. Bibliography: pp.149-59.

Agriculture

DEVARE, Medha Hemant.

Effect of Tillage, Rice Establishment, and Solarization on Crop and Soil Parameters in the Rice-Wheat

System of Nepal. Cornell University [United States], 2000 (Ph.D. in Crop and Soil Sciences). Chairperson/Adviser: John Duxbury. xiv, 186p. DAI 61, no.4 (Oct. 2000): 1704-B; UM 9967492.

We determined whether the nutritional value of the rice-wheat system in Nepal, along with soil properties and rice and wheat yields could be sustained or improved with deep tillage and without puddling in a rice monocrop and a rice-legume intercrop on raised beds. The importance of biotic constraints to yield within these systems was also determined using soil solarization as a diagnostic tool. Puddling did not result in increased rice or wheat yields. While deep tillage appeared to improve yields in deep tilled plots and in conventionally tilled puddled plots, these increases could be ascribed to increased soil moisture due to a water table gradient, rather than to tillage treatment. Deep tillage did not affect soil bulk density or root distribution to 50 cm in either crop. Deep tillage was expected to particularly impact wheat yields during the dry season; however, no yield advantage was noted. Rice yields of over 5 t/ha, comparable to those from conventional practice were obtained from raised-bed intercrops, by keeping soil moisture close to saturation at least until grain-fill. Thus, our study showed that it may be economically feasible to improve the protein value of this system by growing legumes like blackgram with rice. Wheat yields from rice-legume intercrop plots were higher than from other treatments in 1998 (about 5 t/ha), and comparable to other treatments in 1999 (about 3 t/ha), indicating that no disadvantage was incurred as a result of this practice. The importance of biological factors was assessed by solarizing rice plots at two sites, covering them with clear plastic for about a month before transplanting. Solarization increased rice and wheat yields from 25 to 40% at both sites through the depression of weeds and fungal pathogens. Thus, the solarization effect lasted beyond the rice season, and increased yields significantly more than traditional methods like tillage and rice establishment. An increased understanding of how solarization works, and of soil biology within the rice-wheat system are essential to improve rice and wheat productivity in South Asia.

Contents: 1. General Introduction. 2. Effect of Tillage and Rice Establishment on Soil and Crop Parameters in the Rice-Wheat System of Nepal: Rice. 3. Effect of Tillage and Rice Establishment on Soil and Crop Parameters in the Rice-Wheat System of Nepal: Wheat. 4. Effect of Soil Solarization on Root Fungi, Weeds, and Grain Yields of Rice and Wheat in Nepal. 5. General Summary. 18 figures. 17 tables. 1 map.

DHITAL, Bishnu Kumar.

Diffused Light Storage of Seed Potatoes in the Hills of Nepal in Relation to Seed Tuber Physiology, Production Environment and Socio-Economics. University of Newcastle upon Tyne [United Kingdom], 2000 (Ph.D. in Agriculture). xx, 244p. AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.49, pt.5, entry no.49-11508. Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DX209518.

Diffused light storage (DLS) technique has been promoted in the hills of Nepal for the last 20 years to improve the storage performance of seed potatoes. Past experience and observations revealed that the adoption of DLS technology has been minimal although the reasons had not been investigated formally. This research project aimed to identify the reasons related to genotype, crop management and/or physiology in the store and in the field and farmers' socio-economic circumstances involved. DLS reduced the storage losses of seed potatoes by about 10% compared with DS in the mid to high hills (1675 to 2000m). In the mid hills (1675m) however, DS seed produced similar yields to seed cold-stored (CS) at 4° (26.1 t/ha) but DLS produced the lowest yields (21.6 t/ha). In the high hills (2000 m), DS and DLS yielded similarly.

GAJUREL, Kishor Prasad.

Organization of Agricultural Production and Human Fertility. Pennsylvania State University [United States], 2001 (Ph.D. in Rural Sociology and Demography). Chairperson/Adviser: Leif I. Jensen and C. Shannon Stokes. xiii, 153p. DAI 62, no.5 (Nov. 2001): 1950-51-A; UM 3014628.

The nexus between organization of agricultural production and human fertility has been described in terms of land-security and land-labor needs hypotheses. According to the land-security hypothesis, owned land can serve as an alternative to old-age security, so landowners should have lower demand for children than landless laborers. Conversely, the land-labor need hypothesis states that at a low level of technology,

cultivated land size should have a positive influence on fertility because large landholders have greater labor requirements and are able to profitably employ family labor.

To test these hypotheses, this dissertation examines (i) the influence of land ownership status, cultivated land size and use of labor saving technology on childbearing preferences, (ii) reciprocal relationship between landholding and completed family size, (iii) influence of landholding on child mortality, and (iv) influence of landholding on use of modern contraceptives using data from the Chitwan Valley Family Studies in south central Nepal.

