

Tibetan Medicine in the Contemporary World

Global Politics of Medical
Knowledge and Practice

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7 Tibetan medicine and biodiversity management in Dolpo, Nepal: negotiating local and global worldviews, knowledge and practices

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The increasing importance being given to cultural knowledge in the context of global environmental management, and the commoditization of biodiversity and of certain forms of traditional environmental knowledge, raise important questions for ethnobiologists and ethnobotanists who mediate between local and international communities (Alexiades 2004). Within this context, we examine the flows of knowledge and information, as well as the redefinition of worldviews and practices in light of increased interactions between the local and international levels, using as a case study the WWF–UNESCO People and Plants project in Dolpo District, Nepal. This project aimed to develop applied ethnobotany, to explore local ‘traditional/indigenous knowledge’ of plant resources, and to work with local users to develop sustainable management systems.

Dolpo is one of the remotest districts of Nepal, located in the north-western area of the country and contiguous to the north with the Tibetan Plateau. We reflect upon how Tibetan medicine practitioners in Dolpo, known as *amchi*,¹ have entered the realm of international conservation, and the implications this has had for them, both individually and collectively. Lama’s (2003) earlier discussion of the relationship between the *amchi* and the conservationists² places the two on a continuum between the local and the global. The current paper furthers this discussion by examining the ways in which Dolpo *amchi* have, at a particular point in global conservation history, entered into certain forms of partnership with conservationists and how the process of forming these partnerships has created new social dynamics. We frame our discussion around the concept of ‘local/traditional knowledge’ and explore how this concept, appropriated by the WWF–UNESCO People and Plants project, was reconstructed locally.

Much attention has been given to indigenous knowledge and practices in the discourse of conservation management over the last two decades. The central aim has been to find ways of bridging the gaps between scientific and local/traditional knowledge and practices (Ellen *et al.* 2000). Scientific knowledge is widely assumed to be disconnected from social and political spheres and to be essentially global,

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while indigenous knowledge is seen to be restricted to specific localities and socially constructed. Biodiversity conservation approaches are thus assumed to be scientific, while the approach and practices of the *amchi* are associated with local indigenous knowledge. However, it is becoming increasingly accepted that all knowledge, including scientific knowledge, is socially produced (Latour 1997) and that different knowledge systems represent 'a plethora of partial perspectives and situated practices among diverse social actors' (Leach and Fairhead 2002: 299).

We focus here on the forms of engagement between holders of different knowledge systems as they work towards a partially shared goal: the conservation and management of medicinal plants. Medicinal plant scarcity is indeed an issue faced by *amchi* throughout the Himalayas, owing to an increasing national and international demand for 'natural' medicines (Lama *et al.* 2001; Pordié 2002). Issues surrounding access to knowledge, and the contested rights to act upon it, emerge through this encounter between local dynamics and global agendas. Following earlier discussions by Lama (2003), we reflect on how the 'flexible selves' of different actors in development and conservation projects enable learning processes that bring together different types of knowledge and worldviews, thus reshaping social and political positions. We also discuss how traditional knowledge can transcend local and national frontiers to interact directly with international efforts for biodiversity conservation.

In examining relationships between *amchi*, conservationists and other social groups, we focus on the *amchi*'s knowledge of plants and their ecology, their symbolic understanding of plants and space, and the ways in which their knowledge interacts with that of the other actors through collaborative efforts. We examine how the work undertaken in Dolpo influenced the perception of medicinal plants and the transmission of knowledge from the *amchi* to other members of their community. We explore how the *amchi* saw in the project opportunities not only for improving local health and management of medicinal plants, but also for advancing their socio-political status, and the extent to which the conservationists accommodated their various agendas. The project made some aspects of the *amchi*'s knowledge known to the larger scientific community, resource managers and policy makers, both nationally and internationally and, in doing so, increased the visibility of the *amchi* as a group. We examine the means through which the project promoted a specific aspect of the *amchi*'s knowledge, the reasons for doing so and the implications of this.

From local indigenous knowledge to global heritage

The concept of 'local/traditional knowledge' is a social construct as well as an environmental tool. It is today strongly influenced by global environmental management discourse and norms, through the important position it has been afforded in the international arena (Cormier-Salem and Roussel 2002; Michon 2002). The very use of concepts such as 'local' enters in consonance with the importance attributed to indigenous knowledge by global environment decision makers (Agrawal 2002).

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Studies of indigenous knowledge were originally rooted in social anthropology and ethnoscience, developed in the 1950s by the New Ethnologists such as Conklin (1957) and French ethnobiologists and anthropologists such as Haudricourt (1962) and Lévi-Strauss (1962). The ethnoscience work, using anthropology combined with naturalist approaches, contributed to systematizing the study of the relationships between local societies and their natural environments, as well as their underlying knowledge systems and socio-cultural dynamics. Linguistic methods were highly valued, in particular the analysis of the semantic categories used in classification processes. Beyond the simple cataloguing of the use of natural products such as medicinal plants – a current approach in colonial ethnobotanical works (Davis 1994) – the main aim was to put more emphasis on how knowledge and praxis, or technical knowledge, are linked to cosmology, religious beliefs, internal social cohesion, and relationships of power and authority within a given society. This approach helped in understanding more clearly how societies perceive, adapt and justify their actions in relation to the natural environment.

There is widespread theoretical consensus among scholars from many fields that finds the nature–culture dichotomy to be inadequate, thus rendering the purely biological dimension of nature, a concept that underpins the majority of classical biological research, non-operational. Contrary to the dichotomized view, many societies perceive the environment to be an integrated natural and cultural object, or a social construct (Descola 2002: 83). Furthermore, variations in nature conceptions are highly marked between different localized societies, and it has been argued that such variations ‘might arise from particular practices of environmental interaction’ sustained by particular social ideologies (Ellen 2002: 101). Such theoretical debates, supported by a large array of studies by anthropologists and ethnobiologists, show the intricate linkages between knowledge systems and practical management approaches and have, both directly and indirectly, raised the importance given internationally by academics and managers to ‘local/traditional knowledge’.

In the early 1970s and especially during the 1972 Stockholm summit, the United Nations Environment Programme (UNEP) began drawing the world’s attention to the ‘global environmental crisis’. Amongst the rhetoric surrounding the fate of the planet, local agricultural practices such as shifting cultivation, utilized by small farmers from third world countries, were portrayed as major contributors to deforestation and environmental degradation. Their knowledge and practices had faced decades, if not centuries, of dismissal as being ‘indigenous’, ‘traditional’ and damaging and had, ever since the development of the modern sciences, been labelled as ‘backward’. The rhetoric generated by the world environmental crisis debate led many anthropologists and ethnobiologists to develop case studies and attempt to demonstrate the validity and internal coherence of indigenous peoples’ resource management systems. Many found evidence of sound environmental bases to such systems (e.g. Posey and Balee 1989). An interdisciplinary approach was adopted, linking ecologists, anthropologists, economists and agronomists in attempts to better understand the overall relationships between different elements of anthroposystems or agro-ecosystems (e.g. Jollivet 1992).

