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Enspirited Places, Material Traces:
The Sanctified and the Sacrificed in Modernizing Bhutan

by

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requirements for the degree of
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of the
University of California, Berkeley

Committee in charge:
Professor Louise P. Fortmann, Chair
Professor Carolyn Merchant
Professor Richard Norgaard
Professor Mary Evelyn Tucker

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Enspirited Places, Material Traces: The Sanctified and the Sacrificed in Modernizing Bhutan

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by Elizabeth Aileen Allison
Abstract

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The Sanctified and the Sacrificed in Modernizing Bhutan

By

Elizabeth Aileen Allison

Doctor of Philosophy in Environmental Science, Policy and Management

University of California, Berkeley

Professor Louise Fortmann, Chair

In this dissertation, I argue that a politicized study of religion and ecology, drawing on the political ecology approach, and incorporating religion and spirituality as potential analytical variables, in the analysis of environmental dilemmas, is necessary.

I illustrate my claim with case studies from the Himalayan Kingdom of Bhutan, in which I demonstrate the myriad ways in which religion and spirituality have material ecological effects in Bhutan and the Himalaya, through taboos that mediate human-environment relations, with regard to both forests and waste issues. Religious and spiritual beliefs therefore leave material traces on areas that are protected and areas that are polluted. Through this analysis of the role of sacred
natural sites in village life in Bhutan and around the world, I demonstrate a perspective that values the agency of non-human nature and landscape.

Drawing on theoretical perspectives on pollution and waste, and Tibetan cultural perceptions of space, purity and pollution, I show how ritual and material pollution are related in traditional Tibetan concepts of space. At the state level, I demonstrate how Bhutan’s waste crisis is not only a material crisis, related to increasingly uncontrolled and unmanaged refuse, but also a spiritual and political crisis of territorialization. I argue that ‘green’ and ‘brown’ environmental issues, and rural and urban issues, are inseparable in Bhutan. I conclude that indigenous and traditional spirituality, such as the deity beliefs of rural Bhutan, is one form of (everyday) resistance (Scott 1987) against the simplifying activities of the state such as functional territorialization (Vanderveest and Peluso 1995a).
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<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAIL</td>
<td>Bhutan Agro Industries, Limited</td>
</tr>
<tr>
<td>BHU</td>
<td>Basic Health Unit – village level health care</td>
</tr>
<tr>
<td>BNUS</td>
<td>Bhutan National Urbanization Strategy</td>
</tr>
<tr>
<td>BTF/ BTFEC</td>
<td>Bhutan Trust Fund for Environmental Conservation</td>
</tr>
<tr>
<td>DANIDA</td>
<td>Danish International Development Agency</td>
</tr>
<tr>
<td>DUDES</td>
<td>Dept. of Urban Design and Engineering Services</td>
</tr>
<tr>
<td>FMU</td>
<td>Forest Management Unit</td>
</tr>
<tr>
<td>GNH</td>
<td>Gross National Happiness, Bhutan’s guiding development philosophy, which the Fourth King proclaimed to be more important than Gross National Product or GNP</td>
</tr>
<tr>
<td>IK</td>
<td>Indigenous knowledge</td>
</tr>
<tr>
<td>LEK</td>
<td>Local ecological knowledge</td>
</tr>
<tr>
<td>MOA</td>
<td>Ministry of Agriculture</td>
</tr>
<tr>
<td>MOWHS</td>
<td>Ministry of Works and Human Settlement</td>
</tr>
<tr>
<td>MTI</td>
<td>Ministry of Trade and Industry</td>
</tr>
<tr>
<td>NEC</td>
<td>National Environment Commission</td>
</tr>
<tr>
<td>NTFPs</td>
<td>Non-Timber Forest Products</td>
</tr>
<tr>
<td>PPD</td>
<td>Policy and Planning Department (of any Ministry)</td>
</tr>
<tr>
<td>RGOB</td>
<td>Royal Government of Bhutan</td>
</tr>
<tr>
<td>RSPN</td>
<td>Royal Society for the Protection of Nature (nongovernmental organization)</td>
</tr>
<tr>
<td>SAARC</td>
<td>South Asian Association for Regional Corporation</td>
</tr>
<tr>
<td>SNV</td>
<td>Netherlands Development Organization</td>
</tr>
<tr>
<td>TCC</td>
<td>Thimphu City Corporation – semi-autonomous branch of MOWHS that manages urban Thimphu</td>
</tr>
<tr>
<td>TEK</td>
<td>Traditional ecological knowledge</td>
</tr>
<tr>
<td>UNEP</td>
<td>United Nations Environmental Programme</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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<tr>
<td>ADM</td>
<td>Geog Administrative Officer: a recent college graduate placed at the local level to assist with infrastructure development</td>
</tr>
<tr>
<td>Arra</td>
<td>Alcoholic drink served in villages, made from fermented rice or barley</td>
</tr>
<tr>
<td>Beyul</td>
<td>A secret or hidden valley, described in Buddhist texts.</td>
</tr>
<tr>
<td>BHU</td>
<td>Basic Health Unit</td>
</tr>
<tr>
<td>Bukhari</td>
<td>Iron, wood-fired stove used for heating in the winter</td>
</tr>
<tr>
<td>Chappals</td>
<td>(Indian term). Plastic flip-flop or slide sandals, ubiquitously worn across South Asia</td>
</tr>
<tr>
<td>Chorten</td>
<td>Multi-layered Buddhist reliquary monument, generally round or square in shape, with a larger base (square), a round dome, and spire. Usually white-washed, with colorful trim. May also be constructed of simply stacked rocks, in descending size. See stupa.</td>
</tr>
<tr>
<td>Doma</td>
<td>Betelnut and areca leaf, chewed together to cause mild intoxication and resulting in a bright red staining of the lips and mouth. Traditional Bhutanese etiquette requires elegant carved boxes for carrying doma and elaborate rituals of offering it to friends and colleagues.</td>
</tr>
<tr>
<td>Drib</td>
<td>Ritual pollution (literally “shadow” or “stain”), acquired by engaging in activities of birth or death, by eating ‘strong’ foods, such as garlic and onions, by burning meat, and other corporeal activities, which makes a person more vulnerable to the attacks of malevolent spirits. Ritual uncleanness may be conflated with physical uncleanness.</td>
</tr>
<tr>
<td>Drukpa</td>
<td>[Dz.: 'brug pa] the collective term for northern Bhutanese citizens, including both Ngalops and Sharchops, as distinguished from the Lhotsampa, or southern Bhutanese</td>
</tr>
<tr>
<td>Druk Desi</td>
<td>Civil administrative ruler who shared power with the spiritual head, the Je Khenpo, in the time of the Shabdrung and after</td>
</tr>
<tr>
<td>Druk Yul</td>
<td>The Bhutanese name for Bhutan: literally, Land of the Thunder Dragon</td>
</tr>
<tr>
<td>Dzong</td>
<td>Fortress-monastery, from which fiefdoms in Bhutan were formerly ruled. Today, these imposing buildings house the secular and religious leadership for each district.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dzongdag</td>
<td>Head of a district</td>
</tr>
<tr>
<td>Dzongkha</td>
<td>Literally, “the language (kha) of the Dzong.” Dzongkha, a variant of Tibetan, was originally spoken primarily in Western Bhutan, but now has been formalized and codified into one of the national languages of Bhutan (the others being English and Nepali).</td>
</tr>
<tr>
<td>Dzongkhag</td>
<td>One of twenty districts of Bhutan</td>
</tr>
<tr>
<td>Dzonggrab</td>
<td>Second in charge of a district</td>
</tr>
<tr>
<td>Ema datshi</td>
<td>National dish of Bhutan: spicy green chilis, served as a vegetable, in cheese sauce, over rice.</td>
</tr>
<tr>
<td>Geog</td>
<td>“Block”, a subdivision of a dzongkhag or district</td>
</tr>
<tr>
<td>Gho</td>
<td>Traditional Bhutanese men’s dress. A knee-length, full sleeved robe, of brightly-striped material, tightly tied at the waist. Worn with knee-high dress socks, and leather dress shoes.</td>
</tr>
<tr>
<td>Gomba/ gompa</td>
<td>Monastery. Often the seat of the ritual and cultural life of a Himalayan village.</td>
</tr>
<tr>
<td>Gomchen</td>
<td>Lay Buddhist leader, who may be married. Gomchen provide most of the direct religious services – prayers, blessings, rituals – in the rural areas.</td>
</tr>
<tr>
<td>Gnas</td>
<td>Pronounced “ney.” Sacred place.</td>
</tr>
<tr>
<td>Gup</td>
<td>The village headman: leader of the geog, a group of villages or hamlets.</td>
</tr>
<tr>
<td>Guru Rimpoche</td>
<td>The eighth century teacher and saint who brought Buddhism to Bhutan in 747 C.E., from Tibet. Also known as Padmasambhava (Sanskirt), or Ugyen Rimpoche, Guru Rimpoche is considered a Second Buddha in Bhutan.</td>
</tr>
<tr>
<td>Gyalpo</td>
<td>Literally “king.” A type of spirit conceived of as the ruler of a locality. Often pictured on horseback, carrying implements and armor.</td>
</tr>
<tr>
<td>Je Khenpo</td>
<td>Top spiritual leader of Bhutan</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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</tr>
<tr>
<td>Kata</td>
<td>White or ivory silk offering scarf, typically given to high lamas and officials on ceremonial occasions.</td>
</tr>
<tr>
<td>Key lha</td>
<td>Literally “birth god.” The god of one’s birthplace. [Dz.: Skye lha]</td>
</tr>
<tr>
<td>Khengkha</td>
<td>The language spoken in Kheng, the central region of Bhutan, which includes Zhemgang and parts of Bumthang.</td>
</tr>
<tr>
<td>Khengpa</td>
<td>A person from Kheng, the central region of Bhutan, which includes Zhemgang and parts of Bumthang.</td>
</tr>
<tr>
<td>Khenpo</td>
<td>Title for an advanced religious teacher with the equivalent of a doctoral degree (awarded after nine to fifteen years of study) in Buddhism</td>
</tr>
<tr>
<td>Kidu</td>
<td>Gift from the King, usually of land or housing</td>
</tr>
<tr>
<td>Kira</td>
<td>Traditional Bhutanese women’s dress. Three meters of striped, often hand-woven fabric, wound around the body and secured with shoulder clips and a tight sash to make a floor-length dress. Worn with a silk blouse (wonju) underneath, and a heavier silk jacket (toego), clasped with a brooch.</td>
</tr>
<tr>
<td>Lha</td>
<td>“God” – a type of deity within the Buddhist pantheon [Dz.: lha]</td>
</tr>
<tr>
<td>Lhakhang</td>
<td>Literally “god house.” A temple, or a chapel within a temple or monastery. [Dz.: lhakhang]</td>
</tr>
<tr>
<td>Lhotsampa</td>
<td>Literally “southern Bhutanese.” People of Nepali ethnicity and Hindu or Christian religion, who migrated to Bhutan during the 19th and 20th centuries to farm land in southern Bhutan.</td>
</tr>
<tr>
<td>Lu khang</td>
<td>Literally “lu house.” A small monument or shelter built as a home for a lu spirit. [Dz.: klu khang]</td>
</tr>
<tr>
<td>Mandala</td>
<td>Highly detailed circular symbolic drawing, used as an aid in Buddhist meditation</td>
</tr>
<tr>
<td>Mang ap</td>
<td>“Father” of the village: a village leader and respect “elder” (though not necessarily old in age, maybe be a younger but educated person), who assists in dispute resolution</td>
</tr>
<tr>
<td>Mani wall</td>
<td>A stone wall, on which rock slabs, carved with prayers are placed. The most frequent prayer is Om Mani Padme Hum (often translated as “praise to the jewel in the lotus”), giving the Mani wall its name. The wall should be passed on its left side, keeping the more auspicious right hand near the wall.</td>
</tr>
</tbody>
</table>
Manmo Female water-dwelling spirit, often translated as “mermaid.” Depicted with an anthropomorphic torso, and the tail of a fish or snake. Frequently, found in lakes. See *tshomen*.