The results from multivariate ordinary least squares regression analysis indicate that landowners prefer smaller family sizes than landless laborers. Conversely, larger cultivated land sizes are related to larger childbearing preferences. However, labor saving technology is not significantly related to the fertility preferences.

Two-stage least square regression technique is used to examine the reciprocal relationship between landholding and completed family size. The findings reveal that the effect of cultivated land size on completed family size is significantly positive, but the effect of completed family size on cultivated land size is not, implying that size of landholding influences fertility but not the opposite.

The findings from logistic regression models show that landowners have significantly lower child mortality than landless laborers, but the cultivated land size has no significant influence on child mortality. The landowners are significantly more likely to use modern contraceptives than landless laborers. Although the effect of cultivated land size on contraceptive use is negative as expected, but it is weak and insignificant.

In summary, the findings supported both the land-security and land-labor needs hypotheses. Based on these findings, implications for public policy and directions for future research needs are outlined.

Contents: 1. Introduction. 2. Theoretical Background. 3. Methodology. 4. Organization of Agricultural Production and Fertility Preference. 5. Landholding and Completed Family Size: A Test of a Reciprocal Relationship. 6. Landholding and Current use of Contraceptives. 7. Conclusion. 5 figures. 24 tables. Bibliography: pp.143-53.

PANT, Dhruva Raj (1953-).

Intervention Processes and Irrigation Institutions: Sustainability of Farmer Managed Irrigation Systems in Nepal. [With a summary in Dutch.] Landbouwniversiteit Wageningen [Agricultural University of Wageningen] [The Netherlands], (Dr.). xiv, 287p. A printed copy is available at the National Agricultural Library (Beltsville, Maryland).

Printed with a summary in Dutch as *Intervention Processes and Irrigation Institutions: Sustainability of Farmer Managed Irrigation Systems in Nepal*, by Dhruva Raj Pant. S.l.: s.n., 2000. xiv, 287p.

POUDEL, Rabi (1959-).

Farmers' Laws and Irrigation: Water Rights and Dispute Management in the Hills of Nepal. [With a summary in Dutch.] Landbouwniversiteit Wageningen [Agricultural University of Wageningen] [The Netherlands], 2000 (Dr.). xix, 235p. A printed copy is available at the National Agricultural Library (Beltsville, Maryland).

Printed with a summary in Dutch as *Farmers' Laws and Irrigation: Water Rights and Dispute Management in the Hills of Nepal*, by Rabi Poudel. S.l.: s.n., 2000. xix, 235p.

SCHOUBROECK, Frank van (1961-).

Learning to Fight a Fly: Developing Citrus IPM in Bhutan. [With a summary in Dutch.] Landbouwniversiteit Wageningen [Agricultural University of Wageningen] [The Netherlands], 1999 (Dr.). 200p. A printed copy is available at the National Agricultural Library in Beltsville, Maryland.

Printed with a summary in Dutch as *Learning to Fight a Fly: Developing Citrus IPM in Bhutan*, by Frank van Schoubroeck. Wageningen: s.n., 1999. 200p.

SHRESTHA, N. P.

Factors Affecting Reproduction in Pigs in the Small Scale Farming Sector in the Hills of Nepal. University of Aberdeen [United Kingdom], 2000 (Ph.D.). AB: *Index to Theses with Abstracts Accepted for Higher Degrees by the Universities of Great Britain and Ireland*, vol.50, pt.1, entry no.50-2062.

Copies are available through the British Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, West Yorkshire LS23 7BQ, United Kingdom, accession no.DXN033807.

This study reviews the factors affecting reproductive efficiency in PAC pigs and identifies the major constraints in traditional pig production systems in relation to climatic environment, nutrition and management practices in the hills of eastern Nepal. The different factors affecting reproductive efficiencies were investigated and the possible means to overcome these problems are outlined under Nepalese situations.

The majority of the pigs in the hills of Nepal are reared below their LCT throughout the year, causing an estimated loss of 43% of the total feed intake requirements by climatic penalty. If this feed loss could be effectively utilised by improving housing conditions, the productivity of pigs could be greatly improved. Improvements in housing conditions seem to be the cheapest alternative for improving efficiency in Nepalese situations.

Improvements in nutrition of rearing gilts and lactating sows resulted in improvements of reproductive outputs in both station and village experiments.

Modified suckling management in late lactation resulted in shorter weaning to remating interval and needs to be introduced in the villages for better reproductive efficiency of pigs.

Farmers in the hills of Nepal do not rear boar and sows together due to limitations of feed availability. Under such circumstances, an artificial boar pheromone (Boar Mate) had a beneficial effect on stimulating and detecting oestrus in PAC pigs. However, Boar Mate is not easily available and hence it is recommended to carry out further critical evaluation of boar urine, which gave promising pilot results, as an alternative.

TRIPATHI, Janmejai.

