



# HIMALAYA, the Journal of the Association for Nepal and Himalayan Studies

---

Volume 5  
Number 2 *Himalayan Research Bulletin*  
*Monsoon/ Fall 1985*

Article 8

---

Fall 1985

## Dissertation Abstracts

Follow this and additional works at: <https://digitalcommons.macalester.edu/himalaya>

---

### Recommended Citation

. 1985. Dissertation Abstracts. *HIMALAYA* 5(2).

Available at: <https://digitalcommons.macalester.edu/himalaya/vol5/iss2/8>

This Dissertation Abstract is brought to you for free and open access by the DigitalCommons@Macalester College at DigitalCommons@Macalester College. It has been accepted for inclusion in HIMALAYA, the Journal of the Association for Nepal and Himalayan Studies by an authorized administrator of DigitalCommons@Macalester College. For more information, please contact [scholarpub@macalester.edu](mailto:scholarpub@macalester.edu).



## VL. DISSERTATION ABSTRACTS

\*Courtesy of Frank Joseph Shulman, Compiler and Editor  
Doctoral Dissertations on Asia: An Annotated Bibliographical Journal of Current International  
Research  
(c/o East Asia Collection, McKeldin Library  
University of Maryland, College Park, MD. 20742 U.S.A.)

+Submitted by author

Unless otherwise indicated, order numbers refer to and copies are available from:

University Microfilms  
300 North Zeeb  
Ann Arbor, MI 48106 U.S.A.  
(WATS telephone number: 1-800-521-0600)

**NOTE: We are aware that some universities do not submit dissertations or abstracts to the central dissertation services. If your dissertation is not generally available, or if you know of one that is not, please send us the necessary information so that our listings can be more complete.**

\*Abrahams, Mark Nathan

-- Ph.D.

-- University of Maryland, 1983. 235 pp.

Title: "A Phenomenological Adaptation of the Tibetan Buddhist Doctrine of Psychic Centers to a Metatheoretical Hierarchy of Human Motivation."

Order No. DA8411986

Supervisor: Jacob D. Goering

The purpose of this study was to systematically account for a number of apparently conflicting theories of human motivation by assigning them to separate levels of a hierarchically structured metatheory.

It was hypothesized that certain major psychological theories of motivation in the West could find phenomenological parallels with corresponding concepts in the East. It was further hypothesized that there exists in the East a model which could not only incorporate the concepts of six important Western theories, but integrate them in such a way that they are not viewed as being contradictory (as they are in the West) but rather as complementary aspects of a multi-dimensional phenomenon.

The metatheoretical model in question belongs to Tibetan Vajrayana Buddhism, and based upon a phenomenological consonance between Eastern and Western concepts, the theories of Freud, Adler, Jung, Frankl, Maslow and Rogers were selected. There is also a seventh concept of motivation included in the Tibetan model which has no well-defined equivalent in the West, and involves the synthesis of the aforementioned theories.

The methodology and design involved a phenomenological investigation of ideas, both Eastern and Western which contributed to the formation of shared concepts of motivation. This investigation made use of a series of seven integrated narratives based upon historically documented sources of information.

The study concluded that the Tibetan Buddhist model was suitably adaptable to a metatheoretical hierarchy of human motivation. A developmental trend could be defined in terms of motivation; and a phenomenological analysis suggested that on the basis of the concepts described herein, the several essential forms of motivation are universal, transcultural and transhistorical.

**\*Baral, Jagadish Raj**

-- Ph.D.

-- University of the Philippines at Laguna, 1981. 561 pp.

Title: The Dynamics of Field Implementation of the Training and Visit (T & V) System in Parsa District of Nepal.

A copy is available at the National Library of the Philippines, T.M. Kalaw St., Manila, Philippines.

**\*Bhatti, Nasir Ali**

-- Ph.D.

-- University of Idaho, 1982. 187 pp.

Title: Depositional Environment of Phosphate Deposits of the Hazara District, Southern Himalaya, Pakistan.

Order No. DA8212743

Deposition of phosphate in Late Precambrian-Cambrian in the Hazara District of Pakistan is a phosphogenic system with a diversity of phosphate rock not reported from a single area elsewhere. A sequence of the phosphogenic stages is reconstructed and the depositional environment is delineated by comparing with diagnostic geological analogues.

Earliest phosphorite is recorded at Gadda at the contact of underlying siltstones of Tanawal Formation and overlying dolomites of Sirban Formation. It is proposed that this phosphate deposition persisted through the transition in depositional regimes that correspond with a shift in tectonic setting from intracratonic basins into geosynclinal platforms around 900 M.Y. before present.

