

of *Hinduism*, 'true Kshatrias', and 'true Brahmans', as well as the many adjectives which indicate a personal judgement, show a certain lack of distance from the subject of study.

The volume offers rich material for our understanding of the Himalayan region, not only in terms of its traditional structures but also of the transformations taking place nowadays. Some of the contributions are excellent and present a more general interest as anthropological studies of kinship and religion.

*Sharing Water: Irrigation and water management in the Hindu Kush-Karakorum-Himalaya* edited by Hermann Kreutzmann. Oxford and Karachi: Oxford University Press, 2000. 277 pp. ISBN 0 19 579159 2

Reviewed by Linden Vincent

This is the first internationally published book to present case studies of aspects of irrigation and irrigated agriculture across the Himalayan mountain range. Its core aim is to show different aspects of water management in a complex and challenging environment—and thus the value of trans-disciplinarity—rather than make comparative analysis of water management technologies, institutions, or processes of change across the region. Another short book also published in 2000 on water management in this region, provides such a synthesis (Banskota and Chalise 2000). The book also aims to promote reflection on science and development, and to better link studies of traditional water management with teaching in the social and agricultural sciences, and with development projects.

The book succeeds in making some important contributions to these aims, and shows the complexity and subtlety of adaptations that are rarely reflected in mainstream irrigation science. The book provides papers on most countries across this mountain range except Afghanistan, China, Myanmar and Bangladesh with: one paper on Central Asia; five papers covering areas of northern Pakistan; three papers covering areas of Northern India (Himachal Pradesh and Ladakh); three papers on Nepal (Dolpo, Mustang, and central Nepal) and one paper on water law in Bhutan. In this respect, the detail and breadth of the study is greatest with respect to northern Pakistan, and decreases eastwards. Of the thirteen case studies, three are by national authors from the region, with no local contributors from Nepal and Bhutan. Except for water harvesting in Ladakh, the case studies all focus on river diversion surface irrigation systems and their environments. These are the main source technologies of the region, but not the only ones (Banskota and Chalise 2000; Pande 1995; Vincent 1995; Yoder 1994).

Of the papers, three have a historical focus in archaeology (Fourniau on irrigation in Central Asia ), or law (Vohra for Ladakh, and Jest for Bhutan). Seven papers present more disciplinary studies of physical and social geography and the local ethnography of water management. There are observations on land use and land stability in Dolpo and Mustang in Nepal by Fort, Jest and Polge de Combret, while Aubriot and Sabatier also document the use of a water clock in Nepal for irrigation scheduling (and astrology). Schmid gives a political case study from northern Pakistan of minority claims to water rights, and the papers by Israr-ud-Din, Stober and Kreutzmann deal with social organization and irrigation practices across Hunza, Gilgit and Chitral in northern Pakistan. Two papers discuss approaches to development assistance: the Aga Khan Foundation in northern Pakistan (Wali Khan and Ali Hunzai) and the USAID-assisted Hill Areas Programme of Himachal Pradesh (Manzardo).

The strengths of the book lie in its well-presented text with relevant photographs and a wealth of local detail: this is valuable locally, and also for broader regional studies. The papers show the different dimensions that come into water management, as well as the long history and strong importance of irrigation in the region. The book highlights the carefully crafted nature of these local water management systems, and rightly urges participatory development processes that might avoid their destruction through insensitive intervention.

The framework for the book has water management evolving through three dimensions and their inter-relationships. These are: **natural factors** and their relation to an environmental framework and processes of technological adaptation; **social factors** and their impact on culture, economy and equity; and **institutional factors** and their importance for sustainable growth and implementation of development projects. The key inter-relationships examined are agricultural activities; resource use and resource endangerment; and fields of conflict (seen as scarcity and competition for water, resource costs, and changing flow regimes through dams or other causes).

This is, as the editor describes it, a 'systemic framework', although this and the other theoretical backgrounds of the case studies are not clearly explained. These I shall review here, because they are important in the debate about future water research in this region. This is not a narrow systems modelling framework approach, but is instead a 'complex systems' approach, in which elements and levels are mediated by complex social and ecological relationships. Such a framework accommodates many other theories and concepts, which can be used to explore local conditions. The threefold division of factors described by the editor, and used in his regional

Karakoram chapter, has parallels with a long-standing threefold 'man-mind-land' analytical framework in natural resource management studies. The remaining case studies draw on other theoretical traditions which sit well within this approach, and indeed are found more broadly now in studies of 'rural resource systems', a concept evolving from older 'farming systems' research.

The first set of papers draws on a range of geographical, geomorphological, anthropological, and farming system ideas which enable one to interpret an environment, its landscape, and its resources, and the transformative and organizational effects of a technology such as irrigation. The concepts used include river regimes, hazards, specificities, and the 'structures of historical space' to explore the adaptive capacities of groups and societies to expand where they can evolve technology, but to remain contained and vulnerable where they cannot. The papers written from these perspectives include those by Fourniau, Israr-ud-Din, Stober and Fort.

