A Forest Community or Community Forestry? Beliefs, meanings and nature in north-western Nepal

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Introduction

In this paper I outline a history of community forestry in Nepal and highlight how it has been embedded within different understandings of ecosystems and development. In particular, the Theory of Himalayan Environmental Degradation (THED) was instrumental in catalyzing the formation of community forestry. I briefly review the history of the programme as it arose nationally and then delve into the daily functioning of a user-group in Mugu District, north western Nepal to give a more nuanced snap-shot of community forestry in action. Through this narrative I try to draw out the ways in which different kinds of knowledges are both employed by different actors within community forestry contexts, but also how the methodologies and theoretical constructs used to investigate the programme produce different knowledges of community forestry and the forests themselves.

The history of forest use and management in Mugu is extremely important for understanding current practices, ecologies and struggles over the forest. The history I tell is compiled from oral accounts and historical documents. This narrative illustrates the importance of forests throughout the twentieth century and helps to explain some of the current interpretations of community forestry. I want to highlight details from the oral histories that illustrate the boundaries of the forest for the tellers. These boundaries are not simply spatial or ecological, but rather encompass a variety of social, cultural and ecological aspects of the forest.

There is a tension that runs through out the paper reflective of my own theoretical ambivalence. In some respects, this is a story that can be told from a historical materialist or dialectical perspective (Harvey 1996, Peet 1991). The focus is on how the forest and its ecosystemic properties interact with the social politics of knowledge and management of forests. While in some sense one could conceive of this interaction as a series of feedback mechanisms, I am more interested in highlighting their mutual constitution, how one arises in relation to the other (Harvey 1996, Peet 1991).

Yet, I am plagued by another theoretical tension that demands I explain how it is that forests have come to be a relevant cultural category at all. Studies of community forestry assume first and foremost the presence of a forest and yet taking a more relational perspective demands that the processes that produce a 'forest' (materially, symbolically, politically) are explained (Braun 2002, Callon 1986, Latour 1993, Latour 1997). How is it that community forests are sustained as 'forests'? As a result of this tension, the narrative here shifts between giving a history of how forests have come to hold the significance they have, and an attempt to explain the processes that produce a forest as a culturally meaningful category. It is not simply the details of management, ecological conditions and contestations over knowledge that are significant, but also how these aspects of forests are produced, framed, (re)told and therefore brought into view that are important (Braun 2002). The specific ecological processes of water and soil movement, seedling establishment and tree growth are only sustained in that configuration by harvesting practices, management strategies and political relationships. One does not pre-exist the other and cannot be understood in isolation (Braun and Castree 1998a, Demeritt 1998, Haraway 1997, Latour 1993). This kind of relational perspective thus rejects entirely the idea of 'impacts' or

'feedbacks' and rather provides a way of thinking about how a particular set of trees cannot exist without the cultural-social-politics that sustain them.

My hope in retaining this tension is to problematise the notion that we can 'know' the forest in any complete sense and yet to make politically meaningful analyses of community forestry we need to have some shared sense of what exactly it is we are talking about. I attempt to illustrate some of the 'local' understandings of forests, but even these interpretations are rife with my own culturally embedded understandings of what a forest is and how they might be important to the people with whom I worked. The resulting narrative is thus somewhat fractured and incomplete but I'd like to suggest that it is those very fractures that allow for new understandings of community forestry to emerge and for the importance of how forests are constructed by a diversity of actors to become somewhat more clear (see also Nightingale 2003a).

Community forestry
Community forestry in Nepal is upheld internationally as a model of resource management that has the twinned goals of providing resources for the poorest of the poor and conserving forest ecosystems, in particular trees. The programmes were conceived in the early 1970s by international donors working with Nepali specialists influenced by THED, discussed in more detail below. Early community forestry pilot programmes had limited success but nevertheless, it was swiftly adopted as a national model and a variety of international donors provided money and expertise to implement programmes throughout the Middle Hills. Almost thirty years later, the programme continues to expand[1] and recently there have been many calls to allow further expansion into the Terai. The Terai offers a new set of challenges to community forestry, but most significantly, the District Forest Offices (DFO) are reluctant to hand over forests filled with commercially valuable timber to communities (Shrestha 2001). This situation is in stark contrast to most parts of the Middle Hills where community forests are primarily used for 'subsistence' extraction of firewood, timber, leaf litter and fodder. While villagers in the Terai have similar needs, the *Sal* forests are sufficiently valuable that DFOs are able to sell lucrative timber harvesting contracts or sell timber illegally. If villagers controlled the forests, either these activities would stop or any profits from them would be largely controlled by the user-groups.

The cultural politics of community forestry
To understand how forests are the centre of a set of mutually constitutive relationships with the state, communities, international donors, and user-groups, it is necessary to examine how Nepal's forests are situated within discourses of environmentalism and development (Escobar 1995, Scott 1998). In the early 1970s, fuelled by the burgeoning environmental movement and neo-Malthusian ideas of population overgrowth, international experts became concerned with the apparent rapid degradation of Nepal's forests. The World Bank published a report wherein they predicted that at the current rate of deforestation, the hills of Nepal would be entirely devoid of trees within fifteen years time and drastic measures were needed to save the fragile forests that were left (Eckholm 1975, Messerschmidt 1987). Deforestation was believed to cause massive landslides—which often further reduce forest cover—

[1] The Maoist movement in Nepal has disrupted Community Forestry user-groups in some parts of Nepal but has not systematically halted the programme.

and to increase soil erosion from steep Himalayan hillsides. This so called Theory of Himalayan Environmental Degradation (THED) was quickly accepted by the international community and a number of programmes were implemented to reverse this frightening trend.

Community forestry was considered key to preserving Himalayan ecosystems by stopping felling and encouraging tree planting. It had financial and technical support from the World Bank, FAO and the World Wide Fund for Nature (Gilmour and Fisher 1991, Graner 1997). Initially the projects were designed to encourage reforestation and to protect existing stands, but the need to provide resources for 'subsistence' agro-forestry users was incorporated into the legislation from the beginning. In many ways, the programme's emphasis on assisting the poor was a long-term environmental rather than social strategy. Poverty is often believed to be the cause of environmental degradation and therefore reducing poverty is a key component of any conservation strategy in the Third World (Arizpe, Stone, and Major 1994, Escobar 1995, Häusler 1993, Pitt 1986). Thus both discourses of poverty and THED ensured that community forestry was from the beginning embedded in an understanding of Himalayan ecosystems as fragile, under threat, and in need of intervention to prevent catastrophic, permanent damage.