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During the early 1980s, a network of committed scholars began raising awareness of the importance of indigenous knowledge for environmental management. Strict conservation approaches, especially those that advocated the exclusion of local people from protected area management, were increasingly called into question (Colchester 1999; Descola 1999). Ethical questions were raised, as the exclusionary approach tended to have adverse affects on the livelihoods of the people who originally relied on the protected areas. These approaches were further criticized as exclusion was often found to have negative effects on the conservation efforts themselves. Thereafter, the idea of 'development' was included in many conservation approaches and the concept of 'integrated conservation and development projects' began to emerge. The roles of indigenous communities living in biodiversity-rich areas in shaping and preserving the overall landscape (Fairhead and Leach 1996; Balée 2000), or in shaping agro-diversity (Brush and Meng 1998), were highlighted. Thus the loss of cultural diversity became a major element of international concern, alongside more established fears about the loss of biological diversity. Organizations such as UNESCO developed an interest in the conservation of traditional knowledge, as illustrated by the mass of literature published on food habits (Hladik *et al.* 1993), land use dynamics and sacred sites (Ramakrishnan *et al.* 1998). This work portrays the intimate linkages between biological and social systems and emphasizes the utility of such knowledge and management systems for biodiversity conservation.

The first International Congress of Ethnobiology, held in Belem in 1988, and the International Society of Ethnobiology, founded at this occasion, developed a code of ethics, namely the Belem Declaration. This certainly contributed to raising local traditional knowledge to the rank of global heritage. It also paved the way for a diversity of claims by indigenous movements in relation to local/traditional knowledge. The Declaration states:

We members of the International Society of Ethnobiology strongly urge action as follows. Henceforth:

- 1 A substantial proportion of development aid be devoted to efforts aimed at ethnobiological inventory, conservation and management programs;
- 2 Mechanisms be established by which indigenous specialists are recognised as proper authorities and are consulted in all programs affecting them, their resources and their environments;
- ...
- 4 Procedures be developed to compensate native peoples for the utilisation of their knowledge and their biological resources;
- 5 Educational programs be implemented to alert the global community to the value of ethnobiological knowledge for human beings.

(Extracts from the Belem Declaration)

The importance of the link between 'local/traditional knowledge' and 'nature conservation' emerged and was supported by many scholars (e.g. Warren *et al.*

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1995), although a range of theoretical and practical problems remained concerning how these two epistemologically very different concepts could be effectively integrated. This led to a more generalized concept of 'traditional ecological knowledge' (TEK), which has been strongly instrumentalized for the purposes of natural resource management (Berkes *et al.* 2000; Berkes and Folke 2002).

In development circles there has also been a general shift in emphasis, at least rhetorically, from 'top-down' interventions to more participatory, or 'grassroots', approaches. Modernizing and scientific/technical approaches, based on the transfer of technology, have given way to a more populist discourse (Sillitoe *et al.* 2002), with a strong participatory focus that promotes local knowledge in problem identification. Olivier de Sardan defines populism in the development context as a:

form of relationship between the intellectuals – associated to privileged classes and groups – and the people – that is, the dominated classes and groups – in which the intellectuals discover the people, have a feeling of pity towards them and/or marvel at their capacities, and intend to serve them and contribute to their well-being.

(Olivier de Sardan 1995: 19)

This author further argues that such populism is consubstantial to development, as participatory approaches are based on a complex and fundamentally uneven set of relationships between those who make the rules, deciding who should participate and setting the agenda, and those who actually participate.

Nevertheless, the promotion of participatory approaches did lead to a major shift in environmental management, especially in the development of co-management systems. Such approaches gained momentum worldwide, but were particularly well accepted in India and Nepal (Hobley 1996; Aumeeruddy *et al.* 1999). The interaction between social and ecological dynamics and the role of interdisciplinary research were highlighted by proponents of the 'new ecology', who drew attention to the role of anthropogenic disturbances on the one hand and ecological stochasticity and resilience on the other as important factors in shaping the dynamics of ecosystems (Gunderson and Holling 2002). The ecosystem concept, previously seen as a linear system that tends towards a climax and a balanced state and where disturbances, especially human disturbances, have negative impacts for the ecosystem, is now highly controversial (O'Neill 2001).

The environmental crisis also led to new concepts, such as that of biodiversity, which was born in the 1980s (Wilson and Peter 1988) and whose limits are essentially blurred, being neither strictly biological nor social (Aubertin *et al.* 1998; Aubertin 2000). The concept of biodiversity is hybrid in nature, being simultaneously an economic object (strong emphasis given to genetic resources and benefit sharing in the Convention for Biological Diversity), a social object (it is closely associated to knowledge and practices) and a political object (the role local indigenous groups and nations may play in decisions regarding their biological resources). The Earth Summit held in Rio de Janeiro in 1992 produced both the Rio Declaration and the Convention for Biological Conservation, which strengthened the role of local

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indigenous knowledge in environmental management, especially in relation to biodiversity.

This overview of the evolution of the status of 'local/traditional knowledge' depicts the context in which UNESCO, within its Man and Biosphere programme, WWF and the Royal Botanical Garden at Kew established a new interdisciplinary programme, the People and Plants Initiative. The main aim of the People and Plants Initiative was to develop applied ethnobotany for conservation, and sustainable and equitable use, of plant resources. Local knowledge held a central position from the outset, as did the need to build bridges between traditional and scientific knowledge to achieve conservation with a strong people-centred approach (Martin 1995; Cunningham 2001; Aumeeruddy-Thomas and Pei 2003).

People and plants in Dolpo: preliminary interactions

Dolpo is an area culturally defined by its inhabitants' strong linkages to their land, the history of their migration from the ancient kingdom of Zhangzung in Western Tibet in the seventh or eighth century (Jest 1975; Snellgrove 1992) and a way of life based upon highland agro-pastoralism. Their seasonal migrations to Tibet, prior to the closure of the Tibetan border by China in 1959, and their ongoing visits to lowland valleys for trade and barter, have created a variety of social, economic and political linkages with different localities (Bauer 2004). Bauer's analysis of the socio-economic and political relationships between Dolpo and the plains areas of Nepal to the south and the Tibetan Changthang plateau to the north show that Dolpo is not as secluded as it has been sometimes portrayed (*ibid.*). A 'middle road' exists for Dolpo people, enabling them to relate to the 'outer' world despite their social marginalization in Nepal (Ramble 1997). Although an airstrip, between one and five days' walk from most villages, now links it to the outside world, the area remains one of the remotest in Nepal.