Ney khang Literally “house of sacred place.” A monument or reliquary built at a sacred place, often marking a sacred natural site. [Dz.: gnas khang]

Ngalop Literally “first risen,” suggesting that the Ngalops were the first to adopt Tibetan Buddhism. Inhabitants of the western part of Bhutan, whose mother tongue is the national Dzongkha. Well represented in government, but less populous than the Sharchops of the east.

Ngarja Sweet tea

Ngultrum Bhutanese currency, pegged to and equivalent to the Indian rupee, which is legal tender in Bhutan. Abbreviated Ng. or nu.

$1.00 USD = 38 – 50 nu, depending on exchange rates.

Pak sha pak Dried pork, a favored food

Pawo Male shamanic ritual specialist and healer, who can intervene with the deities in case of illness

Pawomo Female shamanic ritual specialist and healer, who can intervene with the deities in case of illness

Phodrang “Citadel” or home of a deity. [Dz.: Pho brang]

Rinpoche/ Rinpocher "Precious gem": Reincarnated lama

Samsara Earthly cyclical existence of birth, suffering and death. Nirvana offers an escape from this endless cycle.

Sharchop Literally “easterner.” The inhabitants of eastern Bhutan, believed to be among the earliest inhabitants of the country, who speak Sharchop or Tsangla languages. More populous in number than the western Ngalops who dominate government.

Stupa Nepali/ Sanskrit name for a large white-washed Buddhist reliquary. See *chorten*.

Sudja Salt butter tea, churned by hand in a traditional vertical churn, and preferred by many Bhutanese

Tengma Dried pounded maize, eaten as a snack with tea.

Ter ma Hidden religious treasures, which may take the form of material objects or relics, texts, prayers, or mental transmissions known as
“mind ter ma.”

Ter ton  Buddhist treasure revealer, which uncovers terma.
Thromde  Urban area, town
Tsadem  “Cough and cold,” upper respiratory infection, particularly common in the winter, and believed to be acquired, in some cases, from breathing foul smelling smoke.
Tsang  Fragrant aromatic herbs, burned to please the gods.
Tsen/ tsan  A guardian deity, often dwelling on a mountain, and conceived of as the owner or guardian of an entire locality. Depicted as a red-faced human-like form on horseback, carrying weapons and armor.
Tshampa  one who meditates for long periods of time
Tschechu  Religious festival, providing didactic lessons in Buddhism, through dance.
Tshokpa  Village leader
Tshomen  Female water-dwelling spirit, often translated as “mermaid.” Depicted with an anthropomorphic torso, and the tail of a fish or snake. Frequently, found in lakes. See manmo.
Yul lha  Literally, “area/ vicinity/ community god.” The spirit who oversees an area.
Zow  Toasted rice, sometimes served with butter and/ or sugar, and eaten as a snack with tea.

A note on Tibetan and Dzongkha language and spelling

The Tibetan language, of which there are numerous variants and dialects, is written in a script not easily transliterated into English script. The most commonly used system for Romanized transliteration is the Wylie system, in which each Tibetan letter is represented by one or more English letters (Tournadre and Rdo 2003: 44 - 45). This system allows one who reads Tibetan to understand how the word is spelled in Tibetan, but gives no clue to the pronunciation. Indeed, multiple consonants may
occur together, appearing entirely unpronounceable in English, but having a straightforward pronunciation in Tibetan.

For this reason, I have rendered Tibetan and Dzongkha words in the text phonetically, to aid in the English reader’s pronunciation of unfamiliar words. When the Tibetan or Dzongkha spelling is known, I have included it in brackets [ ] with the notation Tib. or Dz., respectively, to assist specialist readers. I have consulted the Dzongkha Development Authority’s English-Dzongkha Dictionary (2006), and the Dzongkha Development Commission’s Dzongkha-English Dictionary (2002). However, for many of these words, the proper Dzongkha spelling is unknown, as they were learned in the field and there is no ready English translation or transliteration. Consistent Dzongkha spellings and Dzongkha-English translations are not available.

The Bhutanese language, Dzongkha, literally “the language of the Dzong [fortress/ monastery],” is derived Tibetan chokey [Tib.: chos skad], the language of the Dharma, used in the study of religion and philosophy. Although Tibetan and Dzongkha share an alphabet and grammar, the vocabulary, pronunciation, and syntax is different. Tibetan is taught at universities in the United States, including the University of California, Berkeley, and the University of Wisconsin, Madison, at which I studied the language. Dzongkha, however, is taught only in Bhutan to my knowledge. Further complicating linguistic matters, while Dzongkha is one of the national languages of Bhutan (along with English and Nepali), and is the language of
government business, it is the mother tongue in only eight of the districts of Bhutan, all of which are found in western Bhutan. However, most of my research was conducted in eastern and central Bhutan, where the local languages are Sharchop and Khengkha, respectively. These languages are mutually incomprehensible with Dzongkha or Tibetan, and are not commonly written.
Acknowledgements

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May this work benefit sentient beings.
INTRODUCTION Ritual Protection, Ritual Pollution

High in the Himalayas, in the Annapurna region of Nepal, lies bowl-shaped valley, surrounded by the sparkling peaks of some of the world’s tallest mountains. The valley is home to a rare and ritually-important plant, valued by the Gurungs who live near by. For centuries, the valley received infrequent human visitors: herders taking their flocks up to graze, the occasional ascetic, seeking a quiet place to retreat, and traditional healers who would ascend to the high valley to collect herbs for their rituals and cures. Because of the sanctity of the valley, women, butchers, and blacksmiths, who were considered to be ritually unclean, along with meat and other items that might produce ritual contamination, were prohibited from the valley, further limiting human influence.