The main phosphate deposits of the Hazara District occur at Lagarban and Kabul. These deposits in the Sirban Formation were formed in an environment comparable to the sabkhas of the Persian Gulf. It is suggested that algal mats trapped phosphate sediments in the Kabul deposits, whereas a regression caused accumulation of phosphate in the Lagarban deposits.

It is proposed that the glauconitic phosphorite at Sirban Mountain formed between the zones of the formation of glauconite pellets and phosphate pellets. Phosphate deposits at Dalola were laid down in a close proximity to a structural high and mark the last phase of phosphogenic deposition.

A sequence of primary phosphate deposition, percolation of iron solutions, leaching, and silicification is delineated by petrographic study. Dolomitization is contemporaneous with phosphate deposition.

Phosphate deposits of Hazara District are chronostratigraphically correlated with Late Pre-Cambrian phosphate deposits of Tien Shan geosyncline of China and U.S.S.R. Similarities in environment and tectonics are remarkable. It is interpreted that Hazara phosphate as well as Tien Shan geosynclinal phosphate were deposited in one and the same geosynclinal basin. It is logical that their location has remained unchanged, which can only be explained if Hazara is considered to be the part of the Eurasian continent rather than of the Indo-Pakistan continent. The reconstruction of Late Pre-Cambrian-Cambrian phosphogenesis considering proximity of Hazara phosphate with that of China and U.S.S.R. is proposed.

**\*Burbank, Douglas West**

-- Ph.D.

-- Dartmouth College, 1982. 306 pp.

Title: The Chronologic and Stratigraphic Evolution of the Kashmir and Peshawar Intermontane Basins, Northwestern Himalaya.

Order No. DA8223848

The intermontane basins of Kashmir, Peshawar, and Campbellpore developed within the schuppenstruktur along the southern margin of the Himalayan Range, where they are symmetrically oriented around the Northwest Syntaxis. Detailed lithostratigraphies, magnetic-polarity stratigraphies, and fission-track dates on enclosed volcanic ashes were utilized to develop a chronology of the evolution of each of these basins.

The results indicate that sedimentation began in the Kashmir Basin 4 m.y. ago. Since then, over 1300 m of sediments have aggraded at rates varying from 16-64 cm/1000 yr. Lacustrine and deltaic sediments dominate the Kashmiri sequences, but conglomerates shed from the faulted basin margins punctuate the depositional record. Paleocurrent analyses indicate a switch from northeasterly derived conglomerates to southwesterly derived ones around 2 m.y. ago. This transition reflects enhanced activity along the frontal thrust complex. In the Pir Panjal Range, 1400-3000 m of uplift at rates of 4-10 mm/yr have terminated widespread sedimentation within the Kashmir Basin during the past 400,000 yr.

Sedimentation within the Campbellpore Basin began prior to 1.8 m.y. ago. In the succeeding 600,000 years, meandering rivers, constrained to longitudinal flow by the emerging Kala Chitta Range, deposited up to 130 m of fluvial and lacustrine sediments.

After a prolonged interval of erosion and faulting, sedimentation commenced in the Peshawar Basin around 3 m.y. ago. Transverse to the faulted basin margin, a northward progression of depositional environments from alluvial fans to braided rivers to low-relief floodplains is displayed by intermontane sediments up to 350 m thick that aggraded at a rate of 15 cm/1000 yr. Widespread sedimentation terminated about 600,000 yr ago due to accelerated uplift of the Attock Range. Since then, catastrophic floods have periodically inundated the basin.

A tectonic model based on temporal, geological, and geophysical observations is presented to explain the structural evolution of the intermontane basins and the Northwest Syntaxis.

**Chapagain, Devendra Prasad**

-- Ph.D.

-- The University of Wisconsin-Madison, 1984. 272 pp.

Title: Managing Public Lands as a Common Property Resource: A Village Case Study in Nepal.

Order No. DA8410764

Supervisor: Daniel W. Bromley

This study addresses the problem of public land use in Nepal from an institutional perspective. In light of the distinction made between the open-access (devoid of any property rights) and common property (collectively shared rules of entitlement) in the use of natural resources, the present study develops an empirical basis to evaluate the relevance of these two alternative institutions in the context of a hill village economy.

The present analysis involves inquiries into the nature of extractive activities on public lands, the perception and awareness of public land use problems, and the current system of property rights on these lands. In addition, a series of hypothetical experiments were conducted on the respondents to

test their willingness to contribute to the provision of, and refrain from extracting benefits from, collective resources. The data were gathered by interviewing 140 households in the study area.