There is no question that there were (are) in fact large scale landslides, significant run-off of top soil, and in some places, a decrease in forest cover (Ives and Messerli 1989). In this sense, community forestry was a reaction to ecological conditions and those conditions shaped the goals of the project in significant ways. Healthy ecosystems at the time were theorised as those that have few catastrophic changes and are in dynamic equilibrium such that when a disturbance does occur, the system quickly returns to a state similar to that prior to the disturbance (Botkin 1990, Weaver and Clements 1938). The Himalayas were considered particularly fragile, thus required immediate action to prevent more catastrophic change by stabilising steep slopes. Within ten years, however, THED was discredited by Geographers and other scientists working in Nepal who argued that much of the degradation seen is the result of a landscape that is inherently unstable combined with heavy taxation burdens during the 19th and early 20th centuries (Ives and Messerli 1989, Mahat, Griffin, and Shepherd 1986, Thompson and Warburton 1985b). This counter theory is widely accepted today by most Himalayan scholars (see also Metz, this volume Byers 2005), nevertheless, the image of massive erosion and deforestation in Nepal continues to hold sway in the popular imagination.

Fuelled by THED, community forestry programmes run by international donors proliferated across the more accessible areas of the Middle Hills in the 1980s and 1990s. Donors provided expertise, staff, and resources to user-groups, working intensively with villagers to form user-groups as well as plant trees (Gilmour and Fisher 1991, Graner 1997). As the programme has developed, the social aspects have become far more significant. In part this was due to the ways in which antecedent social relations intersected with ecological conditions in the context of specific projects (Nightingale 2003b). Many early projects were plagued with non-compliance by villagers, leading to poaching, apathy in protecting plantations from grazing animals, and a failure to properly tend planted seedlings. Research into why villagers were not enthusiastic about the new projects revealed that in many cases project implementation had failed to adequately include local elites (Gilmour and

Fisher 1991). Without the support of local elites, other villagers did not feel compelled (or were afraid) to assist the projects and thus there was little chance of them succeeding. These failures required project planners to re-evaluate their strategies and the result was much more emphasis on community participation and especially the inclusion of local elites.

In many ways, community forestry in Nepal has exemplified the best in participatory development. I'd like to suggest that this is in part due to the ways particular socionatures (cf. Swyngedouw 1999) were produced within the programme. Most donors took an impact view—what impact did the cultural conditions have on the success of community forestry? (cf. Joshi, Jali, and Hamid 1997, Mahat, Griffin, and Shepherd 1987)—and yet, in practice the distinction between social and environmental aspects were less distinct. It became clear very early that changes in environmental conditions could not occur without careful attention to local social relations around forest use and protection. Thus elites were consulted and enlisted into leadership roles, and the importance of including women and lower castes was recognised (Kharel 1993). In many communities of Nepal, women and lowest caste men do most of the harvesting of forest resources and yet they are often excluded from any kind of formal decision making forums and thus projects thus sought to directly include women in community forestry committees (Nightingale 2002). But what is less clear, is the extent to which the projects take the knowledge and beliefs of villagers seriously as resources for developing good management of forests. I have argued elsewhere (Nightingale 2005) that community forestry is predicated on the belief that villagers need to be taught and the programme is suffused with ideas of scientific forestry and the dissemination of expert knowledge instead of an emphasis on fostering local knowledges (see also Scott 1998).

I would like to suggest that not only is the relationship between social-cultural relations and ecological conditions more complex and embedded within each other (as opposed to impacting each other), but also that the issue of knowledge is central to understanding this embeddedness. In some sense, each group of actors within community forestry interacts with a different forest due to their knowledge and understanding of it. For some, the forest encompasses the management arrangements, daily resource extraction practices, the trees themselves and the set of processes that are required to keep them in tact. For others, the forest is an area delineated on a map with a set of legal obligations and permissions relevant within those boundaries, and for yet others, it is simply a collection of particular species of trees and a few associated under story species. Of course many of these understandings overlap and it is difficult to identify specific individuals who hold only one, purified version of these caricatures as I demonstrate below. Nevertheless, it is these understandings that produce 'a forest' and the ways in which they are different, in part produce the conflicts that emerge over the forest.

Community forestry in Mugu
The material for this section draws from a case study carried out in Mugu District of north-western Nepal over two time periods, 1993-1994 and 1998-1999. I worked intensively with one user-group and peripherally with other user-groups in the valley in addition to interviewing a host of actors within the District Forest Office (DFO) and international donor agencies in Kathmandu, Surkhet and Nepalgunj (both in

south-western Nepal). Mugu is an interesting place in terms of community forestry because it is one of the very few places where there is not significant donor input into user-groups.

The user-group I worked with was the first to be formed in that part of the country. It began in 1992 initiated largely by the villagers themselves. The group is composed of people from three different villages and four different caste groups, roughly corresponding to the three villages. Caste distinctions historically defined the division of labour and caste also carries important social restrictions related to ritual pollution. High castes will not take food or water from lower castes, particularly the so-called Untouchables which I refer to as "lowest-castes." Forty-two households of highest-caste Brahmins and Thakuris live in Chaina near the district centre town of Gamgadhi. Twelve middle-caste Chhetri families live in Hernikanth a 45-minute walk up the hillside near the forest boundary. And 24 lowest-caste (untouchable), kami or blacksmith families also live on the forest boundary, in Sangkhola, but on the opposite side of the ridge (see map four). They manage Pipledi forest which covers the ridge at the top of a large, well sheltered valley with a warm, relatively dry micro-climate. The top of the valley levels off into the Rara Lake basin, Nepal's largest freshwater lake. The watershed is protected by a National Park and the two villages that lived on the lakeshore were moved in 1978. People of all the surrounding villages, including Chaina, Hernikanth and Sangkhola, had use-rights to grazing and shifting cultivation lands on the eastern shore of the lake that were used about six months of the year. These lands were lost when the Park was formed and has increased pressure on Pipledi forest.

Caste relations are central to how power operates within the community forestry user-group (Bennett 1983, Bhatt and al. 1997, Connell 1991, Krause 1988). The two highest castes, Brahmins and Thakuris, share a variety of kinship and ritual relationships. There are no Brahmin priests in the village, and the Brahmins will intermarry with the Thakuris, but overall, both groups have worked to protect both their ritual high-caste status and also their economic dominance by controlling the better agricultural land and ensuring their sons receive sufficient education to obtain jobs in government offices. The Chhetris are also a relatively pure caste. In western Nepal, there are Matwali Chhetris, or alcohol drinkers, who are of a lower status than the Chhetris in this user-group (Connell 1991). Oral histories explain that the Brahmins brought the Chhetris to the village to keep the temple clean and carry water, and that the Kamis were brought to work their fields and do other chores, indicating that a variety of bonded labour arrangements predominated until relatively recently. Presently, the Brahmins and Thakuris no longer have the same control over the labour power of the others, although the Kamis still work for very low wages during times of peak agricultural work. Changes in the economy and political situation have been instrumental in breaking down caste obligations even if caste boundaries remain rigid (Nightingale 2005). The Brahmins complain that the Kamis can find more lucrative work through government contracts and therefore no longer want to work for them and the Chhetris have become relatively wealthy and self-sufficient. These changes in historical relationships are extremely important for understanding the allocation and control over forest resources today (Nightingale 2001, Nightingale 2005, Nightingale 2006).