By the late 1980s when I visited the area, however, the ritual plant was harder to find. Trekking tourism had become wildly popular in Nepal, growing more than 50% between 1985 and 1986 alone (Nepal 2000), and bringing needed foreign currency. His Majesty’s Government of Nepal had declared the Annapurna region a Conservation Area in 1986, and had entrusted the King Mahendra Trust for Nature Conservation, a local non-governmental organization, with helping local people become active stewards of their ecological and cultural heritage (Nepal 2000). The Annapurna Conservation Area Project, a locally-developed and managed conservation and development scheme, was to decrease the negative impacts of tourism, while protecting natural resources and improving local livelihoods. Although the Project
and the biophysical ecology in which they were embedded. It was clear to me on that visit that religious beliefs did not protect the natural environment in toto — dry red eroded hillsides were the backdrop for much of my journey up the Kali Gandaki River. I became curious about the mechanisms through which taboos had apparently protected the ritually-important plant, and the ways that economic development was
affecting this religion-ecology interaction. This dissertation, then, represents an effort
to tease apart the strands of the interplay of religion and ecology in the Himalayas, and
to assess in what ways religious values, perceptions and practices shape ecological
perceptions and actions.
Chapter 1  Politics, Religion, Ecology and Bhutan

In the two decades since my first visit to the Himalayas, two ideas raised in the preceding vignette have gained increasing acceptance among scholars and practitioners: the appreciation of traditional ecological knowledge, and the study of religion and ecology together.

First, the notion that local and indigenous people might have useful – even crucial – insights about local ecology that are relevant both to conservation and development, has gained currency as "traditional ecological knowledge" (TEK), "indigenous knowledge" (IK), or "local ecological knowledge" (LEK) (Gadgil et al. 1993; Agrawal 1995; Fairhead and Leach 1996; Warren 1997; Berkes et al. 1998; Huber and Pedersen 1998; Myer 1998; Nygren 1999; Berkes et al. 2000; Gadgil et al. 2000; Nabhan 2000; Colding and Folke 2001; Fairhead and Scoones 2005; Fortmann et al. 2008). Ecological economist Richard Norgaard usefully presents the broader term “cultural knowledge,” which does not privilege traditional or modern culture, and shows how knowledge is embedded in the cultural structures that produce and sustain it, including art and cultures mores, as well as books and stories (Norgaard 1994). These terms capture the notion that, shaped both by close experience with the land and by social interactions, such as storytelling and interactions with spirit mediums, local knowledge is socially constructed over time. Each of these terms, however, has its limitations. The term “traditional ecological knowledge” obscures the variations within and among
communities that make use of the knowledge and hides the continual reworking of knowledge in encounters with new information (Nygren 1999: 283). “Local ecological knowledge” suggests a spatial limitation to the validity or importance of the knowledge (Nygren 1999: 283). “Indigenous knowledge” seems dangerously close to harkening back to a pristine, Edenic time. Indigenous knowledge is not monolithic – it is unevenly distributed within societies, it is not necessarily “best” just because it’s local, and it may change over time, incorporating ‘external’ knowledge, and coming to represent a hybrid between emic and etic knowledge (Watts and Peet 1996b: 20).

Critical studies of TEK, IK, and LEK show that locally-developed knowledge is unevenly distributed, and affected by class, gender and other markers of social location (Agarwal 1994; Agrawal 1995; Schroeder 1999; Fortmann 2006; Nagar et al. 2006; Fortmann 2008; Fortmann et al. 2008). Political ecologist Arun Agrawal (1995) identifies three main distinguishing themes in the discourse about the differences between indigenous knowledge and scientific knowledge: substantive, methodological/epistemological, and contextual. To elaborate, indigenous knowledge deals with different subject matter than scientific knowledge; it begins from a different world view and employs different methods to investigate reality; and it is more deeply rooted in context than Western/scientific knowledge (Agrawal 1995: 418). While traditional knowledge was often seen as inferior to Western scientific knowledge in the past (Keeley and Scoones 2003), the pendulum of conservation and development discourse has swung the other way, valorizing traditional, non-industrial ways as harmonious and sustainable (Nygren 1999). However, Agrawal suggests we
“dismantle the divide” between indigenous and Western knowledge, and attend to the politics behind the deployment of knowledge and categorizations thereof: “The same knowledge can be classified one way or the other [that is, as indigenous or scientific], depending on the interests it serves, the purposes for which it is harnessed, or the manner it is generated” (Agrawal, 1995: 433). Given the politics inherent in branding knowledge as TEK, IK or LEK, we can see that ‘cultural knowledge’ (Norgaard 1994) is perhaps the most encompassing and useful term for identifying knowledge that falls outside of the scientific sphere.

Building on the insights of scholars of epistemology, and particularly those who study TEK, IK, and LEK, I take the lived experience and insights of my informants as primary to understanding local ecology. Further, as indicated in the first vignette, I am interested in how their religious and spiritual perceptions influence their environmental practices. This interest has been supported by a second intellectual development (or re-development) in the past twenty to thirty years: the growing interest in studying religion and ecology together, and the development of Religion and Ecology as a field of scholarly inquiry (White 1967; Tucker and Grim 1994; Tucker and Williams 1997; Kaza and Kraft 2000; Tucker 2001; Kellert and Farnham 2002). Essential to this development was the series of conferences held at Harvard University in which scholars and practitioners from around the world met to discuss the relation of the world’s religions with planetary ecology (Tucker 2006). These conferences resulted in the publication of ten volumes on the world’s religions and
ecology (Tucker and Williams 1997; Tucker and Berthrong 1998; Chapple and Tucker 2000; Hessel and Ruether 2000; Girardot et al. 2001; Grim 2001; Chapple 2002; Tirosh-Samuelson 2002; Foltz et al. 2003; the Shinto volume was published in Japanese), and to the creation of the Forum on Religion and Ecology, which, through its conferences, publications, talks, and website (Forum on Religion and Ecology 2004) has shepherded the scholarly study of religion and ecology.

During the 1990s and early 21st century, some scientists, scholars, and policymakers reached the conclusion that current human-nature interactions were proceeding in on unsustainably trajectory, and that significant changes in our production and consumption patterns are required to reach a more sustainable future. They concluded that the global environmental crisis was also a crisis of values. Although science, policy and economics had done a good job of addressing relatively localized environmental issues of the 20th century, such as air and water pollution, those tools had so far been only partially successful in addressing the globalized and interconnected environmental issues of the 21st century. The recognition of global and transboundary environmental problems, including the global loss of biological diversity, and to an even greater degree, climate change, caused observers to begin to look for solutions beyond the science and policy that had been effective in addressing local and national environmental problems in the 1960s – 1980s, through such policy as the Clean Air and Clean Water Acts.
As environmentalists Micheal Shellenberger and Ted Nordhaus (2005) wrote in their widely-discussed white paper “The Death of Environmentalism:”

Environmentalists need to tap into the creative worlds of myth-making, even religion, not to better sell narrow and technical policy proposals but rather to figure out who we are and who we need to be.

In defining a values-based environmentalism, these environmentalists raised broadly theological questions, typically left to the world’s religious traditions, relating to what it means to be human, appropriate relations between human and non-human life, and the place of humans in the world and the cosmos. Thus, redefining a relationship between human beings and the natural world is a theological, religious and spiritual task. Studying religion and ecology together may provide a key to changing human relationships with the planet on which we live.

A group of 57 leaders from diverse fields with an interest in the environment, convened by Yale School of Forestry and Environmental Studies, concluded in 2007:

[We] must seek the help of fields not regularly associated with environmental issues. We have many sophisticated scientific and policy analyses of climate change, species loss, and other environmental issues, but our situation also requires the knowledge and wisdom of psychologists and philosophers, poets and preachers, historians and humanists to help us see and communicate hard truths and inspire individual and social change (Leiserowitz and Fernandez 2008: 13).

Appeals to audiences of religious practitioners, scholars of religion and theologians highlight the urgency and severity of the environmental crises, and call on religions to become engaged:
The environmental crisis calls the religions of the world to respond by finding their voice within the larger Earth community. In so doing, the religions are now entering their ecological phase and finding their planetary expression (Tucker 2003: 9).

Already, religion's moral force has been pronounced in bringing attention to the issue of climate change. Religious leaders have used their moral authority to petition governments and nudge them toward action. In 1992, a group of eminent theologians, religious leaders, scientists and scholars, led by Carl Sagan, issued the Joint Appeal by Religion and Science for the Environment that united the moral values of religion with the concrete data of science (Religion and Science for the Environment 1992). The scientists and religious leaders stated:

We believe that science and religion, working together, have an essential contribution to make toward any significant mitigation and resolution of the world environmental crisis. What good are the most fervent moral imperatives if we do not understand the dangers and how to avoid them? What good is all the data in the world without a steadfast moral compass? Many of the consequences of our present assault on the environment, even if halted today, will take decades and centuries to play themselves out. How will our children and grandchildren judge our stewardship of the Earth? What will they think of us? Do we not have a solemn obligation to leave them a better world and to insure the integrity of nature itself? Insofar as our peril arises from a neglect of moral values, human pride, arrogance, inattention, greed, improvidence, and a penchant for the short-term over the long, religion has an essential role to play. Insofar as our peril arises from our ignorance of the intricate interconnectedness of nature, science has an essential role to play.

Differences of perspective remains among us. We do not have to agree on how the natural world was made to be willing to work together to preserve it. On that paramount objective we affirm a deep sense of common cause....
We reaffirm here, in the strongest possible terms, the indivisibility of social justice and the preservation of the environment (Religion and Science for the Environment 1992).