Major findings of this study are that: (a) there is consistency between the individual behavioral intention and the collective interest among the households in the study area. This is true both in the cases of contributing toward the provision of collective resources as well as in expropriating benefits from an existing resource; (b) the willingness to contribute resources is attested to by their actual acts of contribution; (c) the villagers are aware of the externality effects of natural resource use, and are capable of devising institutional rules to minimize these externalities, if entrusted with that responsibility; and (d) this process of institution building could be strengthened by providing proper incentives on the part of the government, rather than by introducing policies that would disrupt this process.

These findings are consistent with the cooperative actions that have been sustained over generations among the rural communities. They also demonstrate the lack of support for the behavior of "free-riding," as predicted by the conventional wisdom.

The findings imply the need for promoting appropriate institutional arrangements in the local areas with respect to resource use practices and by involving local residents in decision-making. The community forestry program presently underway can be an important vehicle in achieving these goals.

**+Dalrymple, Mary**

-- M.A.

-- University of Texas-Austin, Department of Linguistics, 1984.

Title: Subject Types in Marathi, Nepali, and Bengali.

There are four types of subjects in Marathi, Nepali, and Bengali: subjects of transitive verbs, subjects of intransitive verbs, subjects of passivized verbs, and so-called 'dative subjects.' These subjects differ in case marking and, in some respects, in syntactic behavior. Each of these subject types is tested in several subject-related constructions and the extent to which each behaves as a subject is examined.

**\*Feng, Chi-Chin**

-- Ph.D.

-- University of Southern California, 1982.

Title: A Surface Wave Study of Crustal and Upper Mantle Structures of Eurasia.

Chairman: Ta-liang Teng

The surface-wave inversion method is improved to determine a more reliable and detailed crust-upper mantle structure model of Eurasia. We first examined the commonly used techniques and new developments in dispersion measurement of the last decade. Then, a new technique termed the 'matched-filter Frequency-Time analysis' is designed for this study. This technique improves range with reduced systematic errors. To extract pure-path dispersion from mixed-path measurements, stochastic inversion theory is applied. This method has the advantage that it can extract more information from inaccurate, insufficient and inconsistent surface-wave dispersion data than the classical least squares method.

The Rayleigh-wave group-velocity dispersion curves of 109 wave paths within Eurasia are measured. All seismograms used in this study were recorded by the high-quality Seismic Research Observatory stations. Pure-path dispersion curves of 45 subregions of Eurasia are extracted from the measured dispersion data. The inverted layered half space models have resolution to a depth of about 300 km.

The average crustal thickness of Eurasia is about 40 km. Abnormally thick crust from 50 to 65 km is obtained in areas of Tien Shan, the Altai mountains, Afghanistan, Pamir, Tibet and Burma. Among

them, Tibet has the least dense crust and highest elevation. This implies that at least part of the elevation of Tibet is due to isostatic compensation.

The upper mantle seismic velocity of the tectonically active regions of Asia is considerably lower than that of the European and Siberian cratons. This explains the large-scale surface features of Eurasia in that regions with weak upper mantle structure deform plastically and regions with strong upper mantle structure remain undeformed as the Indian subcontinent moves northward into Eurasia.

**\*Fricke, Thomas Earl**

-- Ph.D.

-- The University of Wisconsin-Madison, 1984. 380 pp.

Title:           And Another to Plough the Fields...Economy, Demography, and the Household in a Tamang Village of North Central Nepal.

Order No. DA8415555

This case study of an agro-pastoral people in the Nepal Himalaya focuses on the role of population in their adaptation to a marginal mountain environment. It provides an example of the integration of household, economy, and fertility among a people at the earliest extreme of the demographic transition. The perspective is that of processual cultural ecology.

Most recent theories of population dynamics stress the institutional supports for childbearing in societies lying along a continuum from determined to self-regulated fertility. Yet few studies are based on data from extant populations whose history is largely unaffected by national development schemes or western contact.

The Tamang village of Timling is illustrative of this earliest extreme. Analysis centers on the overlapping systems of reproduction and production in the context of the household. Data are from a combination of anthropological and demographic methodologies including a village census, marriage and fertility histories from 152 Tamang women, economic surveys from 30 randomly chosen households, life histories from 50 household heads, and clan histories.

Analysis shows Timling's fertility to be the result of a combination of social and biological factors, especially marital exposure and breastfeeding. The expression of fertility is then related to the household developmental cycle and its implications for changing household fortunes through time. Finally, population growth is shown to follow from the organization of village economy in an environment that encourages diversification. The implications of these processes include the search for new resource frontiers which create a new set of constraints on village adaptation.