The History of Forest Management in Mugu

Historically, land tenure and taxation in Mugu was governed by the *thekthiti* system similar to other parts of the upper Karnali.[2] Under this system, the land was officially owned by the state, except where private ownership claims were recognized. The local *mukhya* or tax collector, had significant powers to set the amount of tax paid by residents and had other political powers as well (Regmi 1988). The present *mukhya* for Chaina, Hernikanth and Sangkhola, has a document issued in 1911, detailing the terms under which a large tract of forest[3] was granted to his great-grandfather. The document states that the land was given to the people to use and manage but was owned by the state. Government appointed forest inspectors periodically inspected the use of the forest and could take away privileges if it was poorly managed. The *talukdar*, a government official and village tax collector,[4] regulated the cutting of trees for timber and oversaw the management of other forest resources. The document has a long list of detailed harvesting rules including: only dead and downed wood could be used for firewood and fencing, animal shelters were prohibited and slash and burn cultivation was also illegal. Hunting was limited ("not too frequently"), and timber trees were to be selectively cut. The document states:

> …as long as usable wood is available from branches, the main trunk is to be saved and if not available, then trees can be cut from places—apart from temple areas, roads (paths), rest places, water canals and areas where the forest is thick—random trees can be cut in areas so that the forest does not spoil. Only big and old and mature live trees can be cut. (document from 1911, as read by the *mukhya* in Chaina July 14, 1999)

Decisions about harvesting wood were to be made by the *talukdar* in consultation with the village elders. No money could be collected for timber permits, but it was customary to give the *mukhya* and other village elders gifts of yogurt, beans, rice and milk (interviews with villagers 1999). Finally, and perhaps most importantly, the document gave the *mukhya* the right to exclude other villages from using the forest. The oral histories all confirm that this is the system that managed forests prior to their nationalisation.

At this time, there were also private lands within Pipledi, and large portions of the southern part of the forest had been cleared for cultivation with potatoes, winter wheat and millet by families from Chaina and Hernikanth.[5] High-caste families, primarily from Chaina, built small houses and herding shacks, and moved to the forest during the summer months. These cultivated lands fell within the forest itself, and today old terraces are apparent throughout the southern twenty percent of Pipledi.

In 1918, shortly after the *talukdar* was officially given control over Pipledi, a cholera epidemic ravaged the valley and killed at least 10% of the inhabitants, in some cases

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[2] Mugu District was formed as a separate administrative district in the early 1970s. Previously it was administered from the zonal headquarters of Jumla located to the south.

[3] Pipledi is about one-quarter to one-third the original area of this forest and two other villages were included in the *mukhya's* territory at that time.

[4] *Mukhya* and *talukdar* are roughly synonymous although in many circumstances, the *mukhya* had authority over several *talukdars*. In Mugu, people frequently use the words interchangeably, although *talukdar* is only used to refer to historical arrangements and the modern equivalent is simply called *mukhya*.

[5] At this time the families from Sangkhola worked these fields and the others lower in the valley. They did not have rights of their own to land in Pipledi.

wiping out entire families (interviews in Mugu 1999). As a result, the lands in Pipledi were abandoned as most families did not have enough people to maintain the upper fields. Pipledi continued to be an important source of forest products and summer grazing land, but the fields quickly re-colonized with blue pine (*Pinus wallichiana*) and thick, even-aged stands of trees exist on many of these old terraces today. Subsequent land surveys reclassified these terraces as forest land, thereby stripping their owners of private property claims.

Management of forests under the *talukdar* prevailed until 1957 when the forests were nationalized in Nepal. This date is universally cited by villagers in Chaina and Hernikanth as the date when they lost control over the forest. It is likely, however, that *talukdar* management continued until somewhat later because many people who could give me details about forest management under the *talukdar* system were in their early 40s in 1999. Also, according to the current *mukhya*, the forest was first brought under state control in 1967, and all old documents pertaining to community management of forests were declared invalid at that time. When the land survey was done in Mugu in 1976, all land with trees on it became property of the state, dispossessing the people of Chaina and Hernikanth from their land within Pipledi. (interview with the *mukhya* in Chaina February 22, 1999). The loss of these terraces was a significant event for the villagers and one which was important for catalysing their interest in community forestry years later. The role of the *mukhya* (formerly *talukdar*) as village leader was slowly eroded during this time due to his diminishing control over forests and other village resources. Finally, in 1981 his role was abolished in Mugu and confined to the collection of taxes only.

The oral histories give rich accounts of past forest conditions and use. They tell of forests under the talukdar system that were dense, wild (*jangali*) and plentiful around 60-70 years ago. Most significantly, one 74 year old man tells of forests large enough to obtain timber trees for building his house that extended approximately 215 meters lower down the valley than they do today. For most people, the forest was a frightening place when they were younger because of wild animals, other people and the dense, thick trees. Today women continue to be reluctant to go to the forest alone for fear of men, spirits and animals, but most people say it is not the wild (*jangali*) place it once was. Many spoke of how much easier it is to collect key resources although there are key differences in the narratives about this across caste lines.

> Andrea: What do you remember about the forest when you were 10-15 years old?
> Thakuri man: About the forest, when I was 10-15 years of age the forest was very close. People like us used to go to the forest to collect fire wood. At the age of 10-15 years it was very easy for us to collect firewood there in that forest and we didn't need to cut live (green) trees…There were a lot of wild fruits such as *bhel* and *chuthro*... There were less people [so there was] sufficient grass in the forest for the cattle to graze and a lot of fodder grass was available. (interview with a Thakuri man July 18, 1999)

But most often, when asked to describe the forest, interviewees responded by detailing management practices, for example:

Andrea: What do you remember about the forest when you were 10-15 years of age ?

Chhetri man: We were small kids. We used to a have village headman. During those days we had to get permission from the headman. We had to get permission for foliage, fodder grass and wood…. [we would] take grams, lentils, curd as royalty.

Andrea: What do you remember as being the best aspect of the forest?

Thakuri man: I remember the best as being that everyone (each village) had their own forest. But people watched the forest very carefully, there was protection. If someone asked to cut four trees they didn't let them cut five… If we told someone they could cut four trees in Pipledi, on a fifth tree, they didn't even touch a branch. (interview with a Thakuri man July 16, 1999)

When interviewing people about the history of the forest, I often had to ask follow up questions to obtain responses about the ecological aspects of the forest because people immediately began comparing the *talukdar* or national forest management regimes to community forestry. For example,

Andrea: think back to when you were 10-15 years old, what was the forest like?

Kami woman: Our Sangkhola's forest was that one (Pipledi) from a long time ago, it was our three village's, it wasn't anyone else's…

Andrea: How was the forest? Was it thin or thick?