In 2001, the Roman Catholic bishops called for immediate steps to reduce climate change (NCCB/USCC 2001). At the 2007 climate summit in Bali, the World Council of Churches called for faith traditions to lead humanity to a new model of life on earth, rejecting the endless economic growth and consumption that treats the earth as a commodity (WCC 2007). The world’s religious and spiritual traditions offer the source for re-envisioning our relation with other life on earth. Existing religious and spiritual traditions for ideas and narratives that run counter to the increasingly global narrative of capitalist accumulation. In the same way that feminist theologians have retrieved, reconstructed, and reinterpreted religious texts (Ruether 1992; McFague 1993; Farley 1994; Ruether 2009), studies in religion and ecology can bring to light texts, beliefs and practices that place humanity and its environment in more balanced and equitable relations. However, studies of ecological issues through the lens of religions, must avoid falling into idealized or romanticized views of religion, and therefore, must be grounded in the specificity of situations and places.

This dissertation examines the interface of religious and spiritual beliefs and practices with environmental management through case studies of two environmental issues – local forest management and solid waste management – in the Himalayan Kingdom of Bhutan. Beginning with the contention of political ecologists that
struggles over resources are simultaneously struggles over material and meaning (Bryant 2000), I employ two frames for analyzing environmental issues: political ecology and religion and ecology, to understand how religious beliefs shape ecological practices in a politicized environment.

My starting point is Lynn White, Jr.’s (1967: 1205) contention that “[h]uman ecology is deeply conditioned by beliefs about our nature and destiny – that is, by religion.” To understand the implications of this assertion, we must ground it in the materiality of a specific situation, where the social, political and historical consequences can be examined. I ground this assertion in the specific situation of the Himalayan King of Bhutan, where the government contends:

Buddhism and animism reinforced this traditional conservation ethic and promoted values such as respect for all forms of life and giving back to the Earth what one has taken away. This traditional respect for the natural world ensured that Bhutan emerged into the 20th century with an intact natural resource base (RGOB 1998b: 12).

Locating the nexus of religion and ecology in Himalayan Bhutan, we can ask what it has meant for the tandem workings of environmental conservation and economic development in a country that takes pride in the preservation of its vast forests and its unique culture. In examining such questions as:

- How is human ecology conditioned by the particular qualities of religion as it is practiced in Bhutan?
- What has shaped the Bhutanese government’s claim that Buddhism and animism, as practiced in Bhutan, have contributed to the protection of the natural resource base?
What aspects of the conditioning of human ecology by religious beliefs are particular to Bhutan, and what might these particularities suggest about conservation, development and cultural preservation?

I am responding to Bryant’s assertion that the complex ways in which socionatural place and moral discourse can come together in politicized moral geographies to shape conservation debates is never fully theorized (Bryant 2000).

In my examination of Bhutanese religious attitudes and practices with regard to the natural environment, I demonstrate a local environmental ethic in action. I describe how Bhutanese traditions of Buddhism and animism shape local human-nature interactions, and suggest their relevance for broader trends of conservation and development.

Central to my way of conceptualizing the Bhutanese approach of the natural environment is what Peet and Watts have termed “environmental imaginaries:” the place-specific – and regionally variable – conceptions of nature that shape the ways that people perceive, discuss, work and play in nature, that reflect a community’s values with respect to its environment (Watts and Peet 1996b). Growing out of the discursive stream of political ecology, this concept incorporates political-economic conditions together with social, cultural, and ideological threads that reflect and respond to the material conditions of particular surroundings, to envisage a regionally distinctive conception of nature. I show how the particularly Bhutanese blend of Buddhism and animism, described in Chapter 3, shapes distinctive environmental
imaginary that responds to both specific material environmental conditions, and
distinctive religious attitudes and perceptions.

Beyond being important theoretical questions, which can shed light on human-
nature relationships and the mutual constitution thereof, these are also as pragmatic
questions that relate to the potential and efficacy of political goals as sustainable
development, environmental conservation, conservation and development, and, more
broadly, constructing an effective response to what has been described as a looming
environmental crisis. In what ways is it possible to envision, and then practice, a more
sustainable, equitable and just way of life that nourishes both human and non-human
nature? Might prevailing mindsets be hindering such a goal? If so, in what ways, and
what alternative paths might we envision?

Building on Bryant’s insight, and that of discursively-inclined geographers,
who contend that place is constructed through social practice and that its identity is
always contested and changing in the flux of social relations (Massey 1994: 5;
Vandergeest 2003: 22), I investigate the ways that Bhutanese religion – and its
embedded moral discourse – shape particular socionatural places. I analyze two
particular sets of places: those that are “sanctified” through Bhutanese environmental
imaginaries that identify such places as sacred natural sites, and therefore subject to
certain sets of protections and prohibitions, and their opposite, those sites that are not
especially revered in and therefore may be sacrificed to mundane uses. I identify the	
	taboos that shape some land use practices, designating, for example, appropriate sites
for waste disposal. I show how these uses are changing with economic development, and hypothesize that some of the government’s difficulties in encouraging the adoption of new environmental practices may stem from the need to change the populace’s behaviors to reflect modern conditions. That is, I show how the durable transposable dispositions of practice – what sociologist Pierre Bourdieu (1998) has termed habitus – result in a specific, distinctively Bhutanese approach to the natural environment, which has far-reaching effects for the material conditions of Bhutan.

Throughout my examinations of Bhutanese attitudes and practices around sacred natural sites, and issues of waste disposal, I am attentive to the lived environmental ethic displayed in daily discourse and action. Much of the debate about the existence of a distinctively Buddhist environmental ethic has focused on the examination of canonical texts to elucidate original intentions and directives (e.g., De Silva 1998; Sahni 2008). Another important stream of research has focused on identifying strands within Buddhist texts that reflect and harmonize with current ecological ideas (see, for example, contributions to Buddhist Perception of Nature 1987; Tucker and Williams 1997; Kaza and Kraft 2000). In this study, however, I have been less interested in the ideas contained within canonical texts and teachings than in people’s lived experience of their distinctive variety of Buddhism, and its meaning in their lives. Because of my interest in applied and pragmatic ways of addressing environmental dilemmas, I wanted to understand how the teachings of the tradition affected people’s daily lives. Whether the ancient texts offer concepts that support a Buddhist environmental ethic is an issue of debate, as some (Harris 1991;
Harris 1994; Sponberg 1997), noting the lack of textual evidence, are critical of efforts that identify congruencies between Buddhist practices and environmental ethics. However, in this project, I am concerned with the lived experience of modern Buddhists. I value people’s self-reported beliefs and practices, even if they are at odds with canonical Buddhism. My position stands in contrast to supporters of close textual readings of Buddhism, such as Harris (1991: 101) who is critical of a leader of a Tibetan Buddhist University who asserted, at an international gathering of the World Wildlife Fund, that Buddhists put great value in the protection of wildlife and the environment. Harris (1991: 101) suggests that the author was overly influenced by romanticization of the past, and the influence of teleological Christianity. However, in this study, I accept self-presented Buddhism as Buddhism. As we shall, Tibetan Buddhism in Bhutan looks different than the Buddhism of many other parts of Asia.

**Outline of the Chapters**

This Introduction provides a general orientation to my research questions, to the geography and culture of Bhutan, and to the research approach and methods I used to investigate my questions.

In Chapter 2: A Place in the World: Ecological and Spiritual Relations, I provide the theoretical background out of which my research grows. I describe the intellectual history and approach of political ecology, and the implicit strands of moral concern within it. I describe how political ecologists took up epistemological questions in political ecology’s discursive turn, which led to greater attention to the
politics and ethics inherent in the construction of knowledge. I describe the environmental imaginaries (Watts and Peet 1996b) that encapsulate perceptions of and interaction with the natural environment in Bhutan. I suggest that they are distinctive, and, as such, suggest useful perspectives for examining and addressing environmental issues in other locations. I show how healing the splits in dichotomous thinking allows us to take religion and spirituality seriously in our analyses of environmental issues, potentially leading to more life-affirming and enlivening approaches to environmental dilemmas. The concern with justice, and the shared goal of an equitable, just and sustainable world that nurtures both humans and other life, brings political ecology to an intersection with religion and ecology. I then discuss the streams that contributed to the study of religion and ecology, and discuss its potential contributions to political ecology.

In Chapter 3: Sacred Natural Sites: Places of Resistance and Resilience, I discuss the breadth of the global phenomenon of sacred natural sites, describing their qualities, locations, practices that maintain them and threats to them. I review the largely celebratory ecological and anthropological descriptions of natural sacred places to situate the beliefs and practices of sacred natural sites in social theories about space and place, and conclude by offering a tentative theoretical framework for understanding sacred natural sites. I suggest that natural sacred places serve as nodes or focal points for multiple issues facing indigenous and non-Western cultures, including sovereignty, cultural continuity and preservation of lifeways. Further,
natural sacred places are places of resistance and resilience, where local and traditional norms place humans and the landscape in particular I-Thou reciprocal relationships, through which non-human nature is respected as comprised of active, agentic beings (Tillich 1952; Buber 1958; Merchant 2003; Merchant 2005). In describing sacred natural sites in Bhutan, I show how these particular places are sites of on-going negotiation between local people and the landscape, in which features of the landscape, and the landscape itself, are understood as active beings whose needs and wishes must be respected. Through this analysis of the role of sacred natural sites in village life in Bhutan and around the world, I demonstrate a perspective that takes the agency of non-human nature and landscape seriously.