The last chapter of this study integrates the description of these systems and relates them to more general population theory, stressing the applicability of the adaptive perspective in its ability to describe both stable and changing societies.

**\*Gilbert, Suzanne Schwartz**

-- Ph.D.

-- The University of Michigan, 1983. 223 pp.

Title:           Trachoma in Nepal: An Investigation Into Socio-Cultural and Individual Factors.

Order No. DA8324185

Chairman:       Yuzura J. Takeshita

Worldwide, trachoma is the leading cause of preventable blindness, affecting an estimated 500 million people and causing blindness in up to nine million of these. Public health efforts traditionally are aimed at controlling trachoma rather than eradicating it. Mass control efforts can dramatically

reduce the prevalence of trachoma blindness within a five-to-ten year period. By simply reducing the incidence of episodes, the more severe, painful sequelae and blindness itself largely can be prevented.

This study, conducted with field observations and 282 survey interviews, takes place in Nepal's West and Far West Terai where one in four adults has signs of trachoma.

The major purpose of this study is to identify and describe community/environmental, sociodemographic, health belief, and general and health practice correlates of trachoma status in Nepal's trachoma-endemic area.

A major, but secondary, purpose is to assess the association of availability of health services, respondents' health concepts and selected sociodemographic factors with use of modern treatments for trachoma.

The leading factors found to be related to trachoma include ethnic group membership, poor accessibility to washing water, and low frequency of face washing. Characteristics which were expected to be associated with trachoma, but were not, include sex, economic status, caste and amount of time spent with children. Availability of health care and public services and clean home surroundings had surprising inverse association with trachoma. Ethnic group membership was the most important correlate of trachoma status.

Males, persons under 40 years of age, and Nepali-speakers were most likely to have tried modern treatment for trachoma. For the entire sub-sample studied, the local availability of health services was not related to use of modern treatment. However, proximity of these services was associated with such treatment practices among older persons and those who did not speak Nepali.

A series of health concepts related to trachoma are described both for their theoretical interest and their value in planning a health education program which promotes preventive and therapeutic activities.

**\*Gross, Philip Howard**

-- Dr. P.H.

-- The University of Texas H.S.C. at Houston, School of Public Health, 1981. 381 pp.

Title: The Potential Effects of a Community Development Program on Demographic Variables in Himalayan Indian Villages.

Order No. DA8212736

Supervisor: Eun Sul Lee

A community development program operating in the mountains of North India was studied to assess its potential effects on mortality, fertility and migration patterns in the community which it served. The development program operated in Jaunpur Block, Tehri-Garhwal District, Uttar Pradesh State. Two comparable villages in the district were studied. The development program had been working in one for two years, and the other was completely untouched by the program.

Since not enough time had elapsed since the beginning of the development program's work for any effects on demographic patterns to be visible in Jaunpur Block, this study looked to attitudes of village residents as indicators of future demographic trends. Existing demographic patterns and their interrelationship with socio-religious customs were examined in the test village. A questionnaire was then administered to ascertain attitudinal differences between the residents of the test village and the control village.

The primary work of the community development program was to train women as village health workers. The results of the attitudinal comparison of the residents of the two villages showed a marked difference in attitudes relating to the position of women in society. The data showed a higher esteem for women in the test village than in the control village, and it is argued that this difference may be attributable to the work of the development program.

Predicting future demographic trends in Jaunpur Block on the basis of the observed difference in villagers' attitudes toward the status of women is speculative. Jaunpur Block appears to be in the demographic stage of pre-transition, maintaining relatively high rates of both mortality and fertility. Based on demographic transition theory the next significant change in demographic patterns in Jaunpur is predicted to be a decline in mortality, and an increase in the status of women is unrelated to this prediction.

The community development program which was studied terminated unexpectedly during the time of this study. A case study of the program's final months is presented, and speculation on the future course of demographic trends in Jaunpur Block is related to the possible alternatives for future development in the area.

**\*Khatri-Chhetri, Tej Bahadur**

-- Ph.D.

-- The University of Wisconsin-Madison, 1982. 318 pp.

Title: Assessment of Soil Test Procedures for Available Boron and Zinc in Soils of the Chitwan Valley, Nepal.

Order No. 8215945

Supervisor: Emmett E. Shulte

The soils of the Chitwan Valley, Nepal, were investigated for their nutrient supplying power. Boron and zinc were diagnosed as the most limiting elements in these soils for crop production. Problems associated with a short supply of N, K and S were also indicated. Less than 10% of the samples tested were deficient in P or Mg.

Positive maize yield increases were obtained in most strip trial locations due to added secondary and micronutrients. DRIS indices calculated from earleaf samples at silking indicated B as the most required nutrient, followed by Zn, when N, P and K were supplied.