Kami woman: At that time it was thick, it has become ruined (*kaattama*). Now there are the saws, they have ruined the forest. (interview with a Kami woman 9 July, 1999)

Initially I thought part of the problem was my questions, but sometimes people would respond by talking about ecological conditions and other times even if I did ask specifically about the trees and other plants, the answers would be either very cursory or solely about management. For instance, one Thakuri man brushed aside my question about the forest as it had been and discussed the present (community forestry) management.

Andrea: In your recollection, what did you like least about the forest?

Thakuri man: [He answers in a different vein] What I like is that we have our own forest, with its clear boundaries. What I do not like is if we do not have many rights to protect the forest. There isn't anything bad to say.

But, what we didn't like is that after the Rastriya ban (National forest) was formed, no one protected the forest and there was a lot of loss. (interview with a Thakuri man July 16, 1999)

This response was part of a series of questions wherein I tried to elicit more information about historical ecological conditions but he was more interested in talking about community forestry and continued to focus his responses on that. Similarly, many people segued from the *talukdar* system, to the national forest, to community forestry in one breath.

Chhetri woman: Before, the forest was really big, there were big trees and then all of them were cut. If we asked why they were doing that, they would say, 'it's the government's forest.' At that time we could not say anything, 'do not bring baby goats here,' we could not say that…. Before, people were careless, they would cut seedlings, cut branches… we thought, 'oh, we also have sons, they need [the forest] are we going to do this?' And we saved the forest, for that we created our own forest. (interview with a Chhetri woman June 14, 1999)

Thus for the villagers, the forest is not simply a collection of trees or a place to which they can go for resources, it is the confluence of the trees, resources, management authority, and the harvesting practices of themselves and others. It is meaningless to speak of the forest without referring to these other aspects as indeed, the very definition of 'forest' in the local vernacular carries an implication of usufruct rights, uncultivated land and a place where fodder, grazing, fuel and if the trees are big enough, timber are available. In many ways, theirs is a relational understanding of the forest such that any description of it must include at least social-political if not ecological dimensions and their sense of whether resources are plentiful or not is closely linked to the extent to which they feel in control of access rights and intensity of harvesting. Thus one Kami woman said,

Before there were enough pine needles and other things. There was a lot of *laligurans*, *okar*, *utis*, *aru*, *banche* (rhododendrons, walnuts, alder, peaches and oak). Wherever you went, there was forest. We could not eat all the peaches we got, we had to throw some away. It was really nice, there was a big forest. *Hajur* [a formal form of you], now what to do? There is not a forest like that anymore. They [people from Chaina] dominate us (*hepchhin*), they do not give us permits, we cannot even talk to them. We always have to do their work. (interview with a Kami woman March 3, 1999)

I spoke to her soon after an incident where the Chaina women caught the Sangkhola women harvesting leaf litter out of turn and thus her sense of being dominated was particularly acute. But other men and women from Sangkhola also lamented the loss of the National forest system because they had found it easier to transgress the rules and avoid paying for key resources. For them, resources were 'easier' under the national forest because they did not have go through the higher caste people to get them even though they can see resources regenerating now.

Regardless of their perspective, all respondents wove together narratives of ecology, access to resources and comparisons between the old system and the new in their oral histories. Such a forest is difficult to map because these systems of control do not lend themselves well to spatial visualizations (see also Nightingale 2003a). The people who did offer to draw maps of the old forest, were careful to point out which areas had been subject to the most change in terms of management, which was often implicitly (but rarely explicitly) linked to changes in forest cover.

The origins of community forestry

Another aspect of the oral histories also highlights the ways that the 'forest' can vary depending on people's positionality. The stories that people tell about how the community forest came into being are closely linked to current interests people have in the forest, thus in some sense they are told in relation to different forests. These interests are bound up in ecological conditions and people's livelihood strategies and therefore it is useful to look at them in more detail. In this narrative I pay close attention to different knowledges of the forest but also how these knowledges are employed for strategic interests and thus mutually constitutive of social relations of power within the group and between the group and the DFO.

The prime motivation for starting the community forest seems to be the degrading ecological conditions in Pipledi. User-group members talked passionately about how Pipledi was overused after the nationalization of the forests, primarily because they could not exclude outsiders and regulate the use of resources. Yet different groups of respondents, generally falling along gender, village and caste lines, emphasized their roles in initiating the process differently. I was told several contrasting narratives, none of which could be conclusively corroborated. This ambiguity is representative of the struggles over social relations and claims different people make concerning control over the forest. By claiming responsibility for initiating the community forest, people assert their own interests and rights to control and manage it. They make these claims by demonstrating knowledge of ecological degradation, scientific forestry and development, and in the case of the lowest castes, by claiming ignorance of these thereby allowing them to behave as they see fit (see also Nightingale 2005).

According to the Thakuri women, the community forest was formed at the initiative of the community—specifically Chaina.

> Long before, when our forest had finished [was degraded], we had the idea [to protect the forest]. Then we heard on the radio about other places like Rolpa [a district in Nepal which has community forestry]. Three rangers and Chaina, Hernikanth and Sangkhola got together and made the decision. Pritivi [a political leader] helped a lot. At that time the committee was 13 people including 4 women. When they were in community forestry meetings, the men would applaud the things the women would say. [The woman speaking clapped her hands, demonstrating.] They thought our ideas were good. The men were educated (*paDhaai lekhaako*), we were not, so we needed both men and women for the community forest. (interview with a Brahmin woman February 20, 1999)

The Chaina women emphasize their role in the formation of the user-group. They complained that the men did not know how to manage firewood collection and had it not been for the women, there would have been permits for that too, something which they collect almost daily. Here they are making claims to expertise in managing the extraction of forest products, but they make it clear that they could not handle the administrative aspects of community forestry. Legally, the group must develop a written management plan and keep accounting records to take control of daily management. The women are not literate whereas the men are, so both these kinds of knowledges were seen as important for producing the community forest.

The Thakuri men, in contrast, say they heard of the program from the forest rangers and that Pritivi (a political leader from Chaina) persuaded the others to form the group. "The DFO, Lal Narayan Singh, told us about CF and helped to start the process." (interview with a Thakuri man June 12, 1999). Another man said, "at the beginning we did not know anything… One day he [Lal Narayan Singh] asked all of us literate people (*jaana maanche*) if we want to take our forest. We did not understand, but he talked with our older brother, [Pritivi] about this. After that our older brother said, 'OK, we do not understand, but we are ready to try it.'" (interview with a Thakuri man July 4, 1999), According to these high-caste mens' accounts, the District Forest Officer was the person who originally promoted community forestry and the villagers were reluctant to trust him. It was the wisdom and foresight of one of their village leaders, Pritivi that allowed them to accept the program.

In these narratives, there are two important threads. One is the question of who learned about community forestry and who was willing to try the programme. The women all gave the men credit for convincing them it would be OK but do claim independent knowledge of it (from the radio). The other thread is that of who understood what community forestry might mean for the community and how to implement it. The women insist they made very important contributions to the development of the management plan even without being able to physically write it. Theirs is a practical knowledge, embedded in their daily use of the forest. The men, in contrast, are careful to emphasise that the DFO was the expert and that the village leader was the key person with the foresight to try the programme but none of them really 'understood' what it meant. In many ways they portray themselves as lacking knowledge both of the programme and of managing the forest itself (Nightingale 2005).