Dolpo is divided into two areas, known as Upper and Lower Dolpo. Access to the upper part was restricted to foreigners for security reasons until the late 1990s, when group trekking was introduced with the payment of hefty fees (Bauer 2004). Most of the formal administrative unit of Dolpa District was incorporated in Shey Phoksundo National Park in 1984. Beyond this administrative reality, local cultural and social representations also distinguish clearly between Upper and Lower Dolpo. The upper part is inhabited by Tibetan-speaking people, whereas the lower part comprises a mix of people of Tibetan origin, and a range of Tibeto-Burman ethnic groups, including Gurung and Magar, as well as groups who have migrated more recently from the Indo-Gangetic plains of southern Nepal. The two areas are thus culturally and ecologically distinct (Kind 2002; Aumeeruddy-Thomas *et al.* 2004). In the very harsh environment of Dolpo, social cohesion, as well as natural resources, plays a major role in local livelihoods. The natural resources, while being crucial locally, are also valued internationally both as commodities for the regional and international phyto-medical markets and for biodiversity, as Dolpo was identified as a place of global importance for biodiversity conservation (Wikramanayake *et al.* 2001).

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Two surveys commissioned by WWF Nepal in Dolpo, one on the situation of *amchi* practice and the other on vegetation and the status of medicinal plants, had shown that there were significant links between the practice of the *amchi* and the conservation of medicinal plants (Gurung *et al.* 1996; Shrestha *et al.* 1998). Increased harvesting for trade by non-*amchi* commercial collectors was largely responsible for the depletion of certain species (Lama *et al.* 2001; Ghimire *et al.* 2004). The *amchi* also saw their medical practice declining, mainly because of economic difficulties.³ They emphasized their lack of formal recognition by the government, which denied them the right to practise in local health posts despite the fact that these were largely empty owing to the lack of qualified staff willing to stay in such remote areas (Shrestha *et al.* 1998). As Dolpo was one of the most important areas for high-altitude medicinal plants in Nepal, WWF Nepal and the WWF–UNESCO People and Plants Initiative project team headed there in 1997.

The project team, comprising botanists and ecologists from Tribhuvan University in Kathmandu, an ethno-ecologist, an anthropologist and two expert *amchi*⁴ from Mustang, reached Lake Phoksundo in Dolpo in June 1997. WWF Nepal's Northern Mountain Conservation Project (NMCP), a USAID-funded programme, was then operating in Dolpo as a partner of the Department of National Parks and Wildlife Conservation with the aim of strengthening community-based approaches in the park. A large gathering of people had been called for an initial field planning meeting of the People and Plants project. Many of the most prominent Dolpo *amchi* were present, as were the local and international NGOs operating in the area, and groups of women and young people from the adjoining villages who had recently been mobilized into Sister Groups and Eco Clubs.⁵

It is a common feature of 'new conservation' approaches to organize people into 'workable' groups, although this generally marks the members as somehow different from the rest of the community and may generate tensions. Such groups are given the opportunity to express their views in decisions and planning phases and in this case most were registered under the buffer zone user committee group. This committee was created specifically to represent the different interest groups living in the national park and surrounding zones.

It is in this culturally assorted context that Dolpo *amchi* were encouraged to express their views on the issues of scarcity and access to medicinal plants, individually as well as in an informally constituted group. The scientists put forward the essential paradigm of conservation, mainly through pointing out that some plants may become rare because of over-harvesting. Issues pertaining to the access to, and control over, plants by different social groups, and to the amounts of plants harvested, were introduced as vital factors underlying the concept of conservation.

It is notable that the Dolpo *amchi* remained relatively quiet following introductory speeches by the Park warden, a representative of the WWF Nepal project in Dolpo, and representatives of international organizations. It was only following the speech of the young botanist Suresh Ghimire from Tribhuvan University in Kathmandu that the *amchi* reacted. The botanist voiced his concern about threats to medicinal plants species in the area, building his argument on his extensive knowledge of the botany and ecology of these species. The *amchi* then highlighted

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their own concerns about depletion and access, as the plants are essential elements of their practice. This shows that their initial encounter with scientific botanical knowledge highlighted certain areas of convergence concerning the concept of conservation and, at least to some extent, the reasons for plant depletion.

The *amchi*'s knowledge of medicinal species appealed to the project team, as it appeared to offer sound potential for setting up sustainable approaches to harvesting medicinal plants. Developing applied research that builds upon local ethnobotanical and ethno-ecological knowledge was indeed a key approach promoted by the People and Plants initiative. As a result of this new dynamic, which brought the *amchi* into interaction with the conservationists,⁶ the *amchi* emphasized their knowledge and use of medicinal plants in meeting the health care needs of the local population.

However, their ability to practise medicine has been largely diminished by their material conditions, leaving them with little resources or time to devote to the study and practice of medicine. The *amchi* pointed to the recent degradation of their medical tradition, which was partly attributed to their invisibility and irrelevance to the policy makers in Kathmandu. Two major ideas germinated at this initial meeting: firstly, the forming of an association of Dolpo *amchi*; and, secondly, the building of a traditional health care centre. The association, which was actually formed two years later, represented an institutionalizing process by which the Dolpo *amchi* hoped to be able to strengthen their roles as health care providers and advocate their demands for support at the national level. These ideas may have been influenced by the *amchi* experts, who were themselves engaged in such actions elsewhere. While the sustainable use of medicinal and aromatic plants (MAPs) and the will to achieve national legitimacy and recognition for their medical system were key interests of the *amchi*, the conservationists were mainly interested in the former. The promotion of sustainable use of medicinal plants and of their management in and around Shey Phoksundo National Park was the conservationists' motto.⁷

At the occasion of this meeting another local group, the women, voiced their concerns, mainly in terms of access to knowledge related to the use of medicinal plants for primary health care. They pointed to their essential role in child care, as well as to their personal concerns surrounding what they termed as 'women's diseases', which were frequent in Dolpo and required more attention than they were being given by the male *amchi*. This advocacy role played by the Sister Groups, organized by the WWF Nepal project, show how a recently set-up project, through organizing people into formal and identifiable groups, has led the women to position themselves more formally in the health care sphere.⁸

Another group that attended this meeting comprised people from the southern buffer zone villages, largely representing the interests of the commercial collectors. They also expressed their interest in collaborating in the project, as they saw opportunities for obtaining support for the domestication of highly valuable medicinal plants, as well as the development of value addition processes. Although commercial collection represents a major threat to medicinal plants in Dolpo, the project chose to work in priority with the *amchi*. Several reasons led the team to make this apparently paradoxical choice: 1) people inhabiting the park were seen

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as immediate stakeholders and more directly affected by the establishment of the park; and 2) the immediate importance of medicinal plants conservation for the health care of the communities living inside the park and in its eastern buffer zone (Dho Tarap) seemed of higher priority. These proximate issues also appeared easier to address than those pertaining to commercial trade in the southern buffer zone, because of the complex role of market factors of which the team had little experience. The people inhabiting the park were seen as the logical 'stewards' of the natural resources, despite their lack of formal roles or decision-making power relating to resource management. The project team hoped that these groups would be able to recover their customary rights and to jointly manage their resources with the park managers – uniting against external poachers – to protect resources which were, at the same time, essential for their medical practice.