From greenhouse experiments with maize grown in these soils and analyses of extractable soil B and Zn, the suitability of several soil tests for these elements was assessed.

Different soil properties affecting extractable B in these soils were discussed. The uptake of B was inversely correlated with pH. Integration of different soil properties including pH, organic matter, silt content, soil Fe and soil test B in a multiple regression analysis gave the best prediction equation of B uptake. The methods of B extraction used were: hot-water, pH 4.8 NaOAc, mannitol, and Bray-1. The mannitol method was selected as best for use in these soils, with a critical level of 0.23 ppm B.

Zinc extracted by different methods was highly correlated with the uptake of Zn by maize. The order of the efficiency of the methods was: DTPA > EDTA-(NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> > NH<sub>4</sub>OAc-dithizone > 2N MgCl<sub>2</sub> > 0.1N HCl. Multiple regression analysis including pH, organic matter, soil test Zn, and soil Fe gave the best prediction of Zn uptake. This equation ranked the DTPA, EDTA-(NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> and 0.1N HCl methods about equal in their prediction of Zn uptake. The DTPA method was selected as the best method for the use of these soils, with an approximate critical level of 0.40 ppm. The use of the Zn Availability index was proposed when the uptake is predicted from an integration of different soil parameters.



**\*Lal, Kaushal Kishore**

-- Ph.D.

-- Kansas State University, 1984. 71 pp.

Title: Genotype X Environment Interaction and Stability Parameters for Yield and Other Agronomic Traits Among Maize (Zea Mays L.) Composites in Nepal.

Order No. DA8428128

Nine maize (Zea mays L.) composites grown at seven different locations in Nepal in 1982 and 1983 were studied to evaluate their yield performance in terms of stability and potential yield. A statistical model developed by Eberhart and Russell was utilized for computation of three parameters, mean yield, regression coefficient, and deviation from regression. Large deviations from regression limited the use of regression coefficients as predictive parameters.

The combined analysis of variance exhibited highly significant first and second order interactions indicating a need to select genotypes more specifically for different agroclimatic regions in the country. The stability parameters were used to show the existence of wide genotypic differences in response to environments and they are useful in describing and predicting genotype performances.

Genotypes having higher yield over 14 environments were Mankamma-2, Rampur-2, Ganesh-2, and Khumal Yellow. However, Mankamma-2 and Khumal Yellow had significantly greater deviation from regression. Rampur-2 and Ganesh-2 had higher mean yield, regression coefficients of one and had smaller deviation (near zero) from regression, therefore were classified as stable genotypes. In contrast a local cultivar which had low mean yield and highest deviation from regression was designated as the most unstable source. Rampur composites which had a low mean yield, a regression coefficient significantly less than unity and nearly zero deviation from regression was classified as a genotype suitable for less favorable environmental conditions.

Other agronomic characters including plant height and days to 50% silking were also evaluated using the Eberhart and Russell (1966) model. Only deviation from regression parameters was considered in this case since means and regression coefficients were nearly the same for all sources. Ganesh-2 was most stable in days to 50% silking. For plant height, Ganesh-2, Khumal Yellow, Rampur composites, Rampur-1 and Rampur-2 were rated as most stable. Although genotypes showed marked differences in mean performance, they were relatively nonsensitive to environment for their traits and the most important stability parameter appeared to be deviation from regression.

**\*Lelliott, A.D.**

-- M. Sc.

-- University of Durham [ England ], 1981.

Title: Studies of Himalayan Pheasants in Nepal, with Reference to Their Conservation.

**\*Malinconico, Lawrence Lorenzo, Jr.**

-- Ph.D.

-- Dartmouth College, 1982. 165 pp.

Title: Structure of the Himalayan Suture Zone of Pakistan Interpreted From Gravity and Magnetic Data.

Order No. DA8316911

In northern Pakistan the westward extension of the Indus suture zone bifurcates into two structural zones which surround a sequence of rocks interpreted as a wedge of island-arc terrain from the Indian

plate while the northern suture, the Main Karakorham Thrust (MKT), separates the island-arc terrain from the Asian plate.

Close to 600 gravity and magnetic measurements were made along traverses that are approximately normal to the major structures in the area. The gravity data were reduced to terrain-corrected Bouguer values and were then analyzed using two-dimensional modeling techniques. The results suggest that both the MMT and the MKT dip towards the north. The MMT dips at angles of 35 to 45 degrees while the MKT dips at around 20 degrees. The island-arc terrain appears to be 8 to 10 kilometers thick with its southern edge tilted upwards and eroded back to expose the lower layers of the sequence.