Evaluation and Improvement of Seed Quality in Cereals (Wheat, Maize) and Oilseed (Brassica campestris) in Nepal. University of Aberdeen [United Kingdom], 1999 (M.Phil.). No published abstract. Contact the Aberdeen University Library (Aberdeen AB9 2UE, Scotland, United Kingdom) regarding the availability of copies.

Public Health/Medicine

DREYFUSS, Michele Lynn.

Anemia and Iron Deficiency during Pregnancy: Etiologies and Effects on Birth Outcomes in Nepal.

Johns Hopkins University [United States], 1999 (Ph.D., School of Hygiene and Public Health). Chairperson/Adviser: Rebecca J. Stoltzfus. xi, 209p. DAI 60, no.2 (Aug. 1999): 580-B; UM 9920705.

We investigated the etiologies of anemia and iron deficiency during pregnancy, and their effects on birth outcomes among a cohort of women in the rural plains of Nepal. Anemia and iron deficiency are prevalent during pregnancy, but their causes are not fully known. It is still unclear whether anemia contributes to poor birth outcomes. We assessed 978 pregnant women, a 10% subsample of a randomized, double-blind, community intervention trial in which all women of reproductive age received either a weekly supplement of 7000 RE of preformed vitamin A or beta-carotene, or a placebo. We investigated the etiologies of anemia and iron deficiency in 271 pregnant women receiving placebos, and the effects of vitamin A or beta-carotene supplementation in the full cohort. The relation of anemia and iron deficiency to poor birth outcomes were examined in 691 women followed through pregnancy. Blood samples were collected for assessment of anemia, iron and vitamin A status, and malaria. Geohelminth infections were assessed in stool samples. Neonatal weight was obtained as soon as possible after birth, within 2 weeks postpartum for 90% of the sample. Iron deficiency was the primary cause of anemia, but vitamin A deficiency and parasitic infections also contributed. Vitamin A deficiency was most strongly associated with mild anemia, whereas hookworms and *Plasmodium vivax* malaria were strong predictors of moderate to severe anemia. Hookworm infection was a very strong predictor of iron deficiency. Weekly vitamin A or beta-carotene supplementation reduced the prevalence of all anemia and depleted iron stores by 10% and 9%, respectively. Supplementation was most effective among women with little or no hookworm infection, and had little effect among more heavily infected women. Vitamin A supplementation reduced *P. vivax* malaria by 41%, but this did not explain the supplementation effect on anemia and iron deficiency. Anemia was associated with a significant decrement in neonatal weight and increased risk of low neonatal weight and preterm birth. Ane-

mia with iron deficiency was more strongly associated with increased risk of low neonatal weight and preterm birth than anemia without iron deficiency.

Contents: 1. Introduction. 2. The Relation of Hookworms, Malaria and Vitamin A Deficiency to Anemia and Iron Deficiency among Pregnant Women in the Plains of Nepal. 3. Effect of Vitamin A or Beta-Carotene Supplementation on Anemia and Iron Deficiency among Pregnant Women in the Plains of Nepal. 4. The Relation of Anemia and Iron Deficiency during Pregnancy to Neonatal Weight, Small-for-Gestational Age, and Preterm Birth in the Rural Plains of Nepal. 5. Conclusions and Recommendations. 3 figures. 21 tables. Appendices [A-D]: pp.159-89. Bibliography: pp.190-204.

LU, Shou-En.

Marginal Analysis and Cohort Case-Control Design for Clustered Failure Time Data. Johns Hopkins University [United States], 2001 (Ph.D.). Chairperson/Adviser: Mei-Cheng Wang. x, 109p. DAI 61, no.10 (Apr. 2001): 5093-B; UM 9993149.

Clustered failure time data are encountered in biomedical research where study subjects from the same cluster (e.g., family) share common genetic and/or environmental factors such that the failure times within the same cluster are correlated. Two commonly used approaches to account for intra-cluster association are frailty models and marginal models. In this dissertation, we focus on the marginal models. In particular, we assume that the marginal hazard of failure for individuals within a cluster is specified by a proportional hazards model (Cox, 1972), and the structure of dependence between individuals within a cluster is left unspecified. Two methodologies are proposed: a marginal inference on clustered failure time data, and a case-control design and analysis for a cohort of clustered members. In the first methodology, an estimation procedure is developed based on a pseudo-likelihood approach. A risk set sampling method is proposed for the construction of the pseudo-likelihood. The principle is to construct an unbiased risk set consisting of independent individuals at each distinct failure time. In the second methodology, a case-control design and analysis for a cohort of individuals clustered into small groups are proposed. With a modification of the risk set sampling method proposed in the first methodology, a case-control sampling method is developed by which a small number of controls per case are sampled from the nonfailures in the full cohort at each distinct failure time. Instead of collecting covariate information from all cohort members, only the covariate information from the cases and the controls sampled at each distinct failure time are needed for the analysis. A data set from NNIPS (Nepal Nutrition Intervention Project-Sarlahi) is given to illustrate the use of both methodologies, and simulation studies are presented to demonstrate the performances of the proposed estimators.

