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Ayurveda and Nature in Nepal

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Abstract

Nepal's unique partnership between Ayurvedic medical and environmental communities is the context for exploring concepts of nature present among biodiversity conservation developers, Ayurvedic practitioners, and rural farmers and artisans. *Ayurveda and Nature in Nepal* extends prior research on farming, gender, caste and Ayurveda to Nepali understandings of human-nature relationships, and initiates new inquiry on biodiversity conservation, gender and nature. It seeks to understand how human-environment orientations are complementary, conflictual, and mutually influential in responding to modernizing forces and to achieving the development goals of health care improvement and biodiversity conservation. The research advances medical anthropological knowledge by synthesizing it with new paradigms in environmental anthropology, particularly the dwelling perspective and new political ecology.

Ayurveda and Nature in Nepal

The Problem Ayurvedic doctors and rural farmers and artisans in Nepal acknowledge and actualize a caring devotion for medicinal plants (*jaDibuti*, 'healing entities from roots') corresponding to what environmental anthropologist Kay Milton has identified as a human-environment orientation of "loving nature" common to communities directly dependent on natural resources for economic, medical, and other needs (Milton 2002). Traditional medicine provides health care for 80% of the world's population in developing countries (Chaudhury 2001) and the WHO describes Ayurveda as the 'national medical system' in Nepal (WHO 2001, 137). Ayurveda and its variants, from local herbalism to lineage practitioners to institutionally trained physicians with advanced Ayurveda medical degrees, are the most common and popular forms of healthcare in Nepal, for Ayurveda provides a theory of health and illness that is supported by people's extensive knowledge of medicinal plants (Cameron 2008, 2009c). Part of

social networks, medicinal plant knowledge is shared with family and neighbors, and plants are respected as gifts from the gods. Ayurveda explicitly acknowledges that plants contribute to the growth and well-being of humans within an ethos (shared, I argue, by lay Nepalis) that might be interpreted to claim that humans and plants are different forms of the same phenomenon.

This human-environment orientation contrasts sharply with scientific environmentalists working to protect Himalayan floral biodiversity. National and international conservation organizations working in countries like Nepal use language of an objectified, discrete nature opposed to human culture in trying to convince people to protect natural resources like forests, waterways, non timber forest products (NTFP), and endangered animals. Among developing countries, Nepal is a leader in experimenting with participatory systems of forest governance, and with the success of sustained management of *trees* in forests Nepali environmentalists have now turned their efforts to sustaining the biodiversity of *non timber forest products* like medicinal plants and wild foods. WWF-Nepal estimates that 1500 plant species are used medicinally in Nepal; these and plants harvested for cosmetics and nutritional supplements are often over-collected and some are in danger of extinction. Here, unsatisfactory conservation outcomes are linked to poverty conditions that compel harvesters to trade outside of sustainable parameters (Adhikari 2005), incomplete knowledge of local human-nature orientations (Campbell 2005), civil war (Baral et al 2005), and non participation of key user groups like women and dalit artisans (Agarwal 2001; Cameron 1996), resulting in access bans to some forests. In the research, I will examine differing orientations to nature in Nepal among environmentalists, Ayurvedic practitioners, and rural farmers and artisans, and the role such orientations play in self-reflexive, complementary and conflictual interactions among these communities in responding to modernizing forces and in producing change.

Ayurveda and Nature advances medical anthropological knowledge by synthesizing it with new paradigms in environmental anthropology, to examine Nepal's unique partnership between medical and environmental communities. Anthropology in the 'environmentalist age' (Campbell 2005a, p. 285) has found itself returning to the nature-culture paradigm once thought to be too essentializing and Eurocentric for cross-cultural comparison (MacCormack and Strathern 1980). Now, however, global circulation of environmental discourse and development finds anthropologists working in communities being persuaded from many sides to protect their biophysical resources. For anthropologists the important problem here is how culture is being leveraged to achieve certain objectives related to a presumed kind of nature; the old paradigm of 'culture' as an obstacle to economic, educational, health care and other kinds of improvements is reincarnated as potentially useful 'indigenous knowledge' and 'local knowledge' in global conservation efforts. More so than in prior development eras, though, nature is explicitly rendered as the development objective, best handled by the Euro-American expert knowledge of technocrats, bureaucrats, and development planners. Yet the environmentalist's nature is, I propose, unrecognizable from the perspective of rural communities. The research will expand my prior work on farming, gender, caste and Ayurvedic medicine (Cameron 1996, 1998/2005, 2008, 2009a-d) to take a new look – aided by innovative models of human-environmental interactions – at Nepali orientations and embodied subjectivities of human-plant relationships.