This approach aimed to favour cultural resources, include local people's knowledge and practices, and promote formal and informal institutions as means of guiding management practices in the protected area. This has been tried elsewhere, such as in the Kayan Mentarang conservation project in Kalimantan (Indonesia), and has been critically analysed by Eghenter and Sellato (2003). This project, entitled the Culture and Conservation Project, recommended a change of status from strict nature reserve to national park and proved that the communities' actual presence and strong cultural identity could contribute to minimizing the risk of encroachment by outside parties. This project also helped in the official recognition of traditional systems and regulation methods, as well as the role of local institutions in the management of the national park. One major and long-lasting effect of the project was the capacity building of the indigenous researchers, which helped local people to reflect on their own practices in relation to conservation. It also showed that traditional management could lead to over-exploitation in situations of competitiveness related to exogenous factors. The Dolpo People and Plants project, to a large extent, pursued very similar goals to the Kayan Mentarang project. Although some attempts had been made previously to integrate the cultural dimensions of conservation management pioneered in the Makalu Barun conservation area project (Ramble and Chapagain 1990), prior to the People and Plants project no such systematic approach, building upon local knowledge and practices, had been developed in the Himalayas.

In Shey Phoksundo National Park, existing policies do not allow resources to be used for commercial collection. The *amchi*, although not directly involved in commercial harvesting, expressed their wish that certain widely distributed and very common species of medicinal plants should be allowed for collection in the park, and not only for local medicinal purposes. The *amchi* felt that limited selling or bartering of such plants should also be allowed, to enable them to purchase the precious lowland medicinal plants that are crucial for their medical practice. This point was emphasized by an external technical analysis of the project (Leaman *et al.* 1999).

During the initial planning meeting, the *amchi* also called for more protection by the park authorities of the resources lying within the park. They highlighted the fact that, since the establishment of the national park, the *amchi* and their

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communities had lost any form of traditional control of their territory and thus the ability to protect the resources therein. Indeed, the establishment of the national park de facto subsumed all their customary rights, since the national park authorities are responsible for maintaining law and order within the park, according to the Forestry Act of 1993. Only the villages and agricultural lands lying within the park boundaries had been declared as buffer zones, while the high meadows that had been used for many centuries by the people, and on which a major part of their economy relies, had come under the jurisdiction of the park. People had been granted informal use rights for livelihood purposes, but no formal access rights to these areas had been offered. This is a vivid example of how state power dominates local authority systems, with little consideration of local social dynamics – a situation frequently encountered throughout the Himalayas (Saberwal 1996).

Therefore, people living inside the park relied entirely on the regulatory management system of the park to protect their cultural and natural resources against the commercial collectors, whom they considered to be ignorant and whose harvesting practices were perceived as having a depleting effect on the resources. Although cases elsewhere in the Himalayas, especially in Ladakh (Pordié 2002), show that *amchi* are engaged in different practices of collection linked to larger trade circuits, Dolpo *amchi* collect essentially for local health care use. Different studies undertaken by this project have demonstrated that their ethno-ecological knowledge has, to date, promoted harvesting practices that were sustainable (Ghimire *et al.* 2004, 2005).

A high priority was thus given for work with the *amchi*, who were perceived as having the highest level of ethnobotanical and ethno-ecological knowledge and assumed to be an important attribute for conservation. It was also assumed that the commercial collectors had a lower level of ethno-ecological knowledge. An analysis conducted later on, however, on variations in levels of knowledge between different medicinal plants users, showed that commercial collectors had relatively high and specific ethno-ecological knowledge regarding the plants that they collected for trade. This knowledge remained largely unused, because harvesting patterns are actually driven by very poorly organized market circuits (Ghimire *et al.* 2004). Rather than a case of lack of knowledge, problems were arising from knowledge that was not being put into practice, compounded by a range of economic factors. Although more time and resources were spent to work with the Tibetan communities living inside the park, the project rectified this initial oversight by including some work with external commercial collectors in 2001, four years after its inception. A major component of this work concerned setting up domestication and cultivation trials with the collectors.

Navigating across different knowledge systems

The *amchi* of Shey Phoksundo National Park and its surrounding areas practise Tibetan medicine, a regionally shared knowledge system based on the scholarly Tibetan medical texts, with the addition of local empirical knowledge. Our studies in Dolpo confirmed that the *materia medica* used in Dolpo was partly based on

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species only found in Nepal, which differ from those highlighted in contemporary medical texts such as the Trungpe Dimey Shelgi Melong (*'khrungs dpe dri med shel gyi me long*).

The relationship between the *amchi* and the conservationists was forged largely owing to the increased trade in medicinal plants from Dolpo and the importance of these plants for the practice of the *amchi*. The global concern for biodiversity conservation has some partial connections with these local realities, conceptually, symbolically and materially, while being on the other hand partly incommensurable. How then does the global agenda of conservation and sustainable use of medicinal plants play out in the day-to-day lives of the *amchi* in Nepal? To answer this question we must identify the specific pathways by which these different realities meet and explore the exchanges and transformations that ensue from these encounters.

The work of the People and Plants project involved close interactions with the *amchi* in different ways and under a variety of conditions. Many discussions took place during meetings, whereby the Dolpo *amchi*, as a group, expressed their opinions about plant scarcity, uses, and harvesting patterns, and engaged in species prioritization exercises for inclusion in a book on *amchi* knowledge and medicinal plants (see Lama *et al.* 2001). The team, made up of both the authors, an ecologist, a botanist, park game scouts and a few expert *amchi*, worked with individual *amchi* in identifying medicinal plants in the alpine meadows and searching through local medical texts to figure out the properties and effects of key medicinal plants and their botanical identification.

The focus, beyond the simple identification of medicinal plant species, was on the interpretation of semantic categories and on seeking to understand how the *amchi* classify plants and how they understand their life cycles, design land units and elements of landscapes. The major aim was to learn from *amchi* knowledge and to discuss and cross-examine this knowledge in view of the reference system that arises from 'scientific knowledge'. This work entailed discussions with individual *amchi* on their specific knowledge about medicinal plants, as well as discussions with larger groups of *amchi*, which served to establish the level of homogeneity in plant classification amongst the Dolpo *amchi*. Work focused, for example, on identifying the categories by which the *amchi* organize the plant world. Two or three of the *amchi* who worked directly with the research team dug out terminologies not in current usage, but which corresponded to certain botanical concepts, such as how to define a plant family. Results of this exchange are given in the box.

The box does not show complete correspondence between botanical and *amchi* classifications. For example, the differentiation of herbs and grasses into seven categories and the differentiation of trees into two major categories (trees with and without thorns) are forms of classification that are not found in the botanical classificatory system. In conducting this analysis, it became obvious that many of these terms are the closest equivalents that the *amchi* could find for the purpose of sharing their knowledge with the botanists. The botanists, having developed a strong practical working relationship with the *amchi* in the field, were able to distinguish

Ethnobotanical rank categories in amchi botanical classification

In life form, *shing* (woody plants) are further classified into four categories, namely *shing sdong* (large trees), *nag sdong* (small trees or large shrubs), *'khri shing* (climbers) and *'db ma* (shrubs), whereas *sngo ldum* (herbaceous plants) are further classified into *sngo ldum* (herbs) and *rtswa* (grass).