Contents: 1. Introduction. 2. Literature Review. 3. Marginal Model for Clustered Failure Time Data. 4. Cohort Case-Control Design and Analysis. 5. Simulations and Data Analyses. 6. Discussion and Future Work. 1 figures. 29 tables. Appendices [A-C]: pp.94-100. Bibliography: pp.101-05.

MASKEY, Mahesh Kumar.

Preventable Risk Factors of Perinatal Mortality in Nepal. Boston University [United States], 2001 (Sc.D.). Chairperson/Adviser: Timothy Lash. 160p. DAI 61, no.11 (May 2001): 5824-B. Contact Boston University Libraries (Boston, Mass. 02215, U.S.A.) regarding the availability of copies.

RAJBHANDARY, Sameer Sthapit.

Fertility and Child Mortality in Nepal: An Econometric Analysis. University of Colorado at Boulder [United States], 2000 (Ph.D. in Economics). Chairperson/Adviser: Robert F. McNown. xii, 113p. DAI 61, no.7 (Jan. 2001): 2930-A; UM 9979390.

This thesis is comprised of three essays that examine the complex relationship between fertility and child mortality in Nepal using data from the Nepal Fertility, Family Planning and Health Survey 1991.

The first essay examines the response of cumulative fertility to child mortality. A reduced form equation with the number of children ever born as a dependent variable is estimated by ordinary least squares and two stage least squares using the number of child deaths as an explanatory variable along with socio-economic and community variables. The Trussell and Olsen technique is used to correct the estimated coefficients on child deaths for endogeneity biases. The resulting estimate, a measure of the direct replacement effect is 0.30. On average, each child death results in 0.30 expected new births.

The second essay analyzes the effect of a child's death on the subsequent birth interval. First, the life table method is used to compare the cumulative probability of subsequent birth by survival status of the index child. Then, a logistic formulation of the discrete-time hazard model is employed to estimate the hazard of closing the birth interval by subsequent birth in any given month, starting from nine months after the birth of the index child. The risk is 2.3 times higher if the index child is dead than if it is alive. Child death exhibits time-dependent effects, and there is evidence of the existence of son preference.

The third essay analyzes the effect of previous birth interval and subsequent conception on child mortality. The discrete-time hazard model similar to the one used in the second essay is employed to estimate the hazard of dying during various phases of childhood. Both previous birth interval and subsequent conception have significant negative impacts on child survival. The effect of previous interval is more profound during the neonatal period. The impact of subsequent conception is greatest during the post-neonatal period. The survival status of the previous child is an important determinant of mortality risk until the second birthday. Breastfeeding reduces the hazard during the post-neonatal period, exhibits time-dependent effects, and plays a mediating role in the relationship between subsequent conception and post-neonatal mortality.

Contents: 1. Introduction. 2. Fertility Response to Child Mortality. 3. The Impact of Child Death on Birth Interval. 4. The Effect of Birth Intervals on Child Mortality. 5. Conclusion. 3 figures. 1 map. 15 tables. Bibliography: pp.107-13.

SHIROISHI, Yukihiro.

Factors Affecting Household Health Care Costs: Operational Research in Nepal. Johns Hopkins University [United States], 1999 (Ph.D., School of Hygiene and Public Health). Chairperson/Adviser: William A. Reinke and Kenneth Hill. xix, 400p. DAI 60, no.11 (May 2000): 5466-B; UM 9950593.

Low accessibility to and sub-optimal levels of health care service have been problems at peripheral level in Nepal. In order to tackle those problems, an operations research was conducted as a pilot study of the Community Drug Program (CDP), a Bamako-Initiative approach, in a hill district (Nuwakot District) in Nepal from 1993-1995 in line with the government's new health policy. It was designed to develop prototype operational guidelines and training manuals for the forthcoming national CDP expansion, and to assess the effect of the CDP strategies (of improving accessibility to the government health services through the establishment of sub-health posts, combined with improvement in the quality of care, the provision of essential drugs, the introduction of user fees, and community participation in planning and management) on household health care seeking, utilization, and costs. With a view of increasing sustainability, the project intervention was implemented as a field simulation exercise, strictly following government's financial and administrative rules so as to permit replication by the central and local governments and communities in future. This project involved a quasi-experimentation design, with the use of non-equivalent control area. After a baseline survey was carried out, monthly assessment of the sub-health post performance and longitudinal household surveys were conducted for a 13 month period. It appears that the households were motivated to increase their use of sub-health posts and decrease their use of less accessible private pharmacies. Also, the study results suggest that less privileged ethnic groups tended to use sub-health posts, however, the sub-health post utilization rate was much lower than expected. In light of the maintained quality of care and better accessibility, most of the patients at the sub-health posts showed positive reactions toward the services provided and toward the user fees charged at sub-health posts. By ensuring the quality mid quantity of health service delivery, four sub-health posts in the project (treatment) area appeared to contribute to a reduction in the household health expenditure proportion. However, their effects did not appear to reduce the household opportunity cost. As the utilization rates of sub-health posts were very low and the recurrent costs of the sub-health posts were much higher than the existing government health facilities, it is highly recommended that the sub-health posts should be expanded with careful local planning with community participation and involvement in management with support from the central level ensuring quality of care and financial recovery.