These claims about knowledge and a lack of it are integral to how people seek to position themselves in relation to various kinds of authorities. The men have a vested interest in cultivating good relationships with the DFO staff and to do so, they need to be appropriately deferential and make it clear that they see themselves as 'below' them. But importantly, they also do not need to prove (to me or anyone else 'outside') that they are the rightful managers of the forest, their literacy skills, high-caste status and gender ensure that claim under local cultural norms (Nightingale 2005, Nightingale 2006). The women in contrast generally have few direct dealings with DFO staff and have a greater need to emphasise their knowledge and thus claim to manage the forest in part because they have become largely marginalised from the committee management process (Nightingale 2002). Many women stated that women's influence on the committee has deteriorated over time as the leaders have become more entrenched and disputes between political parties have taken precedence over other alliances and issues within the group.[6]

The Kami men and women essentially corroborate the Chaina men's narratives, but they simply credit Pritivi with starting the process, and do not provide any details. It was their trust in and deference to Pritivi's leadership that allowed the program to begin. I think their reluctance to give me details about it not only reflects their marginalization during the entire formation process, but also their reluctance to trust

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[6] Political party allegiances have become a very important source of conflict within the group Nightingale, A. J. 2001. A 'Trialectic' of Community Forestry Management in Mugu District, Western Nepal: Power, Cultural Meanings and Ecology. Doctoral Dissertation, University of Minnesota..

me with too much information. I found it difficult to elucidate a distinctive Kami perspective on many community forestry issues which I believe reflects the difficulties I had in developing relationships with them and should not be taken as an indication of their lack of knowledge (see also Nightingale 2006). It is also important to recognize that a political leader of Pritivi's standing historically would have controlled the forest, and the Kamis believed they could not contest his authority over it; therefore it is not surprising they did not seek to do so to me.

The Chhetris from Hernikanth (men and women), however, do tell a different narrative. They emphasise the role of a man from their village who saw publications in the DFO office and approached the DFO staff about forming a group. In an interview one man said, "In the beginning, I was at the DFO office and I read about community forestry in a magazine that was on the accountant's desk. I picked it up and asked the accountant what it was about. The accountant explained it," (interview with Hernikanth man June 14, 1999). Another said, "Actually our village is the only one to start this [community forest]. It was the secretary and the teacher's father first, after that Chaina found out about this and they made Pritivi [from Chaina] the chairman. We ourselves started this community forest in the beginning," (interview with Hernikanth man July 20, 1999). It was only later, according to this account, that Chaina's community forest and Hernikanth's were joined. In the first few months, Hernikanth and Sangkhola were said to have had a community forest that was separate from Chaina's. No one from Sangkhola or Chaina professed any knowledge of this initial arrangement.

This claim is very interesting, because I believe it is related to current struggles within the group and the desire of people from Hernikanth to take over managing part of the forest independently. People in Hernikanth continue to rely heavily on animal husbandry as a source of subsistence and cash and believe that the forest is not being managed sufficiently for grazing. The inventory work I did corroborates this, as the current management practices are largely targeted at producing good timber rather than grazing vegetation.

The Hernikanth women also discussed the role of the man from their village in forming the community forest. Like the women from Chaina, they pointed out the importance of their own knowledge, but they framed it somewhat differently than the Chaina women, acknowledging more fully their own initial reluctance.

> We were afraid. Women scolded their husbands and asked them why they were forming the community forest and the rules [in the way they were]. The men gave their wives a lot of trouble. The men didn't know how to manage the firewood, they wanted to have permits for that too. The first time that they wanted to do this, the Chaina, Hernikanth, Sangkhola women who didn't understand scolded their husbands. Not all of us [laughs], but it took some time for some women to understand. Now we all understand. (interview with Hernikanth Chhetri woman June 14, 1999)

This quote is difficult but I interpret it to mean that the men did not have a good grasp of appropriate harvesting rules, and that the women did not appreciate the *value* of community forestry which produced conflict between husbands and wives. The

Hernikanth women present a rather self-deprecating image of themselves as lacking understanding. They equate understanding with development, implying that now that they understand, they have progressed and they recognize the importance of a program like community forestry (see also Pigg 1996). Yet they simultaneously highlighted the importance of their contributions to the community forestry process and their knowledge of harvesting practices for key resources, especially firewood and leaf litter (mentioned by other interviewees). In sum, they present themselves as having gained understanding of forest protection through the community forestry process, but also insist on the relevance of their prior knowledge for managing the resources they work with everyday.

Thus people from Hernikanth, by insisting on their knowledge and activities in initiating community forestry, assert their claims to Pipledi and its management. These claims are very important. It emerged later that many people in Hernikanth would like to divide Pipledi and manage a smaller piece themselves. Several Hernikanth men mentioned that they would like to separate from the larger user-group, saying that the people of Hernikanth were more cohesive in their ideas and they could do a better job managing a smaller forest. The women mentioned that there is not enough grazing land and they are concerned that all the re-growth of blue pines in Pipledi will not help create more fodder (they are 'correct' on this point from a forestry perspective). One way to promote their agenda of splitting the forest was to emphasize to me their role in the process, and establish their temporal precedence in forming the community forest.

Questions of expertise and control were not confined to the formation of the group. Different kinds of knowledge of forests and in particular, questions of expertise were central to daily conflicts and decision making forums when I did my fieldwork. I have written extensively about this elsewhere (Nightingale 2004) but here want to pull out a few details. As mentioned above, the high-caste men in the user-group have a vested interest in cultivating a strong relationship with the DFO staff. Historically such relationships have proved useful to them and many see connections with government employees as a potential source of jobs, support in local disputes and other intangible benefits that may accrue later. One way in which they seek to curry favour is by demonstrating that they are educated and 'developed' (Pigg 1996). Most often they do this by invoking understandings of scientific forestry and deferring to expertise when arguing for particular management strategies. A good example of this was evident in the ways high caste men described the contribution of international experts and the DFO to community forestry. As one Brahmin man said, "Until 2034 [1977] all the forests were Rastriya ban. Then scientists, specialists, and scholars came from different countries and thought that the forest was for the people. And it is better to give the right to the people to conserve their own forest. If you put it in their hands it *is* better," (interview June 12, 1999). Another Thakuri man said, "The DFO-sahib taught us all the instructions [for community forestry], now we think our Pipledi forest is better than all the other forests, he taught us the way," (interview with a Thakuri man July 4, 1999). Similar to the narratives above, high-caste men very often negated the importance of their own knowledge and rather utilised discourses of teaching and subservience to indicate the higher status and learning of the DFO staff and the international experts who advise them. Yet the high-caste men, by appealing to their trust and understanding of the DFO's forestry practices, are able to assert their superior right to control the user-group.