In Chapter 4: Enspirited Places, Material Traces, I discuss the myriad ways in which religion and spirituality have material ecological effects in Bhutan and the Himalaya, and describe how taboos mediate human-environment relations with regard to both forests and waste issues. I raise the question: if religious and spiritual beliefs have a salubrious effect on ‘green’ environmental issues, in particular cases, what role might such beliefs play in shaping attitudes and practices surrounding ‘brown’ environmental issues, such as waste, pollution, and urban land use? Drawing on theoretical perspectives on pollution and waste, and Tibetan cultural perceptions of space, purity and pollution, I show how ritual and material pollution are related in traditional Tibetan concepts of space at the local level. At the state level, I demonstrate how Bhutan’s waste crisis is not only a material crisis, related to
increasing uncontrolled and unmanaged refuse, but also a spiritual and political crisis, related to loosening of state power with incipient democracy, and subsequent reassertion of state power through territorialization. Throughout the chapter, I argue that ‘green’ and ‘brown’ environmental issues, and rural and urban issues, are inseparable in Bhutan.

In Chapter 5: Of Purity and Pollution, I show how competing environmental imaginaries, and habitual actions developed in rural areas, have contributed to difficulties with household waste management in urbanizing Thimphu. The social science concepts of environmental imaginaries and habitus (Bourdieu 1994/1998) provide insights into the challenges of inculcating urban waste management practices in a populace that has largely migrated – and continues to migrate – from the rural areas. I have described how government officials in the capital came to view urban waste management as an urgent problem, and I have described traditional attitudes and practices related to household waste management in rural areas of three districts of Bhutan. I describe the various items that rural households see as waste, and their disposal practices for these items. Certain groups of people and animals tend to be maligned as waste culprits, and I discuss the ramifications of assigning blame to these liminal groups.

Finally, in Chapter 6: Politicized Studies of Religion and Ecology, I offer my major conclusions and recommendations for further research. I conclude that political ecology studies need to include religion and spirituality within their purview to
provide insight into how local people *envision* their place in the world, *vis a vis* moral geographies (Bryant 2000), which underlie conservation dilemmas throughout the world. In Bhutan, it is relatively easy to see the role of Tibetan Buddhism in shaping environmental imaginaries in the areas where the research was conducted because of the relative ethnic and cultural homogeneity.¹ This dissertation has modeled an approach that may be useful in illuminating environmental dilemmas in other places. Second, religious and spiritual beliefs shape environmental imaginaries, and consequently taboo beliefs and practices, and therefore leave material traces on areas that are protected and areas that are polluted. Finally, I conclude that indigenous and traditional spirituality, such as the deity beliefs of rural Bhutan, is one form of (everyday) resistance (Scott 1987) against the simplifying activities of the state such as functional territorialization (Vandergeest and Peluso 1995a).

**About Bhutan**

Located in the eastern reaches of the Himalaya Range, Bhutan is a ruggedly mountainous landlocked country, in which the terrain rises from a few hundred feet above sea level to more than 20,000 feet within less than 100 miles. Steep north-south mountain bands divide the country into three distinct regions – Western, Central, and Eastern. Three distinct climatic bands further divide the country into tropical,

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¹ It should be noted that Bhutan is not culturally and religiously homogeneous. The Southern Bhutanese are of Nepali ethnicity and practice Hinduism. Their cultural practices are quite different from those of the northern Bhutanese. The Bhutanese government selected my research sites, which were inhabited by northern Bhutanese. For details on the southern Bhutanese, see Hutt, M. (2003). *Unbecoming citizens : culture, nationhood, and the flight of refugees from Bhutan*. New Delhi; New York, Oxford University Press.
temperate with monsoon, and alpine ecosystems. Extreme topography and self-imposed isolation kept Bhutan cut off from most visitors from beyond the Himalayan realm, other than a few European explorers in 18th and 19th centuries, until the mid-1970s, when foreign dignitaries visited for the coronation of King Jigme Singye Wangchuk (the fourth king) in 1974. Thereafter, trekking tourism was introduced gradually, first limited to about 200 visitors a year, who were required to travel in groups of six with a government guide and pay $130 per person per day (Armington 1998: 30).
Figure 1-1: South Asia and the Himalayas. Map from http://www.state.gov.

Today, tourism is limited not by a quota, but by a daily fee of $200 - $250 instituted by the government to ensure "high quality, low volume tourism." In the past few years, Bhutan has beefed up its image as an exclusive destination, adding two
luxury lodges – with rooms costing up to US$1248 per night – that offer services far beyond those of the standard clean-and-comfortable guesthouses (Cyr 2004: 50). The mandatory daily fee, which includes all food, lodging and ground transportation (excluding luxury accommodations), effectively limits pleasure travelers to around 21,000 per year (Choden 2008), up from fewer than 8000 annually in 2001 (Gyeltshen 2001). This limitation on tourism prevents the sparsely populated country from being overrun by backpackers, like much of the rest of South and Southeast Asia, while still contributing US $30 million in 2007 to the Bhutanese economy (Choden 2008).

Bhutan’s total economy in 2009-2010 was worth about 580 million in US dollars (as calculated from figures in Lamsang 2009b, with 47 nu = $1). While its per capita income – estimated at US $ 1,321 in 2006 (Tashi 2008) – is among the highest in South Asia (Crow 2004), this level still qualifies Bhutan for inclusion in the list of the world’s fifty least developed countries (UN-OHRLLS 2005). However, this low income obscures the fact that most traditional farmers do not require much cash as they own their land, live in sturdy houses, and generally have enough to eat, even if lacking some important nutrients. Compared with other developing countries in Asia and Latin America, the level of obvious poverty or distress is low.

The 2005 census found the population to be 672,425, with nearly 70% of the population living in rural areas (RGOB 2006). By contrast, Nepal, Bhutan’s western neighbor, has three times the land area but more than 20 times the population of Bhutan. Thimphu, the capital city, about an hour’s drive from the national airport, has
a population of approximately 80,000 and no traffic lights. While a small number of well-educated elite fill government jobs in the capital city, most of Bhutan’s populace lives in rural areas, following a traditional way of life (RGOB 2006). Farms are typically small, averaging two acres in the mountainous north, and eight acres in the foothills of the south. Farmers in small villages of traditionally constructed houses and rely on small-scale agriculture, livestock, and forest products for their needs. Only 7.8% of Bhutan’s land area is under cultivation (RGOB 1998b: 36 - 37). In the rugged areas, farmers cluster in the fertile river bottoms, cultivating rice in terraced paddies, as well as potatoes and maize. Wheat, buckwheat, and millet grow at the higher elevations. Kitchen gardens provide vegetables including chilies, tomatoes, onions, asparagus, squash, and leafy greens. Agricultural extension workers are introducing additional fruits and vegetables to provide greater variety and nutrition in the rural diets. Cows, and yaks in alpine areas, provide milk and cheese. Poorer families may keep chicken or pigs. Rearing pigs is considered to be vulgar, “low class” and sinful activity because the only reason to keep a pig is to slaughter it, contradicting the Buddhist admonition to protect all life. Villagers harvest a variety of non-timber forest products including fiddleheads, mushrooms, leafy green vegetables, and dozens of medicinal plants. Villagers also rely on the forest for construction materials, firewood, and fodder.
A Brief History of Bhutan

Prior to the twentieth century, Bhutan had little centralized state control. Nomadic herders, believed to occupy Bhutan as early as 2000 – 1500 BCE, moved with their herds from the low-lying valleys in the winter to the higher pastures in the summer, a pattern maintained by herders in the high regions of the country today. These lands on the southern border of Tibet, known as Lho Yul (the Southern Lands) or Lho Men Jong (Southern Valley of Medicinal Herbs), sheltered Tibetan aristocrats who fled civil war in Tibet in the ninth century, bringing both Buddhism and civil war with them to Bhutan, as they fought to extend the reach of their power from valley to valley (Aris 1979). Though various ruling clans and noble families gained and lost power between the 9th and 17th centuries, no one emerged as a central ruler over the scattered fiefdoms. Finally, the Shabdrung (whose title means “at whose feet one prostrates”), Ngawang Namgyal (1594 – 1651), who came to Bhutan from Tibet in the 17th century, unifying Tibet’s southern borderlands, and establishing many of the customs, etiquette and dress rules, religious dances and songs that distinguish Bhutanese culture from that of Tibet (Aris 1994). The Shabdrung established a Buddhist theocracy, governed by a reincarnated lama, known as the Je Khenpo, with administrative duties delegated to a secular leader, known as the Druk Desi (Dz. brug sde srid) or Deb Raja (Aris 1994).