Contents: 1. Introduction. 2. Background. 3. Literature Review. 4. Research Design. 5. Research Findings. 6. Discussions, Conclusions, Recommendations, and Feedback. 62 figures. 75 tables. Appendices [1-15]: pp.335-89. Bibliography: pp.389-400.

TAYLOR, Mary Elizabeth.

Analysis of Systems: The Jumla Community Health Program. Johns Hopkins University [United States], 2000 (Ph.D., School of Hygiene and Public Health). xv, 282p. DAI 61, no.3 (Sept. 2000): 1363-B; UM 9964221.

Objectives: To document the evolution of aims, systems, and outcomes in a child survival intervention project carried out in Jumla District, Nepal from 1986 to 1994. *Rationale:* Improved child survival as a result of pneumonia case management and vitamin A supplementation were previously documented for this population, but without analysis of the complex internal and external systems. Understanding the evolution in assumptions and models used as well as their effectiveness and sustainability could contribute to improvement of primary health care systems. *Conclusions:* The Jumla Community Health Program, originally designed in a technical paradigm in which a series of child health problems were analyzed and solved by applying simple clinical algorithms, assumed that individual solutions could be put together to improve the overall health situation of children. This approach was based on the assumption that the world was essentially stable and that effectiveness in the form of decreased mortality could be maintained, an assumption not supported by the time series analysis. This may reflect the inability of the health system and community to attain theoretically possible mortality reductions as complexity increases. The interactions of problems such as maternal mortality and child survival, and reported unintended consequences of interventions such as decreased community ability to feed more surviving children, became apparent as time went on. As the boundaries of community need expanded, it became necessary to shift toward a systems paradigm and to define and understand Jumla and the JCHP as a complex system. In addition to clinical algorithms, continuous improvement was used to build organizational capabilities to learn and adapt in a changing environment. Lasting improvements required addressing special cause and common cause variation through redesign of processes. As the JCHP came to a close, the community became more involved in communicating and designing changes in local health services. As increasing participation and ownership was demanded, a shift took place toward a community and systems paradigm that called for driving decision-making based on community needs. The JCHP as an organization might not survive, but the health system needed to contribute to a larger societal system. This thesis demonstrates that systems of problems in community based health programs can be studied and more holistic information synthesized. The JCHP was developed to serve two very different communities: the local community in Jumla and the international health research community. This introduced a divergence of missions and approach from the inception of the program that increased over time. Methods and tools of research and experimentation that study complexity and change over time, such as were attempted here, need to be employed more regularly to address the problem of implementing sustainable, highly effective child survival programs, especially at scale. [Abstract shortened by UMI.].

Contents: Part One: Overview. 1. Introduction. 2. The Research Site: Jumla District, Nepal. 3. Background on Child Health Interventions and Research. 4. The Jumla Community Health Program as a System. 5. The Jumla Community Health Program. 6. What More Can Be Learned? Part Two: Time Series Analysis of Child Mortality Data from the Jumla Community Health Program. 1. Statement of the Problem. 2. Research Objective. 3. Methods. 4. Results. 5. Limitations of Study. 6. Discussion. Part Three: Analysis of Maternal Mortality Data from the Jumla Community Health Program. 1. Statement of the Problem. 2. Research Objective. 3. Methods. 4. Results. 5. Limitations of Study. 6. Discussion. Part Four: Applying a Framework for Continuous Improvement in a Rural Health Care Program in Jumla. 1. Statement of the Problem. 2. Research Objective. 3. Methods. 4. Results. 5. Limitations of Study. 6. Discussion. Part Five: Conclusions: Lessons of Paradigms. 71 figures and maps. 41 tables. Bibliography: pp.273-80.

Art/Music/Architecture

EGYED, Alice Maria.

Theory and Practice of Music in a Tibetan Buddhist Monastic Tradition. University of Washington [United States], 2000 (Ph.D., Special Individual Degree). Chairperson/Adviser: Ter Ellingson. vi, 225p. and one music CD (digital: 3 -3/4 in). DAI 61, no.9 (Mar. 2001): 3408-A; UM 9983679.

The *Bskang gso* are propitiation and healing rituals addressed to the wrathful, protective deities, Mahakala

(T. *Mgon po Nag po*) being the most important among them, in the *Rnying ma pa* and two *Gsar ma pa* orders. The study, it is hoped, will contribute to our understanding of the development of music and its place in ritual performance within the two major Tibetan tantric systems (*Rnying-ma*, or «Adherents of the Old» and *Gsa-ma*, or «Adherents of the New») by clarifying the similarities and differences between their traditions.