In response to wide-spread problems in environmental development (for South Asian examples see Greenough and Tsing 2003) anthropology has proposed new models of human-nature relationships that move beyond the fundamental tenet that the biophysical world we intellectually apprehend as 'nature' and 'environment' is culturally produced, to show how fields of power alter the nature-culture divide, and to overcome the relativism projected by dissonant

and incompatible ‘nature’ discourses. One promising model developed by Tim Ingold and compatible with the Nepal context is that human-nature relations are an on-going *engagement* - rather than a fixed set of concepts - that he calls the ‘dwelling perspective’. The dwelling perspective begins with the assumption that people always exist in an environment of humans and non humans, are committed to the relationships entailed therein, develop orientations to and experience subjective states resulting from the human-environment context, and continually reproduce the conditions of their existence in interaction with their environment (Ingold 1992, 2000). Cutting across the barrier between human and non human, the model implies openness to the world parallel to the fluid, dynamic and referential qualities described for South Asian culture (Daniel 1987; Lamb 2000; Marriott 1989). The research will apply Ingold’s model but also understands that human - nonhuman relations exist in fields of power. *Ayurveda and Nature* will probe orientations to nature from Ayurvedic doctors, conservationists, and rural farmers and artisans involved in NTFP biodiversity conservation, and will identify situations in which orientations are contested and/or modified as a consequence of social power and modern forms of scientific power. *Ayurveda and Nature* extends my prior research to Nepali understandings of human-nature relationships, and initiates new inquiry on biodiversity conservation, medicine, and gender and nature in modernizing contexts.

Ayurveda’s Nature Ayurvedic medicine provides a relevant starting point from which to examine human-plant relationships because it presents an elegant and simple application of the philosophical idea of *prakriti*, nature, to the human body that leads one conceptually to the terrain of people's lived orientations to plants and to embodied subjectivities of human-environment interactions. Ayurveda draws its therapeutic language from a set of natural images by which to situate humans within the phenomenal world, to further Ayurveda’s ‘natural’

typologies of people, and to advance its theories of illness causation, progression, prognosis and cure. Classical Ayurvedic medicine detailed in the ancient medical texts (*Carakasamhita*, *Susrutasamhita*, *Astangahrdayasamhita*) derives from Samkhya natural philosophy in theorizing that the living body is comprised of natural characteristics in the form of three humors, *dosa/tridosa*: wind (*vata*), bile (*pitta*), and phlegm (*kapha*), substances that flow throughout the body and exhibit perceptible qualities (Wujastyk 2003). The *dosas* are formed from five ubiquitous elements, *panchamahabuta*, found in the phenomenal world – ether/space, fire, air, water, and earth (*akash*, *tej*, *bayu*, *jal*, and *prithvi*). *Tridosa* in humans have identifiable qualities, *guna*, and are in dynamic equilibrium with internal and external phenomena (food, water, plants, animals, seasons, planets) possessing the same perceptible *gunas* as the *tridosa* (Zimmermann 1987), an environment constituted by the *panchamahabuta*. The two main causes of illness are faulty daily regimen and diet, thus disturbing the ‘cooking’ or ‘ripening’ of *rasa*, the food-juice of life within the body (White 1996), and read by the physician as excess, absence, or dislocation of one or more humors (hence *dosa* also means ‘fault’). To rebalance the humor(s), the patient adjusts dietary and daily activities and consumes plant-based medicines; *jaDibutis* work not because of biochemical properties but because their natural *gunas* can readjust the patient’s own imbalanced *dosas*. Ayurveda defines health as a state of dynamic balance among the *tridosa* maintained by congruence between the body and its physical and living environment (Langford 2003). This suggests health is an embodied state best achieved from an experiential orientation to the plant world that is protective but potentially disruptive. Ayurveda considers the person to be a microcosm of the biophysical world. *Ayurveda and Nature* asks how that extends and translates into practitioners’ and lay people’s orientations to nature in clinical and conservation contexts.