Below life form ranks, there are two intermediate ranks, based on flower and fruiting characters. In intermediate 1, all the *shing sdong* (which contains various species of trees) are further divided into two categories based on whether the plant flowers or not: *me tog can gyi shing sdong* (plant with flower) and *me tog med p'i shing sdong* (plant without any distinct flower). Similarly in intermediate 1, all the *sngo ldum* (herbs and grass) are directly classified into seven categories based on the morphology of fruits, roots and flower. These seven categories of *sngo ldum* are *gng bu can* (plants with bean-like fruits), *'brs bu can* (plants with ovoid fruits), *tsug* (plants with mustard-like fruits), *rtsa ba* (plants with small roots), *rta ba che ba* (plants with large roots), *me tog can* (plants with distinct flower) and *me tog med pa* (plants without flower or with indistinct flower). All the lower plants (fungi, lichens, hepatics, mosses and ferns) are grouped in *sngo ldum* under *me tog med pa*.

In intermediate 2, all the trees which flower, *me tog can gyi shing sdong*, are further divided into two on the basis of presence or absence of thorn. Thus, the thorny trees are divided into *tshar ma can gi shing* (*tshar ma* – thorn), and non-thorny trees are grouped into *tshar ma med p'i shing*.

Below the two intermediates, there is another rank locally referred to as *rigs*. However, the word *rigs* is used only in some cases. It is a theoretical concept that *amchi* use when asked to comment in relation to the integration of different groups of plants into a higher level of hierarchy. It represents a small grouping of several groups of plants bearing a similar generic term (generics) that are considered to be similar in either habit, plant morphology, use, property, etc.

(Source: Lama *et al.* 2001)

within this discourse between what was approximation for the sake of promoting understanding and what was actually the current discourse used by the *amchi*. This was particularly necessary regarding the ways of distinguishing one species from another. During long discussions with larger groups of *amchi*, it was generally acknowledged that the terminologies were correct, although some of the *amchi* seemed puzzled because some of the terminologies, although useful for interacting with the research team, were rarely used among themselves.

In scholarly research, the ethnobotanist aims to understand and record the meanings of local semantic categories, with no other objective than to establish

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the coherence of the classification system. In this case of applied research, *amchi*, scientists and conservationists engaged in an exchange of knowledge, for the purpose of gaining social and political recognition for the former, and for the purpose of conservation for the latter. Their different forms of knowledge were thus in an ongoing state of engagement and negotiation, following similar processes to those detailed by Leach and Fairhead (2002). Partial perspectives and situated practices play a major role in the expression of knowledge, which is itself a mirror reflecting the engagements between the researcher and the local 'informants'. This form of analysis, which has been extensively used in academic ethnoscientific research, can thus be used in applied research. How social and biological scientists position themselves in such situations raises a number of ethical and political issues because, although they are involved in research, they are also social mediators between local groups and larger national and international forums (Orlove and Brush 1996: 330; Eghenter and Sellato 2003: 17).

This classification exercise illustrates how the *amchi* adopted certain aspects of the system used by the botanist, thus offering an example of the local interpretation of scientific classifications. Ordering and classifying are known to refer to worldviews and to ways of conceptualizing nature, as well as to arise from particular practices (Friedberg 1992). In this case, the partial expression of the *amchi*'s knowledge and the effort made to integrate the scientists' classificatory approach was a way for the *amchi* to navigate and negotiate between two worldviews.

Vernacular classifications are also known to be multilayered, with much overlapping between purely naturalist approaches and other forms of symbolic or utilitarian classification processes, which are not necessarily made explicit in vernacular nomenclature. Thus, other forms of classifications used by the *amchi*, such as ordering medicinal plant resources according to their medical properties and uses, were downplayed in the course of interactions with scientists and conservation managers, whose main purpose was the sustainable management of resources. For example, the three fruits of *Terminalia chebula*, *Terminalia bellerica* and *Phyllanthus emblica* referred to as 'the three fruits' ('*brs bu gsum*', '*brs bu*'), which are crucial to *amchi* medicine, and the six species including *Elletaria cardamomum*, *Syzigium aromaticum*, *Myristica fragrans* and *Carthamus tictorius* referred to as the *bzng po drug* (literally the 'six good', meaning six good plants highly appreciated for medicine, but also in religious rituals as offerings) are equivalent to panacea types in *amchi* medicine. However, they were barely mentioned at all in the classifications discussed with the botanist. All medicinal plants and materials for making medicine are said to have six tastes: sweet (*mngar*), sour (*skyur*), salty (*lan tshwa*), pungent/acrid (*tsha ba*), bitter (*kha ba*) and astringent (*bska ba*). In addition to the six tastes, medicines have three post-digestive tastes (*zhi rjes*) and eight potencies (*nus pa*): heavy (*lci*), light (*yang*), oily (*snum*), coarse (*rtsub*), cool (*sil*), hot (*tsha*), blunt (*rtul*) and sharp (*rno ba*). Examples of medicinal plants having a sweet taste were given by the *amchi* during the course of discussions relating to their medical practices, while such classifications were never referred to in the context of situated practices relating to management.

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The analysis of this knowledge proved very useful in establishing how best to define the objects around which the project revolved, i.e. the medicinal plants. It also provided a framework for discussing plant life cycles and habitats, as well as collection practices, parts of plants collected, seasons of collection, and choice of best habitats for collection, as understood by the *amchi* on the one hand and the ecologist on the other. This framework was also used in a joint exercise between the *amchi*, the game scouts and the project botanist/ecologist, which focused on two species of major importance both for local use and for trade. This exercise was conducted in high-pasture areas in Pungmo, with the *amchi* involved in the design of the ecological experiment (e.g. the sampling of sites) and in the simulation of their selective harvesting practices, as well as in the ecological monitoring processes, which used the different stages of plant life cycles to follow up on the fate of medicinal plant populations (cf. Ghimire *et al.* 2005).⁹ Such stages were used by both the local team and the scientific team, on the basis of a consensual understanding.

Apart from the use of this collaborative framework, the exercise derives entirely from classical approaches in ecology, through the monitoring of densities, frequencies and abundances. Further to this experiment, which obviously incorporated the two types of knowledge, the *amchi* were asked to simulate *in situ* their very selective approach to harvesting, which is based upon the selection of mature life stages and those plants seen as most vigorous and potent from a medical perspective. They were instructed to simulate their own approach to collection, i.e. collection of about 10 per cent of the plant population, and then to increase this level to 75 per cent to enable the measurement of the population's reaction to different levels of harvesting. In other words, this exercise aimed to establish whether *amchi* collection practices are sustainable, as well as to determine the highest level of pressure that could be sustainably applied (Ghimire *et al.* 2005). These exercises illustrate how the knowledge of the *amchi* was integrated with that of the scientists in the course of what are referred to as 'practising relationships'. It is also an example of how what is generally thought of as local knowledge can transcend the local level, through its integration in broader scientific experiments that may have a demonstration value at a larger level.