Both theoretical and practical questions concerning Tibetan Buddhist music were written down, interpreted, and systematized by Tibetan scholars. The earliest and most significant musical treatise which has survived from Tibetan sources was written by an outstanding scholar who was the religious-political leader of twelfth-century Tibet, Sa-skya Pandita Kun-dga rgyal-mtshan (1182-1251). Ritual and musical traditions/practice and the written musical manuals differ not only among each of the four main orders but also among their suborders, and further, even among discrete monastic lineages. Therefore it is necessary to learn a given musical notation from the *dbu-mdzad* ('musical leader') of the particular monastery where it is used, a corollary being that every *dbu-mdzad*, he can perform and teach only his own monastic tradition.

We interpret the traditional musical, ritual and historical texts, the oral interpretations by recognized keepers of tradition as well as ethnographic observations of repeated performances of the selected ritual in each of the four major orders of Tibetan Buddhism, to elucidate their differences in structure and function. This study will show the interrelation of music and religion, its thought and practice in Tibetan culture.

Contents: 1. Introduction. 2. In the Field. 3. Early Buddhist and Tibetan Sources. 4. History and Role of *Dbyangs* in Primary Textual Sources. 5. Approaches to *Dbyangs* in the Tibetan Theoretical Literature. 6. Vocal Music in the Different Sects. 7. Instrumental Music of the Different Traditions of Tibetan Buddhism. 8. Rituals in the Monasteries. 9. Cross Sectarian Teachings and Influences. 10. Conclusion. 3 figures. 20 musical samples. 5 tables. Bibliography: pp.204-22.

SELIG BROWN, Kathryn Helene.

Handprints and Footprints in Tibetan Painting. University of Michigan [United States], 2000 (Ph.D. in History of Art). Chairperson/Adviser: Walter M. Spink. 319p. DAI 61, no.10 (Apr. 2001): 3803-A; UM 9990979.

The goal of this dissertation is to illuminate the tradition of Tibetan paintings (*thang ka*) displaying handprints and/or footprints through an investigation into their origins, history, and religious significance. This study demonstrates that the print *thangka* tradition has at least an eight hundred year history in Tibet and that it is primarily associated with the Bka' brgyud and Dge lugs sects of Tibetan Buddhism. The thirty-two print *thangkas* examined are categorized into four types which correspond generally in composition, iconography, date, techniques, and support material. Based on visual analysis and on textual references, it is suggested that each category of *thangka* fulfilled a particular function and that the prints on print *thangkas* are based on the actual touch of a lama.

Chapter 1 reviews Western scholarship on the subject of print *thangkas* and Chapter 2 investigates Indian antecedents to print *thangkas*. Chapter 3 focuses on the multivalence of print *thangkas* by examining the occurrence of prints in other Tibetan contexts and the concepts that might be evoked by handprints and footprints on *thangkas*.

Chapter 4 and 5 examine the corpus and relevant texts. The first part of each chapter is a visual analysis of the *thangkas*. The second half provides insight into the *thangkas*' buddhological and historical contexts using texts which mention the creation of print *thangkas*. Chapter 4 addresses the two early categories (11th to 14th century), footprints in ink on silk supports and footprints flanking a deity and/or a lama, and a text written by the early Bka' brgyud scholar, Phag mo Gru pa (1110-1170). Because of their iconography, it is suggested that *thangkas* in the latter category were created to function as described by Phag mo Gru pa: to provide teachings when the teacher is absent. Chapter 5 examines the two categories of *thangkas* which date from the 15th to the 20th century, lamas or other historical personages with handprints and footprints, and handprints. This chapter also discusses the significance of passages written by the Fifth Dalai Lama (1617-1682) and his regent Sangs rgyas Rgya mtsho (1652-1703). Chapter 6 offers conclusions about the Tibetan print *thangka* tradition.

Contents: 1. Introduction. 2. Indian Antecedents to Print *Thangkas*. 3. The Multivalence of Print *Thangkas*. 4. Footprint *Thangkas*, 11th-14th Century. 5. Handprint and Footprint *Thangkas*, 15th-20th Century. 6. Conclusions. 72 figures. Appendices [A-B]: pp.290-99. Bibliography: pp.300-19.

SHRESTHA, Vikas (1962-).

Sustainable Urban Housing in Kathmandu, Nepal: Proposals and Evaluations. University of California at Los Angeles [United States], 2001 (Ph.D. in Architecture). Chairperson/Adviser: Murray Milne. xiv, 379p. DAI 62, no.2 (Aug. 2001): 362-A; UM 3005979.