Ecological Elements of Forest Dynamics
The narratives above are one way to understand the history of community forestry in Mugu. I now want to provide a different kind of analysis using aerial photo interpretation and a vegetation inventory. The forest that emerges is very much an 'ecological' forest and most issues of control, access and politics are absent. Yet, it is the following kind of analysis that is most often used to evaluate whether Nepal's forests are 'improving' and to develop policy for future management (His Majesty's Government of Nepal 1999). I want to contrast these different 'forests' to highlight the importance of integrating different kinds of analyses and to show some of the cultural constructions of knowledge.

Forests in this part of Mugu are clearly in transition due in part to the establishment of the National Park and the community forestry programs, both of which have changed forest use practices. Areas within the park have regenerated and areas outside it show both clearing and regeneration (I will discuss this in detail below.) Forest dynamics are also driven by a variety of ecological factors, but it is difficult to assess their relative influence without detailed historical data to calculate the growth and recruitment rates of forest species. Historical ecological work is challenging in Mugu as virtually no detailed vegetation inventories have been done for the Karnali Zone with the exception of the present study. The oldest available aerial photos were taken in 1978. They do provide some data on forest cover change, but their scale is so small, 1:50,000, that identification of crown cover species is impossible and the topographical distortion is so extreme that calculations of density are outside the scope of this study.

The aerial photo interpretation was done by mapping areas of different vegetation types onto a base topographical map. I mapped areas of forest (greater than 50% canopy cover), partial forest (less than 50% canopy cover), and open areas. I had some poor copies of the 1996 photos in the field with me and ground truthed them to be sure that what I categorized as the same on the photos were also the same on the ground. While the photos are from 1996 and I was in the field in 1999, forests do not change that quickly unless they are cleared, therefore in general, the photos and the landscape corresponded. I plotted these areas onto a base map, compensating for the distortion in the photos. The base map and the two layers were then scanned and rectified in ArcInfo by Dr. Mark Lindberg, the University of Minnesota cartography lab director, allowing calculations of area and the cartographic presentation of the data.

The base map is the 1964 Indian Army survey map and is not very accurate, particularly the contour lines. New topographical maps for this area were in the process of being made but not available in 2001 when this work was completed. This made the aerial photo work quite difficult as areas could not accurately be placed in the vertical plane. But given the amount of distortion in the photos, absolute measurements, even after corrections, still contain a wide margin of error. These problems make a calculation of absolute area possible but virtually meaningless and therefore I have reported my results as changes in relative area. These numbers are derived from calculating the area of the polygons on the aerial photo interpretation maps that are in or adjacent to Pipledi. I have included the areas that have regenerated near Chaina which are not technically in Pipledi. I have done my best to

standardize the area I calculated for these numbers so that their percentages are comparable. The total area I interpreted encompasses the entire valley and surrounding hillsides as aerial photo work is generally done on a much larger scale than that of Pipledi alone. Therefore it is total change in different vegetation types that can be measured rather than absolute area. The results of this work are presented in maps 1-3 and table 1.

The oldest photos are from 1978 and thus most improvements would be expected within Rara National Park as those lands have been restricted since 1978. The photos do indeed show that most of the open areas on the eastern side of the lake have filled in with thick forest (see maps 2 and 3). On the ground, one can see even-aged stands of blue pine growing in these areas. The northeastern side of the lake also shows significant regeneration, especially adjacent to Pipledi forest but within the Park boundary.

Closer to the three villages, there is a decline in forest cover in some areas and improvement in others. The area below the lower boundary of Pipledi had been forested in 1978 but in 1996 had been cleared (see map 4). Similarly, the old terraces within the middle of Pipledi abandoned during the cholera epidemics have been recently cleared. When the community forest was established, many families were able to reassert their claims to those terraces and they were reclassified as private. The upper elevations of the forest, however, appear to have become thicker, and areas that were once largely cleared, now show relatively closed forest canopy. Interpreting density on the photos is extremely difficult and unless the change is dramatic, it can be hard to state conclusively that the canopy is thicker. Yet, in comparison to other areas that do not seem to have changed much at all, some areas of Pipledi do seem denser.

Thus in contrast to the generalized premise of THED that forest cover is diminishing, overall, the picture is mixed but shows some improvement. Forest cover has increased by 5-6%; patchy forest has decreased by 3-4%; and open agricultural or grazing areas have decreased by less than 2% (see table 1). The exact percentage of change is difficult to state because of the problems with interpreting density from the photos. I have calculated change based on treating the apparently thinning areas in two ways. In one calculation, I treat it as 'forest' and in another as 'patchy forest' thus the maximum amount of forest increase is 6% while the minimum is 5%. Also, the main forest polygon in Pipledi is contiguous with the Park and therefore some of the forest change observed may be attributed to regeneration in the Park.

Table 1: Per cent Change of Cover Types near Gamgadhi

YEAR	Cover Type	Area (Ha)	% of area ea. type	Total area of aggregate type	% of total area	% change
1978	Forest*	547.7	28.1	547.7	28.1	5.8
1978	Patchy Forest	122.0	6.2	122.0	6.2	-4.0
1978	Agriculture/Open	1282.9	65.7	1282.9	65.7	-1.8
1996	Forest	543.0	27.8	660.1	33.8	
1996	Patchy Forest	44.7	2.3	44.7	2.3	
1996	Clearing	34.6	1.8			
1996	Agriculture/Open*	1213.1	3.0	1247.7	63.9	
1996	Regeneration	95.9	4.9			
1996	Thinning forest	21.2	1.1			
Thinning forest and Regeneration are added to forest for the aggregate change.						
Clearing is added to Agricultural/Open for the aggregate change						
*The total forest area measured here is larger than Pipledi and extends into the Park.						
* Agriculture/Open encompasses much more area than that adjacent to Pipledi,						
but has been standardized so that all that is measured here is change in open area within						
or on the boundaries of Pipledi. The total area remains much larger than Pipledi.						
Thinning forest as 'patchy forest'**						
1996	Forest*	543.0	27.8	638.9	32.7	4.7
1996	Patchy Forest	44.7	2.3	66.0	3.4	-2.9
1996	Clearing	34.6	1.8			
1996	Agriculture/Open*	58.5	3.0	93.1	63.9	-1.8
1996	Regeneration	95.9	4.9			
1996	Thinning forest	21.2	1.1			
Thinning forest is added to patchy forest for the aggregate change						
Regeneration is added to forest for the aggregate change.						
Clearing is added to Agricultural/Open for the aggregate change						
**Areas that have thinned within Pipledi are on the boundary of being 'forest' versus						
patchy forest' and since thinning is not necessarily even across the entire area,						

Despite these difficulties in interpretation, there are areas close to Chaina and Hernikanth that have improved noticeably. An area on the hillside above Gamgadhi, about 20 minutes walk from Chaina has begun to regenerate. It is technically outside of Pipledi (it was included in the aerial photo interpretation), but Chaina and Hernikanth residents manage it as a community forest and are able to exclude outsiders. Similarly, the forest above Hernikanth that had been very thin forest with large open areas now has largely grown in, to the point where in many places on the photos, it looks no different from other parts of Pipledi. Thus the aerial photos show some small improvements in forest conditions, but overall very little change. In this sense they contradict the oral histories which insist that forest conditions have improved dramatically since the establishment of community forestry.