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Even after the unification of Bhutan under the Shabdrung in the 17th century, state control was limited by the rugged territory and nomadic herding lifestyle. The Shabdrung went into retreat in 1651, and died sometime afterward, but his death was kept secret from the nation for half a century, to avoid disruption (Pommaret 1998). When three reincarnations of the Shabdrung were identified – one each representing the Body, Speech and Mind of the deceased ruler – the nation again descended into squabbling over the next ruler (Pommaret 1998). In the two and a half centuries between the Shabdrung’s death and the installation of the first hereditary monarch, Sir Ugyen Wangchuk in 1907, the country was governed by more than fifty Desis, secular leaders who ruled in tandem with the Je Khenpos. As many Desis came to office late in life, the average reign for a Desi was four and a half years, before retiring, being killed in office (the fate of six), or being deposed (as twelve were) (Aris 1979: 266). In 1907, a consortium of secular and religious leaders established a hereditary monarchy, with Ugyen Wangchuk, the Penlop, or governor, of Trongsa, a district in central Bhutan, as the first king (Aris 1994). With the unforgiving terrain and few transport routes, Bhutan was nearly ungovernable from a central location. The second king, Jigme Wangchuk, who reigned 1926-1952, worked on strengthening internal administrative and taxation systems, and centralizing control over the rugged nation (Aris 1994).
Development in Bhutan

Planned economic development began in the 1960s when the third king, Jigme Dorji Wangchuck, who reigned from 1952-1972, promulgated the First Five Year Plan. In the early years of development, nearly all aid came from India. As recently as the late 1980s and early 1990s, an estimated 90% or more of Bhutan’s population of 600,000 lived in rural areas (RGOB 1987). At that time, there was no clear delineation of urban areas, and no studies had been conducted to determine the rate of urbanization or to examine rural to urban migration. By the 2005 census, the population was determined to be 672,425, with 30.9% living in urban areas, and 69.1% living in rural areas (RGOB 2006). In the space of 15 years, the population – or at least the perception of its location – had shifted dramatically, and with it, the reliance on manufactured products, and the need for appropriate waste disposal systems, a subject to be address in Chapters 4 and 5.

While more 70% of the population still practices subsistence farming, Bhutan developed ways to provide education and healthcare services to a dispersed rural population, and greatly improved material livelihoods during the reign of the fourth king, Jigme Singye Wangchuk. The fourth king reigned 1972-2006, ascending to the throne when he was just 16, upon the death of his father. An increase of road coverage from 1,755 km in 1985 to 5,362 km in 2009 (Lamsang 2009a) strengthened the ties between the central government and the outlying areas, leading to increasing simplification and intervention into local people’s lives. The completion of the 545
km East-West Highway (or Lateral Road) in the early 1980s, after 20 years of construction (Wangchuk 2004), allowed government officials easier access to the rural areas and facilitated the construction of the education and healthcare infrastructure. In large part, this has resulted in material improvements in the lives of Bhutanese citizens.

In just 30 years, Bhutan has created an infrastructure for free universal healthcare and education. More citizens that ever before have access to health care, education, clean drinking water, sanitation, transportation and nutritious food. In 2009, 176,483 students were enrolled in school, as compared with 51,835 in 1985, reflecting both the increased availability of schools, and the increasing belief in the necessity of education among the populace (Lamsang 2009a). The average life expectancy has risen from 47.5 years in 1985 to 66.3 years in 2009, and infant mortality rates have dropped from 142 per thousand in 1985 to 40.1 per thousand in 2009 (Lamsang 2009a).

Table 1-1: Changes in Socio-economic Indicators

<table>
<thead>
<tr>
<th>Changes in Bhutanese socio-economic standards over 24 years, 1985-2009</th>
<th>1985</th>
<th>2009</th>
<th>Increase/decrease</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads (kms)</td>
<td>1,755</td>
<td>5,362</td>
<td>3,607</td>
<td>306</td>
</tr>
<tr>
<td>Telephone connections (not including mobile subscribers)</td>
<td>1,880</td>
<td>26,850</td>
<td>24,970</td>
<td>1428</td>
</tr>
<tr>
<td>Students enrolled in school</td>
<td>51,835</td>
<td>176,483</td>
<td>124,648</td>
<td>340</td>
</tr>
<tr>
<td>Life expectancy (years)</td>
<td>47.5</td>
<td>66.3</td>
<td>19</td>
<td>140</td>
</tr>
<tr>
<td>Infant morality (per thousand)</td>
<td>142</td>
<td>40.1</td>
<td>-102</td>
<td>28</td>
</tr>
<tr>
<td>Birth rate (per thousand)</td>
<td>39.1</td>
<td>19.7</td>
<td>-19</td>
<td>50</td>
</tr>
<tr>
<td>Death rate (per thousand)</td>
<td>19.3</td>
<td>7.1</td>
<td>-12</td>
<td>37</td>
</tr>
</tbody>
</table>
GDP (in millions of ngultrum) | 2,392 | 51,521 | 49,129 | 2154  
Total government revenue (in millions of ngultrum) | 233 | 11,608 | 11,375 | 4982  
Agriculture, as % share of GDP | 53 | 18.1 | -35 | -34  
Rural population access to piped water (in %) | 14 | 89.6 | 76 | 640  
(Statistics from Lamsang 2009a.)

Urban growth

In recent years, Thimphu, the capital, has grown by 7-10% percent annually, primarily through the addition of migrants from rural areas (RGOB 1999; Mayerhofer et al. 2002; RGOB 2005b; Wangchuk 2007; RGOB N.d.). More than three-quarters of migrants believe that the quality of life is better in urban areas (Wangchuk 2007). When I first visited Thimphu, the capital, in 2001, its population was estimated at 30,000 – 40,000 people. By 2005, the population of the capital’s dzongkhag, or district, had reached 98,676, with Thimphu thromde, or city, accounting for about 79,000 of that total (RGOB 2006). By way of comparison, the rural Gasa Dzongkhag, directly north of Thimphu Dzongkhag had only 3,116 people during the 2005 census, and rural Haa Dzongkhag, to the west of Thimphu, had 11,648. See Figure 2 for locations of Haa and Gasa, as well as approximate locations of 2007-2008 interviews and participant observation, circled in red. From left to right, the interview locations are Thimphu (n=19), Zhemgang (n=37), Trashiyangtse (n=15), and Trashigang (n=33). The larger ovals in Zhemgang and Trashigang indicate both a larger sample size, and a larger area in which the interviews occurred. Note the relatively few major roads. Between 1999 and 2012, the Bhutanese government planned to increase road
accessibility by ensuring that 75% of the population was within half a day’s walk from a motorable road (up from 50% in 1999) (ADB 2001: 6). The Ninth Five Year Plan, in operation from 2002 to 2007, called for 300 kilometers of roads to be constructed in the four Dzongkhags (Mongar, Zhemgang, Pemagatshel and Samdrup Jongkhar) in which one-third of geogs (counties) were not connected to roads. A new 45-kilometer Gomphu-Panbang highway was planned, under construction during my 2007-08 visit, which will connect portions of the poorest Dzongkhags to the National Highway (RGOB 2002b: 35) Consequently, interviews in Zhemgang required a week-long trek, through sections of Royal Manas National Park, to reach the outlying villages.

Figure 1-2: Map of Bhutan, from Google Maps. Bhutan is about 600 km east to west.
Engagement with international institutions

Since opening its borders to participate in the world of international development, Bhutan has worked to avoid dilution of or derailment from its objectives by larger powers. Bhutan did not join the International Monetary Fund (IMF) or the World Bank until 1981. Bhutan became a member of the International Finance Corporation, the World Bank's private sector development arm, in 2003, and began movement toward accession to the World Trade Organization (WTO). Even after becoming party to the global development apparatus, Bhutan kept tight hold of its own agenda, rejecting funding that did not fit with Bhutanese-defined objectives, going so far as to reject aid from the World Bank to build a dam on the Manas Chu that would have flooded a large conservation area on the southern border with India (Savada 1991). World Bank lending to Bhutan, which has focused primarily on education, urban development and transport, has amounted US$64.3 million for nine projects since 1981. Loans in the early and mid 1980's supported technical assistance to law, justice, and public administration; development of the forestry industry; and production of calcium carbide for export. Recent projects have addressed institutional strengthening, private sector development, sustainable land management, and decentralized rural development (World Bank 2009).

Electrification (from hydroelectric projects) and vigorous afforestation efforts protected forests in rural areas (Savada 1991). Recognizing its uniquely intact forests and wild species as a valuable resource to be protected and capitalized upon, the
government protected more than one-quarter of the land in parks and protected areas in the 1980s, sheltering designated areas from logging and dam construction. Steep mountain gradients and fast-running rivers allow for the production of hydroelectricity, most of which is sold to India. Hydropower accounts for 10.8% of GDP (RGOB 2005a).

**Bhutan’s natural environment**

Bhutan’s natural environment – including vast forests and mountains, diverse wild species, and intact ecosystems – may be its greatest asset. Located at the margin between the temperate Palearctic realm of Eurasia and the tropical Indo-Malayan realm of the Indian subcontinent, Bhutan is home to remarkable biological diversity, including 5446 species of vascular plants, 178 species of mammals and 770 species of resident and migratory birds (Namgyal 2001). The last remaining large tracts of mid-hill Himalayan ecosystem are found in Bhutan. Elsewhere in the Himalaya, this ecosystem, which is the most hospitable for human habitation, has been cleared for agriculture. Because of the number of endemic species of wildlife and its intact forests, and the degree of threat faced, Bhutan is part of the Indo-Burma biodiversity hotspot of the eastern Himalaya (Myers et al. 2000).