Kathmandu Valley represents one of the oldest cultural hubs in the Himalayas. The historic towns in the valley consist of densely built traditional *Chowk* and *Bahal* houses with enclosed courtyards. With exposure to the outside world since 1951, the western style single-family detached house has become an image of the modern home and a status symbol. In the context of the exploding population, the prevailing trend of these free standing houses have exacerbated urban sprawl and led to inefficient use of the limited agricultural land in the valley. Devoid of shared open spaces, the new settlements lack play areas for children, places for social gathering and a sense of community.

Building materials that are not manufactured locally must be trucked from India over the mountains. So is coal for the production of brick and cement, and diesel for transportation. Minimizing the amount of imported materials and energy used by these modern houses will reduce the environmental impact and also benefit the national economy.

Kathmandu enjoys clear sky conditions during winter that makes passive solar design a potential strategy to achieve thermal comfort and eliminate kerosene heaters with their harmful effects. The abundance of rainfall during monsoon season makes rainwater collection a viable supplement to the unreliable municipal water supply.

This dissertation creates three new housing prototypes that address all these issues. These prototypes are modern interpretations of the vernacular *Chowk* and *Bahal*, which create communal open space by grouping row-houses around a common courtyard. Combining vernacular wisdom with the principles of sustainable design, these prototypes reduce land consumption; reduce resource consumption; create community open space; minimize imported materials; increase energy efficiency and thermal comfort; make homes and neighborhoods self sustainable for water supply and wastewater treatment; and altogether improve the quality of life.

This dissertation quantifies the embodied energy of basic building materials that are used in Nepal; proposes new types of locally produced insulation; and develops a sustainable design evaluation system based on LEED. This integrated system of sustainable materials database, evaluation system, and vernacular-based housing prototypes developed in this dissertation lays out an example for other third world countries.

Contents: 1. Contextual Review. 2. Definitions, Contributions and Limitations. 3. Climatic, Cultural and Socio-Economic Contexts. 4. Proposals for Sustainable Urban Housing. 5. Evaluation Framework. 6. Evaluation. 7. Future Perspectives. Conclusion. 106 figures. 293 tables. Appendices [A-H]: pp.305-74. Bibliography: pp.375-79.

TIWARI, Bhai Kaji (1958-).

Der 55-Fenster-Palast in Bhaktapur: ein Beispiel nepalesischer Architektur und Denkmalpflege. [Text in German: The Palace with Fifty-Five Windows in Bhaktapur: An Example of Nepalese Architecture and the Preservation of Monuments.] Universität Kaiserslautern [University of Kaiserslautern] [Germany], 1999 (Dr.-Ing.).

Published as *Der 55-Fenster-Palast in Bhaktapur: ein Beispiel nepalesischer Architektur und Denkmalpflege*, by Bhai Kaji Tiwari. Aachen: Shaker Verlag, 1999, 249p. (Berichte aus der Architektur).

Linguistics

GARRETT, Edward John (1971-).

Evidentiality and Assertion in Tibetan. University of California at Los Angeles [United States], 2001 (Ph.D. in Linguistics). Chairperson/Adviser: Carson Schütze and Dominique Sportiche. xi, 292p. DAI 62, no.2 (Aug. 2001): 550-A; UM 3005976.

This dissertation examines the three major evidential categories in Standard Tibetan—ego, direct, and indirect. Indirect is argued to be a performative epistemic modal; its performativity accounts for its highly restricted distribution. Direct is argued to be complex, consisting of a demonstrative component, which

requires that the marked situation be stage-level, and a pragmatic component, which requires that the marked situation have been observed. Evidence from conditionals and from the Amdo variety of Tibetan show that these two components can be disentangled from each other. Ego is argued to be a morphologically zero, default, 'elsewhere' case, which indicates either immediate or groundless knowledge.

Aside from its contribution to Tibeto-Burman linguistics, this dissertation touches on various theoretically important issues in pragmatics and the philosophy of language. First, in discussing ego, it is argued that a property-based semantic view of attitudes *de se* has no advantage over a proposition-based pragmatic theory. Special uses of ego with names *de se* and performatives highlight this point.

Second, it is suggested that questions be analyzed as in the traditional answer set approach to the semantics of questions; but rather than taking a question to denote a set of propositions, it is argued that a question should denote a set of assertions instead.

Third, a new division among conditionals is proposed. Based primarily on the behavior of Tibetan evidential constructions in conditional protases, but also on the behavior of English 'will' in the same position, a category of 'interactional' conditionals is introduced. Interactional conditionals differ from 'hypothetical' conditionals in that the speaker does not simply represent the protasis as unknown, but as something which can and should be immediately verified or countered by another discourse participant.

Contents: 1. Introduction. 2. Indirect Evidentiality. 3. Direct Evidentiality. 4. Ego Evidentiality. 5. Embedded Assertions. 6. Questions. 7. Conditionals. Bibliography: pp.281-92.

Tibetan Studies

SARDAR-AFKHAMI, Abdol-Hamid.