The Main Boundary Thrust (MBT), the youngest of the structural features studied and the zone of current crustal shortening, is modeled as dipping less than 15 degrees to the north. When the present attitudes and presumed ages of the MMT, MKT and MBT are considered, the generalization can be made that the older a structure is, the steeper its present dip.

Modelling of gravity data along a traverse that crosses the entire length of the suture zone suggests that the Indian plate is being thrust steeply under the Asian plate. This thrusting is forcing sialic material to a maximum depth of 100 kilometers.

Total field magnetic anomalies along the same traverses do not reflect major structural trends, but correlate instead with bodies of ultramafic rock which appear to be localized along the suture lines. An ultramafic klippe is observed 25 kilometers south of the present outcrop of the MMT and suggests that the island-arc terrain once extended farther to the south. A possible tectonic history for the area is suggested. Approximately 40 m.y. ago the collision of the Indian plate with an island arc resulted in obduction of the island-arc terrain into the Indian plate along a very shallow thrust (MMT). The basin behind the arc subsequently closed in the northern edge of the island-arc was thrust under the Asian plate (MKT). Continued northward migration of India steepened the MMT and MKT into their present attitudes, while crustal shortening is accommodated along shallow thrusts (MBT).

**\*Nagano, Yasuhiko**

-- Ph.D.

-- University of California, Berkeley, 1983. 458 pp.

Title: A Historical Study of the rGyarong Verb System.

Order No. DA8413529

rGyarong is one of the Tibeto-Burman languages, spoken in the north-west region of Sichuan Province, China. Because of the striking similarity of some words to the orthography of Tibetan and its complicated morphological processes, the language has long attracted many scholars' attention. In no previous study, however, have we found any clear-cut description of the language's complexity -- the verb system, above all, shows such a puzzling structure that no earlier works on rGyarong seem to have succeeded in analyzing it in a convincing way.

The historical/genetic position of rGyarong has not been well elucidated either. It has been classified in the Tibetan group simply because of the similarity of a limited number of rGyarong words to Written Tibetan, while the affiliation of the rest of the lexicon has gone unstudied.

In the descriptive part of this dissertation, the structure of the verb phrase is analyzed; a great deal of attention has been paid to the morphological segmentation of final verb-phrases and the morphosyntax of affixes.

On the basis of this description, a comparison is attempted on three levels: verb root, morphological processes, and morphosyntax. The comparison of verb roots reveals that rGyarong verbs display more regular correspondences with Abor-Miri-Dafla than with Written Tibetan. We regard the rGyarong/WT similarities as coincidences rather than true correspondences, and suspect they are due to loans throughout the long history of rGyarong cultural contact with Tibetans. Proto-rGyarong, as conceived by the author, shows an unexpectedly close similarity to Proto-Tibeto-Burman as reconstructed in Benedict's Conspectus, but, some intermediate stage seems to be needed to connect the two.

Through the comparison of morphological processes, we have found that rGyarong basically belongs to the Kamarupan group (Abor-Miri-Dafla, above all) and that, in terms of affixing systems, it presents the characteristics of a "link language" which connects various sub-groups of Tibeto-Burman.

**\*Neupane, Fanindra Prasad**

-- Ph.D.

-- The University of Wisconsin, Madison, 1982. 221 pp.

Title: The Bionomics of the Maize Borer, Chilo Partellus (Swinhoe) in Nepal.

Order No. DA8218035

Supervisors: Harry C. Cooper and R. Keith Chapman

In the Chitwan valley, Nepal, Chilo partellus preferred maize and sorghum over rice. Infestation on young maize plants produced "dead hearts" and on older plants reduced growth and sometimes prevented cob formation. The yield reduction in some maize cultivars reached 60% and stem infestation levels to 98%. Borers produced "dead hearts" in young and "white heads" in older rice plants.

The egg, larval and pupal periods from April through September lasted 4-5, 16-41 and 4-8 days, respectively. A complete generation took 28-48 days under summer field conditions and 192-233 days from October to May.

The optimum temperature for a complete generation of C. partellus in the laboratory was 30°C. The threshold temperatures for egg, larval, pupal and complete generation were 13.25, 12.50, 12.75 and 13.00°C, respectively. A complete generation in the laboratory and field took 471.7 and 515.0 thermal units, respectively.

There are 5 generations of C. partellus in the Chitwan valley. Moth emergence in the spring peaks on April 15. The 1st, 2nd, 3rd, 4th and 5th generation moth peaks occur on May 24, June 28, July 31, September 3 and October 10, respectively. The third generation is by far the largest followed by the 2nd and the 4th.