Understanding management systems in a particular locality also implies understanding how people manage the space where medicinal plants grow. Studies of local toponomy in a high-pasture area in Pungmo showed that the landscape is ordered, and therefore appropriated in everyday life, on the basis of morphological characteristics such as vegetation types or specific plant species (e.g. *spong rtsi do bo*), real and symbolic animals either visiting or related symbolically to ecological zones (e.g. *skyung ka thang*; *skyung ka* is a mythical bird in Tibetan cosmology), and types of forbs and grass quality, as well as spirits known to inhabit the landscape (Aumeeruddy-Thomas *et al.* 2004). In addition to naming the landscape, ritual and religious practices, such as annual pilgrimages and festivals, are celebrated to pay tribute to local deities, such as *lha*, *gzhi bdag* and *klu*, and to request permission to use the area, practices which are common in many other communities of Tibetan origin (see Ramble 1997). The analysis of how people related to the high-pasture

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area during the different circumambulations of the Yulha Chulsa¹⁰ pilgrimage in Pungmo highlights the gap between the scientist's naturalist vision, which generally considers morphology, relief and sometimes vegetation, and the local relationship to the landscape, which does not draw a stark divide between natural and supra-natural elements. However, as the project essentially aimed at understanding the cultural dimension of local management practices, it moved beyond strict scientific understandings of the landscape to incorporate supra-natural elements in different exercises. These included resource mapping, during which the *amchi* located the distribution of medicinal plants, including mythical as well as naturalist elements.

The greatest resistance encountered in terms of sharing knowledge (which was generally done quite openly) was in the discussions on the use of substitutes for species that are rare and endangered. Such species face depletion because of their limited distribution, their high extraction for trade, their difficult regeneration owing to the parts used, and their high number of users. In earlier times, when access to the Terai was more laborious, the *amchi* used local species as substitutes for important lowland species such as *Terminalia*. While the *amchi* disclosed several species for which substitutes were currently being used, this subject found less enthusiasm and interest than others. Although some learned *amchi* advocate using substitutes for problematic species and many *amchi* claimed to be doing so, others, including one of the expert *amchi*, felt that the use of substitutes would degrade the quality of their medicines. It is interesting to note here the differences of opinion amongst *amchi* themselves on this topic. At the national-level *amchi* workshops, however, the *amchi* came up with a list of substitutes that were acknowledged to be effective for use by the authoritative Chagpori (*Lcags po ri*) Institute at Darjeeling. During his visit to Nepal, one of the Institute representatives enumerated a list of plants that should be used as substitutes to avoid over-exploitation of the original species. In theory, medicinal substances may be substituted for one another if their taste (*ro*) and potency (*nus-pa*) are similar to the original ingredient. However, the project held back in the push for substitution, as it was felt that the impetus came largely from a narrow vision of species focused on conservation.

Another instance of 'practising relationships' relates to the engagement of the services of the 'expert *amchi*' from the neighbouring district of Mustang in the initial years of the project. Reflecting upon this practice of importing expertise and its unspoken impact upon the Dolpo *amchi*, in later phases the project started to rely more upon a local expert, who was unanimously declared as the most knowledgeable *amchi* by the other Dolpo *amchi*. Such a move no doubt enhanced the confidence of those *amchi* who had experienced less exposure to the mainstream of events and processes that concerned them and impacted upon them. The local expert *amchi* was directly involved in determining local priorities and preparing agendas and programmes for *amchi* workshops, and was in regular consultation with the various *amchi* associations. Furthermore, he had to be in constant communication with the Nepali-speaking project personnel, who were from outside Dolpo. Through dialogue, however slow and laborious, the Dolpo *amchi* must learn to speak a new language and engage more closely with development and conservation concepts in order to promote their tradition. The switch from external

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experts to a local expert *amchi* thus provided greater opportunities to the Dolpo *amchi* to increase their visibility and participation in wider development processes.

Practising relationships are, however, rarely smooth or clear and often entail a fair degree of misunderstanding and negotiation. Following requests from the *amchi* for medical texts to further their pursuit of knowledge and training, especially among younger *amchi*, the project team procured some key materials, including modern Tibetan medical texts. However, there were concerns about some texts, which were considered by the external evaluators of the project to be eroding or downplaying the knowledge of the local *amchi*. These texts included the '*khrungs dpe dri med shel gyi me long*, a classical Tibetan text book illustrated with a large number of botanical plates. This book has been widely adopted by the Dolpo *amchi*, who lengthily commented on its content, especially on the recipes and identification of plants. In certain cases, the plants differed from the Dolpo species they used. External evaluators, however, were concerned that such texts, seen as external to Dolpo, may act as a type of authoritative standardized knowledge base which could transform the Dolpo *amchi*'s own knowledge. However, the project considered that there was no need to cut Dolpo *amchi* from information sources, since they had themselves expressed their interest in having access to medical texts that they did not possess.

Such concerns, although relevant, were not viewed as major by the project team, as specificities of *amchi* knowledge are unlikely to disappear if they are relevant to the *amchi* themselves. Furthermore, in the quest for government recognition, there have been moves by the Himalayan Amchi Association towards the standardization of knowledge (through developing a standard curriculum to present to the government). In the last few years, the Himalayan Amchi Association has introduced training on medical theory taught by *amchi* graduates from a medical school in Darjeeling, India, courses which most of the Dolpo *amchi* attended.

Changing social relationships

A community-based model for the management of medicinal plants and for the promotion of *amchi* practice in Dolpo emerged as a major objective of the project after the first year of general surveys that were conducted throughout the region. One community, that of Pungmo in Lower Dolpo, chose to construct a Traditional Health Care Centre (THCC) through their Village Development Committee – a decision that was strongly supported by the project team. This situation created some tensions between the Upper and Lower Dolpo *amchi*, with the former believing that they had been left out of the whole planning process. They strongly voiced their interest in having the THCC in Upper Dolpo rather than Lower Dolpo. This tension finally led to the Upper Dolpo *amchi* achieving, at a later stage of the project and on their own initiative, the establishment of a second clinic in Dho Tarap, as well as forming the Upper Dolpo *amchi* association, which was supported by the project only after its formation.

The People and Plants project saw the first clinic, in Lower Dolpo, both as an opportunity to develop a monitoring centre for the conservation of medicinal plants

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inside the park and as a way to provide quality health care services and promote *amchi* knowledge. Negotiations took place with the *amchi* to ensure that the conservation and sustainable use of medicinal plants would be a major objective of the centre, in addition to the health care and promotion role, which were the primary concerns for the *amchi*. Before the THCC was inaugurated in June 2000, an exercise aimed at identifying species to be used at the clinic and to identify the potentially vulnerable species was developed. The concept of 'vulnerable species' was not well understood by the *amchi* at the outset. However, over the course of the exercise they came to understand more clearly the purpose of this prioritizing exercise, which was based on their own knowledge of plant distribution, abundance, parts used and amounts needed by the clinic (Tripathi and Schmitt 2001). Thus a list of potentially vulnerable species was established, on the basis of the criteria outlined above, but also considering the potential external demand. These priority species were to be closely monitored by a Medicinal Plants Management Committee that, although not yet recognized by the national park, was formed on a voluntary basis and comprised young people from Phoksundo villages. This group had been proposed previously, in the management plan of the national park, to serve as a link between the THCC and the park for the monitoring of medicinal plants.