The Buddha's Secret Gardens: End Times and Hidden-Lands in Tibetan Imagination. Harvard University [United States], 2001 (Ph.D. in Sanskrit and Indian Studies: Tibetan Studies). Chairperson/ Adviser: Leonard Vanderkuijp. vi, 219p. DAI 62, no.4 (Oct. 2001): 1454-A; UM 3011474.

In recent years, there have been a growing interest in the subject of Tibetan sacred geography, yet the relationship between sacred places and political crisis in Tibet imagination remains little understood. In popular imagination, Tibet still conjures up fantasies of a peaceful land sitting outside of time whose subjects were primarily engaged in spiritual pursuits and went on pilgrimage to distant shrines and mountains. In reality, Tibet was a more complex feudal society characterized by civil wars, religious persecutions and foreign invasions. In such times, a secret society of Tibetan yogins began to fantasize about hidden utopias situated in the mountains surrounding their country. This study focuses on a collection of medieval guidebooks to these sacred places and examines their impact on Tibetan imagination up to modern times. While this study is primarily historical, it emphasizes the psychological aspect of the primary literature, and attempts to shed light onto a small group of Tibetan yogins, for whom the Himalayan wilderness became a source of hope and utopian fantasy.

Contents: Introduction. 1. Pure Lands and Forest Utopias in Indo-Tibetan Imagination. 2. The Tibetan Cult of the Mountains. 3. The Mountain Paradises of Guru Padmasambhava. 4. The Visionary Journey of Rig 'dzin Rgod Idem can. 5. The Path Finders. 6. Padma bkod: Tibet's «Heart of Darkness». Concluding Thoughts. Appendices [1-3]: pp.182-201. Bibliography: pp.202-16.

SCHAEFFER, Kurtis Rice.

Tales of the Great Brahmin: Creative Traditions of the Buddhist Poet-Saint Saraha. Harvard University [United States], 2000 (Ph.D. in Sanskrit and Indian Studies: Tibetan and Himalayan Studies). Chairperson/Adviser: Leonard W. J. van der Kuijp. xi, 524p. DAI 61, no.5 (Nov. 2000): 1847-A; UM 9972423.

Tales of the Great Brahmin is a study of the many types of Tibetan religious literature dedicated or attributed to the Indian Buddhist poet-saint, Saraha—known also as the Great Brahmin. The central argument of the thesis is that members of the Buddhist traditions who were heir to Saraha's legacy in India, Nepal, and primarily Tibet transformed and adapted works by and about him in the process of transmission, and thus were instrumental in the formation of both his enduring saintly image and the religious works associated with his name. The thesis thus shows how images, tales, and teachings of the Great Brahmin

were transmitted, transformed, and created by the members of diverse Buddhist traditions in Tibet from the 11th to the 19th centuries. The thesis consists of an introduction and ten chapters, and is divided into two parts. Part One discusses the hagiographic literature dedicated to Saraha. Chapters One and Two provide a comprehensive survey of the different hagiographic traditions dedicated to Saraha as they developed in Tibet from the 11th to the 19th centuries. Chapter Three looks at liturgical and iconographic guides, hymns of praise, and accounts of meeting Saraha in mystic visions. Chapter Four details the polemical uses to which the figure of Saraha was put in Tibet. Part Two deals with the songs attributed to Saraha, and in particular his famous *Treasury of Dohâ Verses*. Chapter Five provides a historical survey of the seventeen occasions on which the *Treasury of Dohâ Verses* was transmitted from India or Nepal to Tibet. Chapter Six presents the Tibetan debates regarding the authenticity of Saraha's works. Chapter Seven introduces the genre in which the majority of Saraha's teachings are preserved, surveys Tibetan views on the creation of Saraha's works, and discusses an important corpus of Tibetan anthologies of Buddhist tantric songs in which Saraha's works figure. Chapter Eight shows how redactors of Saraha's *Treasury of Dohâ Verses* transformed the work. Chapters Nine and Ten present translations and editions of the *Treasury of Dohâ Verses* and a 13th century Tibetan commentary on the work.

Contents: Introduction: Stories and Songs of the Great Brahmin Saraha. Part One: Stories. 1. Tales of the Great Brahmin. 2. Further Tales of the Great Brahmin. 3. Meeting the Great Brahmin in Rituals, Paintings, and Dreams. 4. Contesting the Great Brahmin: Saraha as Abbot and Adept. Part Two: Songs. 5. Bringing the *Treasury of Dohâ Verses* to Tibet. 6. Commentary and Controversy on the *Treasury of Dohâ Verses* in Tibet. 7. Creating the *Treasury of Dohâ Verses*. 8. Re-Creating the *Treasury of Dohâ Verses*. 9. The *Treasury of Dohâ Verses* and the *Ornamental Flower for the Dohâs*. 10. The *Treasury of Dohâ Verses*: Comparative Editions. Bibliographies.

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