Environmentalism and Nature The Ayurvedic medical community's involvement in biodiversity conservation projects in Nepal is unique and pragmatic, for plant biodiversity includes the *jaDibuti* vital to indigenous medicine (e.g. ESON 2008). Prior research shows that Ayurvedic medical development increasingly turns on the status of medicinal and aromatic plants (MAPS) in Nepal, rather than vital institutional and personnel development (Cameron 2008), placing *jaDibuti* as a kind of bridge between global environmentalism and plural medicine development. Ayurvedic and environmental activists' perspectives converge on where 'balanced' nature for the one and 'wild' nature for the other exist, namely in rural locations. In contrast to a general development ethos, *bikas*, seeking a modern country in which rural locations symbolize 'backwardness' (Pigg 1992), Ayurvedic advocates and modernist managers of biodiversity both idealize the rural as an original source of medicinal plants and balanced life superior to crowded, polluted and imbalanced urban places (Cameron 2009c). Relatedly, urban middle-classes and elites increasingly consume Ayurvedic medicine, cosmetics, and wellness products for Ayurveda's association with 'nature' and South Asian identity, allowing them to be modern by being 'natural' and ethnic (Liechty 2008, personal communication).

The research examines when the convergence doctors and environmentalists conceptually share about the 'natural' rural ends. Unlike the Ayurvedic physicians who are committed to their medical system which, widely preferred and globally popular, they believe to be modern, conservationists are committed to genetic variability and not to medical pluralism, and they would not consider Ayurveda modern. Still, they leverage the Nepali people's preference for plants in healing on behalf of biodiversity, for progress in managing nature begins with the conservationist's assumption that degraded bounded ecosystems result directly from human action and culturally specific practices. Averting the environment's loss of genetic diversity

requires changing human actions to benefit the non human biological world. Beginning with the absence of humans as one component of biodiversity (Harper 2002) - humans stand outside of nature - my concern in the research is to compare the environmentalist's nature-culture dichotomy with the human-environment orientations of Nepali doctors and farmers. My familiarity with Nepali culture suggests that for doctors and farmers, nature is not perfectible by humans but rather the inverse; humans grow and are made healthy by plants, and the human disruption of natural forms (considered, in fact, sacred forms), is dangerous (albeit necessary), as found in concepts of impurity related to birth, smith work, and specific farming phases (Cameron 1998/2005). Ayurvedic doctors' applied theory of the place of humans in nature engages and interfaces with lay people's daily affordances with plants, incorporating the *gunas* of food and plants into dietary and medical decisions. How do *dosa* and *guna* as entities and qualities of the phenomenal world that bring life and health to people, compare with environmentalists' categories? Ayurvedic doctors speak of degraded conditions for plant growth, particularly in urban spaces, but the air, water and soil degradation is caused by modern industry and technology, not people. Doctors and villagers alike may not see the same kind of ecosystem degradation that environmentalists see. How do Ayurvedic doctors working in environmental projects make sense of these discrepancies? How distinctively different is their 'nature' from the environmentalists'? And what do farmers and artisans who live their lives with plants think about biodiversity conservation goals they, their families, and their neighbors partake in? What sense does it make to them that the sacred power of the natural realm recently has been leveraged to produce more perfect environments (Campbell 2009), as if that sacred power could not take care of these problems itself? *Ayurveda and Nature* will investigate how Ayurvedic practitioners, environmentalists, and farmers and artisans understand human-plant relationships in healing and

in modernist biodiversity conservation, as these paradigms come to work in both mutualistic and contradictory ways to achieve two important development goals in Nepal, health improvements and Himalayan biodiversity conservation.

Gender and Nature The insistent linking of women to nature in Western thought is contradicted by numerous cross-cultural studies on how 'nature' is a constructed category. The recent move from 'culture' to 'indigenous knowledge' as a more manageable tool for achieving development goals and one that brings gender into conservation discourse and practice, is supported by agricultural research and gender-based economic anthropology that show women and men perform different and complementary roles vis a vis natural resources, thus acquiring different knowledge and skills. Research on informal and traditional healing in medical anthropology demonstrates that women around the world produce health using medicinal plants (Inhorn 2002). Still, a Western gendered nature-culture dichotomy is reintroduced in global environmentalism (Gupte 2002), where gender *difference* in indigenous knowledge is emphasized over gender *complementarity* in human-nature orientations, and women often are left out of conservation projects altogether (Gupte 2004). Incorporating professional women Ayurvedic doctors (approximately 15% of the higher degree holders) and doctors-in-training (40% of the students at Naradevi Ayurvedic College in Kathmandu) into the research I endeavor to fill a gap in the medical anthropology of gender that overemphasizes informal and traditional women healers and midwives (Inhorn 2002). Importantly, feminist science and technology studies undertaken in the humanities and social sciences demonstrate the many ways in which Western gendered values are embedded in scientific practice and in concepts of nature, with discriminatory results of uneven technology distribution and over medicalization of life functions (Haraway 1978, 1989; Keller 1985, 1992; Lock 1993; Longino 1990, 2002; Martin 1987; Rapp 2000; Strathern 1992).