This approach has not yet proved to be a workable one, however, as the *amchi* generally prefer to collect the plants themselves. Any assistance they might require is generally organized informally, on the basis of mutual confidence and the *amchi*'s appreciation of the harvesters' knowledge. Women have thus been identified in Pungmo village as the main providers of medicinal plants to the *amchi*, because of the long periods they spend in the highland pastures during summer while taking care of the herds. While the *amchi* did not reject entirely the forming of the Medicinal Plants Management Committee, it became obvious that, without continuous support from the project, the committee would not function. However, the committee did continue to collect plants for the clinic and record the amounts collected for each species, which allows for some degree of assessment of the impact of collection for the clinic.

The Lower Dolpo THCC inauguration was a subject of pride both for the *amchi* and for the local communities. It also was an occasion for representatives from the district administration offices to extend their wishes to further support the *amchi* in their new endeavour. Religious chanting and prayers in the clinic central room by the groups of Upper Dolpo and Lower Dolpo *amchi* is one of the activities that helped in establishing linkages between the Dolpo *amchi* as a group. Other activities included the plantation of selected medicinal plants species in the THCC garden.

Domestication of Himalayan medicinal plants is a subject of high interest among the *amchi*. All of them had individually attempted some experiments in their home gardens, but most efforts had been directed towards *in situ* planting, where it was felt that the species would retain their medical potency. Besides plantation trials, all *amchi* had brought about ten of the most used species of medicinal plants for the purposes of identification. These dried samples were used for verifying their identification by going through botanical flora and Tibetan medical texts, and the samples were displayed in the clinic, with both Tibetan medical terms and botanical

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names. One expert *amchi*, who was previously involved in domestication trials in Mustang, had been actively exchanging experiences, seeds and planting materials with the Dolpo *amchi*.

The project also encouraged the planting of medicinal plants in the THCC garden for demonstration purposes, but the *amchi* were not convinced by this as they thought that the plants would not thrive in the conditions around the centre. That they still went ahead with the garden was a sign that they were willing to engage and share experiences with the project. Moreover, it shows the symbolic importance of this practice vis-à-vis all the people who visited the garden during the inauguration.

The THCC inauguration was an important occasion for social representation for the *amchi* of Dolpo, both Lower and Upper. It asserted their identity as a group, despite their internal tensions, and in this respect was shown to be quite successful. The *amchi*'s reach to patients had now increased from the local communities to the members of the district administration, national park staff, army personnel, occasional tourists and even passing insurgents. However, the social consequences of this new institution are still difficult to assess. A major issue lies in the fact that the *amchi* were no longer seen as village *amchi*, but as clinic *amchi* living outside their villages in a place that, although more or less equidistant from the different villages using the clinic, was nonetheless somehow disconnected from village life. Their new status and positioning at the clinic appeared to be in contradiction to their village-based social role, and this issue certainly needs further anthropological research for all the implications to be unpacked.

Negotiations and transformations

A 'globalizing' world means that even the most remote corners of the world are now accessible to environmental policies and management approaches, and residents must often adhere to, or negotiate with, preset terms and conditions of interaction. The conservationist, the ethno-ecologist, the botanist and the anthropologist are only a small part of the (mostly well-intentioned) influx of people who arrive in the mountain village with their own worldviews and sets of values, aiming to do 'good' both for themselves and for the local community. But following their departure, what remains? What aspects of their way of life have the local population been empowered, coerced or seduced into transforming? Very often, it turns out to be those aspects of indigenous and traditional activities which are contrary to the notions of science and modernity and hence 'in need of change'. Conservation knowledge, like other forms of 'governmentality', through its strategies and action plans, impacts upon local people, how they secure a livelihood, practise medicine, graze livestock, collect medicinal plants and so forth.

Research on *amchi* knowledge and practices have opened up the space, both literal and metaphorical, for collaboration with the *amchi*. Even if it is only certain aspects of their knowledge that are valorized by the conservationist, the *amchi* have benefited from the overall visibility in the local and trans-local arenas. The *amchi* of Nepal have been able to reframe their status and identity in the national arena,

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just as 'indigenous' and 'traditional' peoples elsewhere in the world have, through deployment of these labels, been able 'to reframe their disadvantageous relationship vis-à-vis the nation-states that encompass them' (Kearney 1995: 560).

The formation of *amchi* associations, at the district and national levels, has made the relationship between the *amchi* and the conservationist more visible. At the local level, the *amchi* associations are key actors through which the project implements its activities. The Dho Amchi Association, for example, took on the key responsibility for the construction of an *amchi* health care centre as well as the organization of local-level workshops to discuss *amchi* activities. At the national level, the Himalayan Amchi Association (HAA), formed in 1998, has continued its activities of seeking government recognition for its medical tradition. Examining the relationship between the *amchi* and the conservationist requires looking beyond the context of medicinal plant conservation and local health care development to embrace issues of identity and cultural survival and to maintaining 'a particular social existence' amidst processes of nationalism, nation building, democratization and ongoing conflict in Nepal.

Association with the project offered the marginalized *amchi* an opportunity to legitimate their own knowledge in the eyes of their community and the nation. As Sillitoe points out, 'the privileging of some knowledge [over others] will extend a degree of power to those who hold that knowledge; alternatively making it widely known may undermine the position of its holders' (Sillitoe 1998: 233). On the other hand, the conservationists, with their attractive packages of training, capacity-building schemes and publications, have perhaps raised expectations beyond what can actually be offered, for example the expected construction of THCCs in every village where there are *amchi*. The establishment of the THCC as an imported social institution will no doubt have long-term consequences in the way education is imparted in the future, and in the *amchi*'s relationship to patients.

Needless to say, any relationship involves negotiations, transformations and a good deal of moulding of those involved. We now turn to the complex agents mediating the relationships between the local and the global, the 'flexibility' of their selves, and the contradictions inherent in these relationships, which are often based on asymmetrical relations of power, perceptions and interests. Given the changing socio-cultural, political and environmental circumstances in the region, what seems to be required is a 'flexibility' and a willingness to transform, if necessary, received wisdoms, be they the 'textual certainties' of the *amchi* or the endangered status lists of the conservationists.

Mediating between different knowledge, worldviews and interests is fraught with difficulties. The agent in the context of trans-local processes in Nepal, such as development or biodiversity conservation, is similarly placed in a position whereby she or he is constantly negotiating between the different agendas and personas that come into play. To say the least, it is not an easy task. The juxtaposition of the *amchi* and the conservationist across the divide between the local and the global does not posit an essential identity or stability. Such a positioning is more a temporary identification that constitutes and reforms the subject, so as to enable that subject to act. There is nothing essentially 'local' about the *amchi* as he travels

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with his yak miles across the Himalayan passes to purchase food supplies on the Tibetan Plateau, or to Kathmandu to attend the national workshop of *amchi* organized by the Himalayan Amchi Association, or the training by the Remote Area Development Committee of the Ministry of Local Development, or to Lhasa under the auspices of WWF to meet with the *amchi* at the *sman rtsis khang*, or to the international conference of Tibetan medicine in Washington, DC, seeking new donors. Similarly, to think of the conservationist as 'global' is also to see only one aspect of a complex role: conservationists working with the *amchi* in Dolpo defy categorization as 'global' because they operate at the national, district, village and sub-village levels.