Recognizing the opportunity to maintain its reservoir of biodiversity, the National Assembly mandated, in 1974, that Bhutan’s forest cover never drop below 60%. In 2009, nearly two-thirds (64%) of Bhutan was under forest cover (Gurung 2009) and the constitution adopted in 2008 requires that 60% of the country remain
under forest cover in perpetuity. In 2008, 36% of the country was under direct conservation protection through parks and protected areas. When the biological corridors (another 9.5% of Bhutan’s land area) running between the protected areas are included in the total, Bhutan has almost half of its land area under protected area status, the highest proportion in the world (Gurung 2009).

Bhutan’s parks and protected areas are home to 72 of the world’s threatened species (IUCN 2002). Bomdeling Wildlife Sanctuary in northeastern Bhutan harbors four globally endangered mammals (tiger, snow leopard, red panda and capped langur), and five globally threatened birds (rufous-necked hornbill, Pall’s fish eagle, chestnut-breasted partridge, black-necked crane and wood snipe) (RGOB 2001: 3). Other globally vulnerable animals occurring within Bhutan include musk deer, leopard, Himalayan black bear, serow, and Himalayan monal (RGOB 2001: 3). Sixteen threatened bird species and 46 species of rhododendron occur in Bhutan (Pradhan 1999; Pradhan and Wangdi 1999). Rare plant species include blue poppy and yew. Chinese caterpillar (cordyceps sinensis) is a highly desired and increasingly rare fungus used in traditional medicines. Many of the endemic reptiles, amphibians, fishes, and invertebrates have not yet been surveyed. Such biological richness in a small country is even more notable in a world in which the global loss of biodiversity is considered by some to be the most urgent problem facing science (Wilson 1992).

Timber harvesting, even for personal use, requires a government permit. The Bhutanese Government’s laws prohibit killing wild pests, unless they are caught in the
act of damaging crops. Until the government put on the brakes with comprehensive forest preservation policies in the 1970s, easily accessible forests were logged by private companies, as well as by villagers requiring wood for construction, cooking and lighting needs. In the 1970s and 80s, training of forest guards, demarcation of protected forest boundaries, elimination of private logging, and development of forest management plans provided greater protection to the forests. The traditional burning of fields and scrubby forests to promote pasture growth, and to clear land for shifting cultivation, has been banned. The slow adoption of economic development has allowed Bhutan to maintain vast swaths of forest, along with the numerous rare and endangered species that inhabit the forests.

Tourism in Bhutan

Tourists come to view the intact natural environment and vibrant culture, providing the country’s largest source of foreign exchange. While ecotourism has been touted as a panacea to conservation and development challenges throughout the developing world, it may actually live up to its promise in Bhutan, where the prospect of gaining revenue for showing the country’s natural features may have played into the calculations to protect the natural and cultural environments. The Bhutanese are proud of their rich heritage, and have chosen not to low-ball its value. Rather, as noted above, Bhutan has focused on “high quality, low volume” tourism, extracting greater revenue from a smaller number of tourists. Because of this policy, pleasure visitors tend to be older and better educated, and thus perhaps more likely to treat the culture
with respect, than those found in other parts of South Asia. The expense of a vacation in Bhutan also tends to limit trips to less than two weeks, consequently restricting impact on fragile ecological and cultural landscapes. Treks in Bhutan are long, cold, and strenuous, especially when compared with Nepal’s teahouse treks, which encourages the concentration of visitors into town areas and specific cultural and religious monuments, further checking additional human impact on sensitive ecosystems.

**Cultural preservation and gross national happiness**

The last decade has seen increasing inroads of cultural and economic globalization, especially in Thimphu. Cable television and internet arrived in 1999 (in celebration of the fourth king’s Silver Jubilee, or 25 years of enthronement). Video movies are available for rent in the larger towns. The increasing homogenization of food, fashion, and entertainment, spread in part by global media, has been called “the march of the monoculture” (Norberg-Hodge 1991). The Special Commission for Cultural Affairs works against the tide of homogenization through the “preservation, development and the promotion of the cultural heritage of Bhutan” (Cultural Trust Fund N.d.). The Special Commission promotes *Driglam Namzha*, the traditional Bhutanese etiquette based on the Buddhist principles of respect, tolerance, and compassion that contribute to social harmony. The Royal Academy of Performing Arts teaches and exhibits traditional dance and music, while *Zorig Chusum* Institutes, akin to technical high schools, train students in the 13 traditional arts and crafts of


Bhutan, including metal working, wood carving, bowl making, painting, embroidery, carpentry, weaving and the like. Visual harmony -- or hegemony, some would claim\(^3\) -- is promoted through the requirement that national dress (a knee-length, robe-like gho for men, and floor-length, wrapped, striped kira for women) is worn in schools, government offices, and religious building. However, hip young urbanites prefer jeans or track pants, and the national newspaper chronicled the trend of diet pill use among young women who want to look stylish in tight jeans (Choden 2003).

As put forward by King Jigme Singye Wangchuk since the late 1980s, Gross National Happiness is Bhutan's "central development concept" (RGOB 1999). This is not an esoteric theory confined to the offices of the capitol city, but is discussed regularly among educated people. GNH grows out of the Tibetan or Vajrayana Buddhism deeply entrenched in Bhutan. Among the tenets of Buddhism are the ideas that all beings want to be happy, and that, while life is full of suffering, the cessation of suffering through guidance, practice, and attention is possible. Royal Government takes pains to clarify that development in Bhutan is not only material development, but must also be emotional and spiritual development in keeping with the Buddhist ethic of personal development toward enlightenment for the good of all sentient beings.

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\(^3\) While this style is the traditional dress for Drukpas, who are dominant in the northern and central areas of Bhutan, the Southern Bhutanese, many of whom are of Nepali origin and prefer to wear saris or salwar kameez, contested its imposition in the early 1990s. This and other problems of cultural difference led to Southern Bhutanese leaving or being forced to flee from Bhutan into India and ultimately Nepal. Today, between 80,000 and 100,000 Nepali Bhutanese wait in refugee camps in eastern Nepal for a verification process that will allow those who are truly Bhutanese and those who did not work against the state to return to their homes. The United States and other third countries have agreed to resettle some of the refugees. For details, see Michael Hutt, *Unbecoming Citizens: Culture, Nationhood, and the Flight of Refugees from Bhutan*, Oxford University Press, 2003.
beings. This emphasis reminds us that a person is more than a collection of material wants and needs, but has essential spiritual and emotional capacities that must be expressed. The Chairman of the Council of Ministers, who is now the Prime Minister, clarified the connections between these concepts in a 1998 speech.

Within Bhutanese culture, inner spiritual development is as prominent a focus as external material development. This follows from an original meaning of development in a Bhutanese context in which development meant enlightenment of the individual. I hasten to add that enlightenment is not solely an object of religious activity. Enlightenment is the blossoming of happiness. It is made more probable by consciously creating a harmonious psychological, social, and economic environment (Thinley 1998).

Since the King’s first formulation of the concept of GNH in 1972, shortly before ascending to the throne, policymakers and scholars inside and outside Bhutan have attempted to unfold the meaning of this koan-like statement to understand how it should guide the modern development and global integration of Bhutan. GNH has been defined as composed of five (or four, depending on the source) thematic headings or “pillars:” “human development, culture and heritage, balanced and equitable development, governance, and environmental conservation” (RGOB 1999). (In some sources, “human development” and “culture and heritage” are collapsed into “cultural promotion” (Wangchuk 2003)). With its emphasis on cultural and spiritual needs, GNH stands as a challenge to the more economically- and materially-centered development theories and practices that grew out of the Bretton Woods institutions.
Prevailing economic theories register increases in national GDP, even as greater shares of resources are used to combat drains on society such as crime, drug addiction, or environmental degradation (RGOB 1999: 46). As many environmental economists have noted, the rapid depletion of natural resources registers as an increase in GDP, even as a nation drives down its natural capital (Repetto and World Resources 1989; Daly 1994). In these examples, GDP has an inverse relationship to GNH — as circumstances get worse, the economic standing of a nation rises. Bhutan rejects the validity of GDP as a measure of national well-being, insisting, “The key to happiness is to be found, once basic material needs have been met, in the satisfaction of non-material needs and in emotional and spiritual growth.”(RGOB 1999: 46). This insight is not a new one, reflecting, among other formulations, Maslow’s hierarchy of human needs, which suggests that after basic physiological and safety needs are met, people are motivated by the “higher” needs for affiliation, achievement, and self-actualization (Maslow 1943). Much of the emotional malaise of the West stems from the consumerist society’s continual effort to do a better and better job at fulfilling our basic needs at the expense of our higher needs. Bhutan’s guiding planning document, Bhutan 2020, recognizes this mismatch between the current consumerist emphasis and human needs, stating:

The concept of Gross National Happiness accordingly rejects the notion that there is a direct and unambiguous relationship between wealth and happiness. If such a relationship existed, it would follow that those in the richest countries should be the happiest in the world. We know this is not the case. This marginal increase has also been accompanied by the growth of many social problems as well as such phenomena as
stress-related diseases as well as suicides, surely the very antithesis of happiness (RGOB 1999: 46).

In its recognition that material development is not the only valid measure of human progress, and its awareness that declining natural resources are a drain rather than a boon to GDP, the notion of GNH recognizes that well-being must extend beyond human material needs.