These results only make sense if one considers that in many ways the aerial photos show a different forest from the one the villagers know. As argued above, their forest cannot easily be mapped or captured on film because it includes a host of political, social and material practices that are not necessarily visual. Thus the aerial photos give an impoverished description of 'the forest' that can only be enhanced by the use of oral histories and local knowledges to supplement them (Nightingale 2003a).

In addition to aerial photo interpretation, I also carried out a quantitative vegetation inventory of Pipledi. The purpose was to provide baseline information on current vegetation in the forest, including species composition, stand structure (i.e. the height layers in the forest), stand age, density and frequency of dominant species, and their spatial variations. This work cannot give estimates of growth and regeneration rates because it is the first of its kind for this part of Nepal. At least one other inventory needs to be done, in five to ten year's time, before rates of change can be calculated. An inventory of a blue pine (*Pinus wallichiana*) dominated forest was done in Kuamon in India in 1986 (Bargali 1986, Singh, Adikari, and Zobel 1994) and those data can be compared to the present study to give an indication of whether the forest falls within the range of values found elsewhere, although micro-climate conditions are likely to be significantly different making such comparisons of dubious value.

The vegetation inventory measures a number of qualities of the forest, particularly of trees. Most of these measurements were developed for the commercial timber industry thus when analyzing a 'subsistence' forest, it is difficult to know which measurements to use and which have much value for understanding a forest with this kind of use. The inventory was designed to be a semi-random, plot-based survey of the forest, gathering both quantitative and qualitative information on the vegetation (Avery and Burkhart 1994, Moore and Chapman 1986, Southwood 2000). The plot diameter was 12.6 meters which made every plot 1/20 of a hectare and thus one plot per hectare was done to provide a 5% sample. The starting point was randomly chosen and plots were then laid out systematically along 320 degree transects (the uphill compass direction; 140º downhill) originating at that point (Avery and Burkhart 1994, Moore and Chapman 1986, Southwood 2000). The transect vector was designed to be perpendicular to the long axis of the forest, and basically ran straight up and down the slope.

All trees over 10 cm in diameter within the plots were recorded by species and their diameter measured at breast height (dbh). Tree heights were estimated and grouped into five classes, <1 m; 1-6; 6-12 m; 12-20 m; >20m, and each tree was assigned a height class (trees rarely fell at the class boundary). Crown cover was also estimated and put into four classes, 0-25%, 26-50%, 51-75% and 76-100%, indicating percent coverage of the ground on the plot. For each tree, human disturbance was recorded along with probable cause (i.e. lopping for firewood), the location of fire scars, and other relevant characteristics such as insect damage or a broken top. We also cored the largest and an average sized tree on most plots. Cores were not taken on some plots either because there were no appropriate trees, or the trees were small enough to count the whorls (places where branches come out) to give a reasonable estimate of age. Almost all of the cored trees were blue pines (*Pinus wallichiana*) because of the species composition of the forest. Our primary intention with these data was to get a decent sense of the age of the stand and it was not necessary to take cores on every plot to achieve this goal.

Because of the large numbers of seedlings (dbh < 1 cm) they were counted only within 2 meters of plot center; saplings (dbh > 1 cm) were counted on the entire plot but their diameter was not measured. Finally, a qualitative estimate of the under story species abundance was done and an attempt was made to identify most plants. Abundance was placed into five categories: not found; scarce; occasional; frequent; and abundant, relative to other under story species on the plot. Identification proved

to be too time consuming and difficult for a complete survey, so I concentrated on the dominant species. Since I was primarily interested in the species composition of trees, total density and approximate age of the stand, the under story non-tree species were not as important to this survey. Ironically, several of the plants used for spices or medicinal purposes could not be identified, and the specimens we tried to collect moulded in the monsoon weather before they could be properly dried for identification in Kathmandu. A complete botanical survey awaits a more highly trained botanist.

The measurements from Pipledi that could be compared to the Kuamon study were primarily basal area and density. Mean basal area is one of the key measurements for commercial forestry. This measures the average cross-sectional area of tree stems at breast height (dbh) and can provide a measure of the total board feet of timber in the stand. While villagers do have a need for timber, it is also a useful measurement for comparison with other stands and to understand aspects of tree growth when other inventories are completed in the future. In Pipledi, the mean basal area per tree is 0.07 meters squared per tree compared to 0.05-0.08 found in the Kuamon study, indicating that the areas of the tree stems are within the same range. The mean basal area per hectare, however, is outside the range at 12.7 meters squared per hectare compared to 27-45 in Kuamon (see table 2). Similarly the density of trees in Pipledi is 169, well below the range found in Kuamon, indicating there are fewer trees per hectare in Mugu. The reasons for these discrepancies cannot be determined without further study, but are most likely due to the degree of human disturbance and precipitation. The stands in Kuamon are described as "old growth, apparently natural communities that are self-maintaining," (Singh, Adikari, and Zobel 1994, p. 405), whereas Pipledi is heavily harvested. Precipitation in Kuamon ranges between 1,000 and 3,000 mm per year, compared to the 700 mm per year in Mugu, and increased moisture would cause increased growth rates in trees[7].

Table 2: Comparison of Basal Area and Density of Pipledi to a Forest in Kuamon

Study	Altitude m	Mean Basal Area m2/tree	Total Basal Area m2/Ha	Density #trees/Ha	Species richness (total # tree species)
Bargali 1986	2225-2585	0.05-0.08	27-45	540-690	n/a
Pipledi	2475-3275	0.07	12.67	169	10

The vegetation inventory, in the absence of a follow up study, thus gives a rather thin picture of the forest. Essentially the average cross-sectional area of each tree is roughly similar to that of the Kuamon forest, but the total number of trees in a given area is lower, making the total basal area per hectare significantly lower.

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[7]See Whiteman, P. T. S. 1985. The Mountain Environment: An Agronomist's Perspective with a Case from Jumla, Nepal. *Mountain Research and Development* 5:151-162. for the influence of precipitation and soil moisture on agricultural productivity in western Nepal. This study indicates that moisture and precipitation are very significant variables effecting plant growth.

The inventory does give some idea of the diversity of trees and other plants found in the forest, however. Indeed, I was surprised by the number of tree species (10) as the initial impression of the forest is that it is largely composed of oaks, rhododendrons and blue pines, yet it is substantially more diverse than that and in places dominated by other species. A forester looking at this data would see a rather thin forest relatively typical of a dry, alpine micro-climate, without huge potential for commercial timber production. The blue pines do regenerate quickly after a disturbance and primarily grow straight and tall. They make good timber, but are less useful (yet widely used) for firewood. There is a relative scarcity of oak seedlings which is cause for concern because the villagers rely on the oaks for fodder.