Mortality factors during the 2nd, 3rd and 4th generations were: larval dispersion, adult mortality, egg, larval and pupal parasitism, and unknown. One egg, 4 larval and 2 pupal parasitoids, all hymenopterans were reared.

Of 134 maize entries screened for susceptibility, 16 showed a considerable amount of resistance to attack by C. partellus. Commonly grown cultivars, Rampur yellow, and Rampur composite, were moderately susceptible and Arun-2, although highly susceptible to stalk infestation, yielded well. Planting of maize prior to May 14 resulted in less borer damage than later plantings. Granular carbaryl as a whorl treatment for the 3rd generation of C. partellus in maize was the most effective insecticide treatment for damage reduction.

**\*Ni, James Fu**

-- Ph.D.

-- Cornell University, 1984. 280 pp.

Title: Seismicity and Active Tectonics of the Himalayas and Tibetan Plateau.

Order No. DA8427160

Available geophysical and geological data are analyzed with additional new data to further the understanding of the fundamental tectonic processes involved in the Himalayan-Tibetan continental collision zone. Seismicity of the Himalayas suggests that at present the Indian Plate underthrusts the Himalayas as a coherent unit along a shallow detachment. The geometry of this detachment beneath

the Lesser Himalayas is constrained by well data and well-determined focal depths of moderate-sized earthquakes. This detachment surface, at or near the top of the downgoing Indian plate, dips at approximately a 15° angle from about 10-km to 20-km depth. This result supports a model of the active tectonics of the Himalayas as "thin-skinned" and analogous to the Paleozoic tectonics of the southern Appalachian Collision Zone.

New seismological observations of velocities and propagation characteristics of Pn, Sn and Lg waves beneath the Himalaya-Tibet and surrounding region can be interpreted, although not uniquely, to indicate the shallow angle underthrusting of the Indian continental lithosphere beneath the Tibetan Plateau. The most significant observation is that, except beneath the northern part, high-frequency Sn waves propagate efficiently in the uppermost mantle beneath the Tibetan Plateau. Strong attenuation of Sn waves suggests the existence of a low-Q zone in the uppermost mantle beneath northern Tibet.

Analysis of Landsat imagery and fault plane solutions of shallow crustal earthquakes in both the Tethyan Himalayas and Tibet indicate that normal faulting and east-west extension are the dominant mode of deformation occurring in the late Cenozoic time. The normal faulting is due to an east-west deviatoric tensional stress within the elevated Tethyan Himalayas and Tibet.

Seismicity combined with structural elements mapped from digitally processed Landsat 3 Multispectral Scanner (MSS) data provide valuable information about neotectonic processes in the overthrusting western Himalayan blocks. The rhomboidal-shaped upper Sutlej River Basin consists of many NNE-trending fault blocks and is interpreted as a pull-apart basin. This pull-apart basin is explained as a result of oblique underthrusting of the Indian plate beneath Himalayas-Tibet.

**+Rokaya, Chandra Man**

-- M. Ec.

-- University of New England [ Australia ], 1980.

Title: Impact of Small Farmers Credit Programme on Farm Output, Net Income and the Adoption of New Methods: A Nepalese Case Study.

**\*Sharma, Bharat Raj**

-- Ph.D.

-- The University of Oklahoma, 1984. 235 pp.

Title: Center for Economic Development and Administration: A Case Study of Institution Building and Development in Nepal.

Order No. DA8418592

Supervisor: Recharad Baker

The purpose of this dissertation is to examine the roles of the Center For Economic Development and Administration (CEDA) in institution building and development in Nepal. The study was performed by a questionnaire containing a variety of items relating CEDA's present and future roles, its place and position, its programs and objectives, its relationship with government agencies, university, public corporations and private enterprises, was administered to a sample of one hundred in Kathmandu, Nepal. In addition, since formal interviews were difficult to coordinate in Nepal's political environment informal meetings were also organized.

Much of the data for this study has also been collected from various agencies and institutions. The best practical research design for this study was found to be the institution building model developed by Milton Esman. It provides the necessary framework for the orderly collection, classification and analysis of the data for the case study, namely: (a) institution; (b) linkages; (c) transaction.

It can be concluded that between 1969 and 1975, CEDA has become established in the sense that it was a growing concern with a program, a staff, a set of clients, an acceptable identity and a stable supply

of resources sufficient to enable it to continue. The findings of this study show that institutional leadership is one of the major and crucial factors in institution building and development. It also suggests that the institution builder of Nepal must be concerned with discovering what institutions are already there before making assumptions as to what new or additional institutions may be needed. Thus, it is often much easier to add a new program to an old institution, which is already established, than it is to create a new institution merely to have a new program.