Another group of papers originates in French conceptual traditions on interactions between water and agriculture, and a comparison of typologies of water environments with agricultural environments. This tradition is not easily translated, but it includes distinctions between hydraulic agriculture dependent on hydraulic control structures, i.e. large-scale irrigation, and 'hydroagriculture' which is agriculture that uses water supplied in different 'natural' ways. It also distinguishes between 'dryland' areas where water is limited (through seasonal rainfall or aridity), and wetlands. This school emphasizes the structure of social organization in agriculture and water supply, especially indigenous local technologies and the institutions which help them to mesh together. It also looks at the field as a social space, with much attention to techniques of water land and crop management. The papers by Labbal on Ladakh, Aubriot and Sabatier on Nepal, and Jest and Polge de Combret on Dolpo, Nepal, demonstrate these approaches.

A third group of papers, including those by Wali Khan and Ali Hunzai and Manzardo, adopt an interventionist approach and discuss how to work (better) at the local level, by filling gaps in the approaches of irrigation agencies, and really supporting local needs. Their theoretical underpinnings come from farming systems, and they develop anthropological traditions that have criticized insensitive technical intervention and driven debates about participation among development-oriented researchers. The fourth and final group of papers relates to law and politics. These stand out because, while they can fit under the complex systems framework, they face dilemmas about how to address socially constituted actions that go beyond adaptation to the environment or a technical innovation in irrigation.

Vohra's study of Ladakh and Jest's paper on Bhutan both choose to document the local laws and customs that are likely to be affected by interventions and population and economic change. However, they do not raise any questions of ethnic politics and local governance that have also affected irrigation operations over the last decade. Only Schmid's paper on caste politics in water access stands out as really celebrating the politics which surrounds irrigation: how people use intervention projects and are not just victims of them. This a paper that should be widely read by development practitioners.

The disappointment of this book lies in the development linkages presented, and those left unexplored, especially for those working in irrigation and development in this region. This stems not so much from any criticism of its findings, but from what is left unsaid about farmer-managed irrigation and water supply systems in the region. Irrigation researchers will be frustrated by a lack of reference to other local work, and the small number of local authors involved. The case studies are largely from research conducted in the late 1980s, although some are more recent. They thus relate to the development concerns of the time which were about endogenous adaptations and appropriate intervention for greater food and environmental security without increased conflict. Other more contemporary local development struggles—for greater empowerment and livelihood viability, system sustainability, equity in water rights, greater gender equality—are invisible. The actions of the state and workers in state agencies, and the politics of everyday water management, are barely discussed. Past history often gets more attention than recent transformations in government, or the difficult politics of democratization, insurgency and ethnic identity. This leaves a feeling of idealization of the past and local adaptations, without a framework for dealing with contemporary struggles. But a recognition of new dynamics is as essential to future development in water management as an appreciation of history and ecological adaptation.

This tension comes from the framework, which views irrigation as an adaptation for agriculture, from particular disciplinary or systemic perspectives, and less as a technology operating in a very complex environment. While some structures and field layouts are described, technical design principles and social action around water management infrastructures are rarely discussed. There are other conceptual approaches that allow one to look outwards from an irrigation system with recognizable adaptations to a montane context, and examine how the dynamics of operating the system bring all kinds of agrarian, political and technical issues into play. Contemporary concepts used in water management and development, such as hydraulic property rights, socio-technical analysis, legal pluralism and collective action, are not mentioned in this book, although they have contributed greatly to

local understanding of irrigation management in the region (Chand 1994; Dani and Siddiqui 1989; Lam 1998; Pant 2000; Parajuli 1999; Poudel 2000; Pradhan *et al* 2000; van Steenberg 1997).

This is a valuable book for the historical and ethnographic detail it contains, which inspires both interest in the region and respect for its communities. However, the book is valuable also for questioning how academic researchers can work more inclusively with local development-oriented researchers and social dynamics. Future publications can build critically on this study, to think further how to reconcile different approaches to research for development. The issue for teaching and research is not only about trans-disciplinary awareness, but also about which issues are studied. We still need more documentation of water management in mountain areas—as a dynamic operational process within a complex ecology subject to many social forces—as well as artifacts and institutions adapted to mountain ecology and culture.

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*dBa'bzhed. The Royal Narrative Concerning the Bringing of the Buddha's Doctrine to Tibet: Translation and facsimile edition of the Tibetan text* by Pasang Wangdu and Hildegard Diemberger. Wien: Verlag der Österreichischen Akademie der Wissenschaften, 2000. (Österreichische Akademie der Wissenschaften, Philosophisch-historische Klasse, Denkschriften, Band 291) 121pp., 32pl.

Reviewed by Rudolf Kaschewsky

The cooperation between the Tibetan Academy of Social Sciences and the Austrian Academy of Sciences has produced a new publication of the highest value: the undisputed earliest version of one of the most authentic chronicles of Tibetan history (in Dan Martin's chronologically arranged *Tibetan Histories* the 'Sba-bzhed' is the No.1). This work presents details on the introduction of Buddhism into Tibet, the erection of the famous temple of bSam-yas, and the "historically still shadowy Chos-Bon contest" (as P.K. Sørensen in his preface, p. x, rightly calls it), and, finally, the debate between the Indian and Chinese interpretations of Buddhism (AD 792-794).

In fact, we have known of the existence of a chronicle bearing this (or a similar) title since A.I. Vostrikov's *Tibetskaja istoriceskaja literatura* (1937 and 1958; this