Informed by these insights, I will ask if women doctors exhibit and perceive an application of the human-plant orientation originating in Ayurvedic theory, that might result in diagnostic, therapeutic and other dimensions of healing different from or complementary to their male colleagues. Within the larger fields of power radiating from modern health care and environmental development, *Ayurveda and Nature* will examine if modernizing Ayurveda alters human-nature orientations in ways that impact women differently than men. Synthesizing medical and environmental anthropological theory and feminist theory in this way, I am able to ask new questions about gender and nature that avoid the problems of cultural relativism and nature-culture dualism, while simultaneously building our knowledge of women and the environment.

In NTFP conservation important questions remain unanswered regarding girls' and women's orientations to nature, including if they perceive they have knowledge and skills different from boys and men, and what the significance of those differences might be to plant resource commitments in the growth and well-being of humans and vice versa. Approaching research with a model that rejects an artificial divide between society and nature would place neither sex more on one side of the divide than the other (Gupte 2002; Ingold 2005), allows a focus on gender symbolism as a guide to fields of power, and turns analytically to people's direct perceptions of the environment for nature-human orientations. In previous publications I describe and analyze several gendered features of farming in Nepal (Cameron 1998/2005). The present research builds on my knowledge of Himalayan agriculture to delve further into people's 'love of plants'. How do girls and women come to use medicinal plant resources? *Ayurveda and Nature* will investigate women's orientations to nature among three groups of women involved in biodiversity conservation: foresters, rural farmers and artisans, and Ayurvedic doctors.

Method and Settings I will generate data on Nepali orientations to human-nature relations for twelve months in Nepal using standard qualitative research methods: direct observation, guided conversation, open-ended interviews, and focused interviews. Interviews will be conducted in Nepali and English, and one Nepali graduate student will serve as technical facilitator and tape translator. The initial five months of medico-environmental ethnographic fieldwork will be conducted with Ayurvedic physicians and students involved in NTFP conservation projects, in the cities of Kathmandu, Patan and Bhaktapur, specifically in Ayurvedic clinics and offices, educational facilities and the Ministry of Health. Several physicians I have worked with are involved in medicinal plant identification and collection projects in their own clinics, and act as policy and field consultants to various national and international conservation organizations. This group of four doctors will assist in identifying four additional physicians involved in biodiversity conservation prior to leaving the US. I will also generate data from interviews with officials and environmentalists in the main offices of WWF-Nepal, the King Mahendra Trust for Nature, The Mountain Institute, ICIMOD, and the Ministry of Forestry and Soils. Administrators and fieldworkers working on NTFP and biodiversity conservation projects will be interviewed, including four women foresters I have identified. A maximum total of twenty conservationists will be identified and asked to participate in the research prior to leaving the US; they will be interviewed and their work observed in Kathmandu and at the project sites. I will then conduct research for four months in two rural project sites that involve a subset of the Ayurvedic doctors and conservationists previously interviewed, and local people. Rural sites will be selected based on travel feasibility to remote areas, project design and objectives, and project duration. There, farmers and artisans involved in the conservation projects will be interviewed and their project work observed; a maximum of twenty participants at both sites will participate. Then, in

Kathmandu I will review all data and conduct final interviews for two months, followed by one month of data analysis, draft manuscript preparation, and sharing of results with 60% of the participants through meetings and a one-day symposium at USEF Kathmandu.

Institutional Importance The research findings will augment all courses I regularly teach at Florida Atlantic University in cultural, medical and environmental anthropology and will strengthen the growing medical and environmental anthropology components of our undergraduate and graduate degree programs. The updated courses are also part of the curricula in four undergraduate college certificate programs, Asian Studies (with an emerging South Asian component), Women's Studies, Religious Studies and Ethnic Studies. The theoretical synthesis and cultural description advanced by the future book *Ayurveda and Nature in Nepal* will provide an innovative model for contemporary fieldwork that examines the important interface of medicine and the environment.

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