\*Sharma, Ramesh P.

-- M. Ec.

-- University of New England [ Australia ], 1980.

Title:                    Uncertainty and Subjective Degrees of Belief in the Adoption of Modern Farming Techniques: A Case Study of Nepalese Farmers.

\*Singh, Indira

-- Ed. D.

-- Columbia University Teacher's College, 1984. 204 pp.

Title:                    The Effects of the Headmaster's Leadership on Teacher Job Satisfaction and Morale as Perceived by the Teachers in Nepal.

Order No. DA8411289

Supervisor:            Ann Lieberman

The purpose of this study was to determine the relationship of the teachers' perception of the headmaster's leadership as measured by the Headmaster Leadership Behavior Questionnaire (HLBQ) with teacher job satisfaction and morale as measured by the Teacher Job Satisfaction and Morale (TJSM) Instrument.

The questionnaires were administered in Fall, 1982, to 189 teachers from 15 randomly selected secondary and vocational secondary schools located in Kathmandu valley and Terai region in Nepal.

The findings supported all three hypotheses. A significant positive relationship was found between the teachers' perception of the (1) headmaster's task and teacher satisfaction, (2) headmaster's task and teacher morale, (3) headmaster's expressiveness and teacher satisfaction, (4) headmaster's expressiveness and teacher morale. A negative relationship was found between the teachers' perception of the (1) headmaster's authority and teacher satisfaction and (2) headmaster's authority and teacher morale.

It was concluded from the findings that the headmaster's leadership is an important factor in producing high job satisfaction of a teacher and in developing high morale among teachers.

The analysis of the behavioral contents of all three dimensions of the leadership and the teacher job satisfaction and morale led to the conclusion that the headmasters with the mode of high to medium task, high to medium expressiveness, and low to medium authority had the best effects on teacher job satisfaction and morale.

The major recommendations of the study were that: (1) the education planners, who are concerned with the instructional improvement, take into account all those intrinsic and extrinsic factors which will contribute to teacher satisfaction and morale, (2) the headmaster be cognizant of the teachers' perception of his leadership and its effects on them so that he can integrate the teachers' demands and the institutional needs in a way that is at once organizationally productive and individually fulfilling, and (3) other studies be conducted to identify the situational and personal variables that would moderate the effects of headmaster's leadership on teachers.

\*Wang, Huei-Yuin Wen

-- Ph.D.

-- Saint Louis University, 1983. 257 pp.

Title: A Seismological Investigation of Tibetan Plateau -- Attenuation, Velocity Structure, and Seismic Source Process.

Order No. DA8325442

Tibet has long been an interesting and important area related to continental collision. The tectonic deformation in the area is profound and complex. In this study, a velocity structure, a  $Q$  model, and the seismic source parameters of some Tibetan earthquakes have been determined in order to better our understanding about the tectonic processes of this area.

Fundamental-mode Rayleigh Waves generated by twenty-two earthquakes that occurred in the Tibetan Plateau and/or along the Tibetan border were used to obtain a velocity model across Tibet. By a trial-and-error inversion approach and by use of partial derivatives of Rayleigh-wave group velocities, a model with crustal thickness of 70 km, a low-velocity zone at a depth of 20 to 30 km, and a low upper mantle velocity was derived. This model fits our observed data very well and is in general agreement with the TP-4 model developed by Chun and Yoshii (1977).

By employing the equation of Anderson et al. (1965) along with Yacoub and Mitchell's (1977) values of attenuation coefficients, a low- $Q_R$  model for periods between 10 and 50 seconds was generated. Our values are quite low when compared with those of Singh and Gupta (1979) but are close to the values obtained by Feng and He (1980).

The inversion of Rayleigh-wave attenuation data yielded an internal friction  $Q_p^{-1}$  model as a function of depth. A low- $Q_\beta$  model was derived and compared with the values for the United States (Herrmann and Mitchell, 1975).

The velocity model and  $Q$  model for Tibet derived in the study support the conclusion that high temperature and partial melting occur in the area (Anderson et al, 1972; Bird, 1976; Chun and Yoshii, 1977; Chang, 1979).

The source parameters of five Tibetan earthquakes have been studied by comparing the synthetic and the observed far-field P waveforms for the first forty seconds of motion. The source parameters such as focal depth, fault-plane solution, and source-time function for the events have been obtained through both ray theory and a matrix method coupled with a generalized inversion procedure.

The first two events, which are located in northern Tibet, consist of the mainshock and the largest aftershock of an earthquake sequence.... (Author's abstract exceeds stipulated UMI maximum length).