Overall, this kind of knowledge of the forest is skewed towards tree species and specifically information on mature trees and how much mass they contain (i.e. basal area, height, crown size). In the present form, it does not reveal much about harvesting pressure and it certainly does not give any information on who is controlling the forest. Some information about management strategies can be obtained, however. For example, there are fire scars on the outside and deep within the cores of many of the old trees, indicating that large fires have been frequent. The relatively even aged stands and large number of seedlings and saplings of pine blue similarly are indicative of the recent fire-suppression practices of the user-group. There is more seedling survival due to the lack of fire since the advent of community forestry. Yet making these kinds of statements about management is predicated on having some information about current practices and not easily read from the forest data alone.

Perhaps most importantly, both the aerial photo data and the vegetation inventory produce a forest that is clearly bounded in space and time. They help to give the impression that the forest is a 'place' and while a changing place, the boundaries of it are not, at least in terms of what is called 'Pipledi'. One can examine changes in forest density and discuss areas that have been cleared but this is done in reference to the place itself, as if there is some kind of blank cartographical space upon which trees and other species can be mapped. This is in stark contrast to the villagers' accounts which merge the place with the politics; boundaries and forest qualities changing with the speaker and the time period under discussion. I want to conclude now by exploring some of the implications of these contrasts for development practice and the theoretical ambivalence with which I began this paper.

Conclusion
This paper has traced the history of community forestry in reference to a particular place in Mugu district, Nepal, pulling out different stories of the forest and its management within that history. Questions of knowledge are paramount in debates about forestry particularly as initial proclamations about the crisis for Nepal's forests have been slowly debunked by both politics and science. Studies on forestry revealed that many places did have forest management regimes in place, whether or not state sponsored oversight was effective (Gilmour 1990, Messerschmidt 1987) and thirty years on, Nepal continues to have a reasonable amount of forest cover, although estimates of its change have been contested (His Majesty's Government of Nepal 1999, Zurick and Karan 1999). In addition, geomorphologists and mountain experts reassessed the soil erosion and land slide crisis and concluded that in an area of significant plate uplift like Nepal, unstable slopes and corresponding soil movement

are 'normal' (Ives and Messerli 1989, Thompson and Warburton 1985b). These studies have contributed to an overall change within many of the physical sciences which have begun to theorise ecosystems as dynamic and characterised by disturbance, rather than stability. Within these theories, human activities are seen as a more natural part of ecosystem change and indeed, as very important agents of change (Berkes and Folke 1998, Botkin 1990). Critiques of THED have been an important part of these shifts in thinking. Yet what ecological science seems to fall short of embracing, is that this kind of understanding requires that we reject the idea of human 'impacts' on ecosystems and rather seek to explore the interrelationship between politics, culture and ecology (Berkes and Folke 1998, Botkin 1990, Braun and Castree 1998b, Cronon 1996, Haraway 1991, Haraway 1997). Some critics of THED have made similar arguments (Thompson and Warburton 1985a), but most of this scholarship continues to work within impact or feedback systems frameworks that cannot capture these interrelationships adequately.

In the narrative I have traced here, I have tried to take these insights seriously, and highlight how in many ways different forests are produced by the ways people understand community forestry in Mugu. In my initial study (Nightingale 2001) I sought to integrate the oral histories, aerial photos and vegetation inventory into a seam-less whole. I used them in relation to each other in a dialectical fashion, assuming that each was embedded within the other and thus wove them together throughout. This produced a gratifying analysis that allowed me to highlight the importance of control and access to the forest for villagers and to explain how forest conditions had in fact improved dramatically when the aerial photos seemed to negate that (Nightingale 2003a). In addition, it demonstrates some of the successes and failings of community forestry as disputes within the user-group are quite literally played out on the ground, causing forest fires, motivating a coalition of members to extinguish them, or resulting in the cutting of green wood for firewood (Nightingale 2002, Nightingale 2003b).

The history I have traced here, however, begins to raise other questions about whether assuming an *a priori* existence of 'the forest' is justified theoretically. In some respects, of course, a study of community forestry would expect to occur in reference to a forest(s) at some point, even if only implicitly through an investigation of user-groups. The forest also provides a neat conceptual anchor against which changing social relations, ecological dynamics, the politics of management and daily harvesting practices can be mapped both cartographically and representationally. It is the place to ground the study, quite literally.

Yet as I've demonstrated above, the place itself cannot be taken for granted. Its boundaries, qualities and meaning shift with each method used to explore it and for different interest groups requiring one to question the existence of *a* forest. What then, is the forest? Is it a collection of tree species of importance because of the resources it provides? Or are the resources, politics of access and control, management practices, scientific assessments and daily conflicts all required to produce and maintain the forest? It is the emergence of the culturally constructed category(s) and place(s) called the forest that can only be explained by exploring the interrelationships between knowledge, practice, politics and ecological change.

The villagers themselves, while clearly defining a place called the forest, refuse to separate the ecological conditions from the management practices and politics of control. For the higher-castes (Brahmins, Thakuris and Chhetris), they see the current situation as substantially better than the national forest, not because poaching has been eliminated (it has not) and not because there are substantially more resources, but because now they have control over them. They can curtail poaching or demand compensation when offenders are caught, and they have a far greater sense of security knowing that they can decide how and when to use the resources that are there. For the lower-castes (Kamis) they are not as convinced that the present situation is better. They felt more in control and less dominated by the higher-castes when it was only the DFO guard they had to worry about rather than all the other members of the user-group. In these incidences, the forest has changed and they cannot talk about how things have shifted without referring to both the ecological and social-political aspects of their 'new' forest.

In this paper I have deliberately separated out the social-political and ecological accounts of the forest to highlight the different kinds of knowledges that are brought to bear on one tract of land. The 'scientific data' (aerial photos and inventory) each provide one account of the forest. Within this work, there are not multiple narratives to explore and rectify, as they have only one story to tell each. The oral histories, in contrast, can be rectified with the other two data sets, but only incompletely. Different groups of people tell somewhat different stories and thus how it is that the forest can be much better and worse at the same time emerges from this account. These contradictions highlight the complex relationship between knowledge, daily practice and the processes of development evident in community forestry. Community forestry has indeed provided resources for the poorest of the poor and engendered a strong conservation ethic within the user-group in Mugu. Development processes have produced forests both within Mugu and nationally and drawn many people into development agendas in contradictory ways. Knowledge of forests and how these knowledges are told, mapped and contested are central to the production of 'developed' and 'undeveloped' people within Mugu and thus both ecosystems and social politics are at stake in community forestry. This account then, goes someway further towards refuting the validity of THED because both the knowledges used to understand ecological change are not consistent but also because it is clear that some losses and some gains as well as some losses have been made within the socio-natural complex of forestry in Nepal.

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