Neither the knowledge of the *amchi* nor that of the conservationist is a closed, static system, but is open to reinterpretation and adaptation, based on the ever-changing social, political and economic environment. For the *amchi*, the practice of experimentation with new medicinal ingredients (plants and minerals) for use as substitutes for endangered species of plants and animals is a challenge of the late twentieth century, caused by the over-harvesting of these species which have now been 'red-listed'. Although the causes of the over-harvesting and poaching are often very distant from the *amchi* themselves – aggravated by the increasing commercialization of herbal medicine, or the opportunistic poaching of rhinoceros in a period of political turmoil – the impact upon the *amchi* lies in their reduced ability to produce medicines according to the formulas that they have long been using.

Thus, although it is a neologism when the *amchi* use the term '*sung-kyob*' (conservation, roughly translated) when they talk about medicinal plant conservation, it is also not something entirely new. The *amchi* have in fact been involved in 'conservation' practices, such as harvesting only the amounts needed for preparation of medicine, collecting from different sites each year, and waiting until after the seeds are dispersed to uproot the tuber, for centuries before they came into contact with the conservationists (Shrestha *et al.* 1998; Ghimire *et al.* 1999). However, it is clear that the more sustained the encounter between the *amchi* and the conservationists, the stronger the emphasis the former puts on plant conservation and the more central it becomes as a distinct concept in their day-to-day lives.

Conclusion

The main postulate of the People and Plants Initiative considers local vernacular knowledge and practices as important components of environmental management. Developing such an approach implies an encounter between different worldviews, knowledge systems and practices and thus carries various epistemological and social implications. A variety of these issue areas have been examined in this chapter. We have stressed the fact that the different parties involved in this encounter between the local and the global had partially shared concerns for a common subject – the conservation of medicinal plants – although the paradigm of conservation, as understood by the conservationists, was new to the *amchi*. While the concerns of the different parties were not fully symmetrical or integrated, they did engage

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in some common actions, such as the Traditional Health Care Centre and the ecological experiments that built upon local ethno-ecological knowledge.

In spite of the fact that the knowledge and worldviews of the different parties were only partially commensurable and that there were divergent agendas,¹¹ the identities of certain actors facilitated a largely positive encounter. *Amchi* have important, highly localized and embedded roles, yet are also recognized as actors within a trans-Himalayan medical system that transcends local Dolpo practices. These identities may be connected with Lama's discussion about 'flexible selves' (Lama 2003), where the *amchi* uses his capacity, just as the inhabitants of Dolpo generally do (Bauer 2004), to develop new ways to deal with the 'Other', in this case the conservation managers, the national Ayurvedic doctors and the representatives of international organizations. It can be seen as an experiential learning process between the different actors concerned and a rich form of 'practising relationship' during which divergent agendas may appear to converge.

Processes of learning are important aspects of this encounter. The fact that local knowledge has entered international arenas through debate hinges on the particular thought processes and directions of the different actors present (Dumoulin 2003). As far as the botanist, ecologist and ethno-ecologist were concerned, the local knowledge of the *amchi*, integrated into their ecological research, provided a new outlook to their work, uniting naturalist, social and cultural dimensions. In the context of the global environmental crisis, ecology as a science is moving rapidly towards understanding mankind as an integrated part of ecosystems (O'Neill 2001). The nature/culture dichotomy, in which scientific knowledge explicitly excludes mankind in its attempts to understand so-called natural and biological dynamics, is now either blurred or rejected. Every scientist must now accept the general 'constant' that each and every part of 'nature' is significantly influenced by human activities, be that influence interpreted as positive, negative or neutral.

Some authors, such as Agrawal (2002), have criticized the 'scientification' of ethno-ecological knowledge, suggesting that facile generalization about this knowledge, and its scientific validation through experiments, in many ways extracts the knowledge from its local cultural specificity. Although this argument carries strength, it appears to the authors that such questions are very much dependent upon how this 'scientification' process takes place. Here, issues of participation, and of how participation is effectively played out, are of central relevance. More than participation in decisions, which is a familiar issue in development projects that build on indigenous knowledge (Sillitoe *et al.* 2002), processes of learning themselves have arisen from analysis of the People and Plants project as a key issue area. This has been inadequately discussed to date and would certainly benefit from more theoretical and practical attention in the future.

Notes

- 1 See Chapter 1, note 4.
- 2 Lama (2003: 3) uses the term 'conservationist' for all personnel belonging to a conservation project. In this paper, we differentiate between the various members of the project: the scientists (ecologists, sociologists or anthropologists), who are scholars

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- holding scientific knowledge, and the conservation managers, who develop management approaches that are assumed to have a scientific basis.
- 3 See, for an example drawn from other areas, Pordié (2002).
 - 4 These were termed 'expert *amchi*' because they were involved in supporting the development and recognition of *amchi* practices at both the national and the international level. Both were also practising *amchi*, recognized for their extensive knowledge and skills.
 - 5 Although it was difficult to fully understand the social structure and membership selection criteria of these groups, it was evident that the representatives at the meeting were either socially prominent people or those who, for different reasons, were able to speak out. One such group, the Medicinal Plants Management Committee, was formed during the course of the project. The process of group formation consisted of an open village meeting and a general discussion, during which members were selected. People became members either because of their capacity to be good brokers between the village and extra-local organizations or because of their high level of knowledge relating to medicinal plants. Many already represented the village at the Village Development Committee, the major administrative unit relating to village life.
 - 6 It was in fact a team composed of scientists and managers coming from different cultural backgrounds and representing both national and international agencies.
 - 7 Large volumes of MAPs are being extracted for trade from this area (see Lama *et al.* 2001).
 - 8 See Gururani (2002) for an account of the increasing emphasis being given to gender issues in environmental management generally, and Gurung *et al.* (1999) for details of women's medicinal knowledge in Dolpo.
 - 9 An example of a perennial herb's life cycle, which includes the different stages of the cycle as perceived by the *amchi* and which was used during the ecological monitoring process, is given in Ghimire and Aumeeruddy-Thomas (2005).
 - 10 Yulha Chulsa is a major pilgrimage celebrated in the high pasture of Kunasa of the village of Pungmo, the main aim of which is to celebrate the protecting deities of this particular high pasture (Aumeeruddy-Thomas *et al.* 2004: 119). 'The "local god" (*yultha*), often also referred to as the village god, or god of the land, [presides] over the well-being of a village community' (Kind 2002: 21).
 - 11 These agendas include sustainable resource management (conservationists), social and political visibility and the promotion of a collective national identity (*amchi*), domestication and value addition (commercial collectors), and increased access to training and education (women).

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