With the introduction of Gross National Happiness onto the global stage in 1998 at the Asia-Pacific Millennium Summit in Seoul, the concept began to gain international currency. *Gross National Happiness*, a book of discussion papers, was published in Bhutan on the occasion of the King’s Silver Jubilee (Center for Bhutan Studies 1999). In 2001, the Centre for Bhutan Studies co-hosted a seminar entitled “GNH - As Challenged By The Concept Of Decent Society” in the Netherlands, with which it has a close aid relationship. In 2002, the South Asian Association for Regional Cooperation (SAARC) planning and economic ministers embraced GNH as a strategy for poverty reduction in South Asia (Acharya 2004). Four international conferences on Gross National Happiness, organized fully or partially by Bhutanese officials, were held between 2005 and 2008, in Bhutan, Nova Scotia, Thailand and Bhutan, respectively.

This brief background on the history, geography, culture and development of Bhutan highlights some of its unique characteristics that made it a particularly good place for analyzing the interactions of religion and ecology. Further, in his discussion
of the development of laws in social science, philosopher Harold Kincaid identifies additional reasons that a developing country like Bhutan is ideal for the type of research I set out to do.

Small scale societies are ideal candidates for explanation for several reasons....[Small scale societies] are likewise more isolated from outside cultural factors while at the same time more directly tied with their ecological environment. So, small scale societies present cases where the number of variables are relatively reduced and provide us with a rich set of data for testing hypotheses (Kincaid 1994: 126).

Thus, having grounded my study in a particular place, I now turn to the approach and methods I used to investigate my research questions.

**Methodology**

This dissertation seeks to understand how religious and spiritual beliefs contribute to actions in the natural environment, through an investigation of ‘environmental imaginaries,’ the place-specific conceptions of nature that shape the ways that people perceive, discuss, and work in nature (Watts and Peet 1996b). Through qualitative ethnographic methods, I endeavored to understand the role of religious and spiritual belief and practice in shaping Tibetan Buddhist Bhutanese environmental imaginaries, with respect to local forest management, particularly around sacred natural sites, and waste management, an increasing problem in a country that has engaged with development for just 60 years. The interconnections between religion, environmental imaginaries, and socio-natural place are not well understood. Therefore, I used ethnography to identify patterns that could be used to
generate grounded theory, relying on unstructured and semi-structured interviews, participant observation, and document analysis to allow general theories to arise from local dynamics (Glaser and Strauss 1967). These ethnographic methods were situated within the political ecology framework, which examines the political-economic structure and historic-physical context in which environmental change occurs (described in detail in Chapter 2).

I took an interpretive approach (Geertz 1994; Geertz 2000) to collecting and analyzing ethnographic data. Like anthropologist Clifford Geertz and sociologist Max Weber, I believe that the human being is

an animal suspended in webs of significance he [sic] himself has spun. I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning (Geertz 1994: 214).

My interpretive approach and analysis has been strongly influenced by the insights of feminist theorists of science such as Donna Haraway (1988) who destabilize the omniscient, disembodied and dislocated scientist with a 'view from nowhere.' Haraway argues for 'situated knowledge,' which recognizes and reflects the social location and embodiment of the researcher. She insists that knowledge is partial, and only by bringing together various knowledges – including scientific, traditional, religious and spiritual – together in conversation can we begin to approach a more complete understanding of the world (Haraway 1999).
This dissertation draws on interview and observational data collected in Bhutan in 2001, 2002, and 2007-08. The government agency that invited me to Bhutan to conduct my research was expecting to get useful data with policy implications. This requirement also made the generation of grounded theory from particular situations the most appropriate tactic. The political ecology approach, also described in Chapter 2, helps me situate specific local situations to the larger national and international dynamics and discourses that influence them.

I employed a discursive, semi-structured approach in the interviews because much of the knowledge in this oral culture is embedded in stories. Interviews were conducted as “guided conversations” so that respondents could raise issues with which they were concerned (Lofland and Lofland 2006: 85). Respondents often seemed to ramble, not following my set pattern of question-response, and indeed, some pointed out that my questions were “out of order.” Answers often came in the form of lengthy stories that would illuminate several issues under discussion. Probing questions, tailored to the situation, followed the questions on the interview guide, in order to elicit additional in-depth information or to clarify contradictory statements (Lofland and Lofland 2006 - 82). To accommodate our different epistemologies, I learned to limit my questions to a few that would launch the discussion, following up on points that needed more clarification. As anthropologist Sherry Ortner (1989: 7) noted in her study of Sherpa religion,
The sequence of my ethnographic questions often seemed meaningless to informants, as I pursued aspects of a topic that seemed unimportant to them, rather than what they felt was the main point... I was more than once criticized for ‘jumping around’ from topic to topic (from the informant’s point of view) rather than allowing the informant to present things in the ‘proper’ order.

Participant observation – “study of people in their own time and space, in their own everyday lives” (Burawoy 1991) – in meetings, events, religious observations and daily life provided a means of corroborating the interviews, and added significant depth to my understanding of life in Bhutan and particularly the subtle power dynamics that course through daily interactions.

Having studied the Tibetan language, of which Dzongkha, one of the Bhutanese languages, is a variant, for three years, and studying Dzongkha during my time in Bhutan, helped immensely with easing social interactions and creating rapport with local people. However, as described in the Note on Tibetan and Dzongkha Language and Spelling, Dzongkha is not useful throughout the country. Eighteen languages are spoken throughout Bhutan, and the predominant languages in eastern Bhutan are Sharchop and Tsangla, which are not frequently written and not formally taught. For this reason, and to adhere to Bhutanese government protocol, I worked and traveled with several different Bhutanese counterparts, who provided language and cultural interpretation. As Africanist Stephen Devereux notes, becoming fluent in a fieldwork language has significant costs in terms of time and money that must be weighed against other demands (Devereux 1993). For this reason, and the limitations
on the length of my visa, per the Bhutanese government, it did not prove practical to learn Sharchop or Tsangla, though I did learn basic counting and pleasantries in Sharchop, which amused local people greatly.

Summary of the sacred natural sites study

My analysis of the social role of sacred natural sites in Bhutan and around the world draws on a re-analysis of data collected during my fieldwork in Bhutan in 2001 and 2002; new interview and participant observation data collected in 2007-08, as part of the waste management study described below; and an extensive review of the literature of sacred natural sites, traditional ecological knowledge, and the spiritual values of biodiversity. The 2001-02 fieldwork, conducted under the auspices of the Bhutan Trust Fund for Environmental Conservation, was undertaken to understand the role of religious and spiritual cultural beliefs and practices in local forest and water management in eastern Bhutan. The study employed semi-structured interviews that explored the respondents’ use of forest products, understanding of cultural rules that prohibited use of the forest in certain locations and certain seasons, and beliefs about deities and their requirements. Primary themes addressed in the 2001-02 interviews included: use of forest products, prohibited places in the forest, deity beliefs, characteristics of deities, and prohibited times for harvesting forest products.

Village interviews were conducted with two research assistants, Tashi Wangdi (2001) and Phuntsho Dorji (2002), both recent graduates from Sherubtse College in Bhutan, who spoke Dzongkha (the national language) and Sharchop (the language of
eastern Bhutan), as well as English. Interviews often included a local guide, who accompanied us to each house. As it was not possible to ask the guide to absent himself from the interview process, the interview responses could be affected by the respondents’ desire to provide socially appropriate responses in the presence of the guide.

Interviews were generally conducted in the early mornings, before villagers went to work in the fields or in the evenings, after they returned from fieldwork. The summer months of June, July and August are particularly busy for these subsistence farmers, who must plant rice, harvest potatoes, and scare wild boars away from the crops at night. Because of the urgency and volume of fieldwork, we made an effort not to interfere, though the appearance of a foreigner and an educated city person in any village is bound to be a disturbance. Respondents were compensated for their time in the interviews with a small amount of money (50-100 ngultrum, equivalent to about $1-2), or packaged food, depending on local customs.

**Summary of the waste management study**

At the request of the Bhutanese government, the earlier forest management study was not continued, and a new study on local beliefs and practices of waste management was launched in 2007. Within the government’s new focus on waste, I endeavored to address my over-arching questions about the role of religion and spirituality in perceptions of and actions in the natural environment. As will be explained below, it became clear that I would not receive a visa to continue my work
in Bhutan unless I focused on waste, so I shifted the explicit focus of my study, while maintaining the over-arching questions. With my agreement to study waste attitudes and perceptions, the Ministry of Works and Human Settlement (MOWHS), Department of Urban Design and Engineering Services (DUDES), issued an invitation and a visa for me.

The goal of this study was to assess residents’ current attitudes and practices of household waste management, as well as issues of concern around household waste management, and to understand the ways that migration within Bhutan affects people’s relationships to their surroundings, and consequently their waste management attitudes and practices. Along with questions about waste materials, practices, and concerns, I built on my previous experience and asked about religious practices and local deities, in an effort to discern how the categories of religion and spirituality might intersect with waste issues in such a predominantly Tibetan Buddhist society. This study was not intended to provide a statistical analysis. Rather, it is a qualitative look at current attitudes and practices around waste management. Life histories provided perspective on the changing circumstances in Bhutan. Employing qualitative ethnographic methods, including semi-structured interviews (Lofland and Lofland 2006: 66 - 89), life histories, focus groups, and participant observation (Burawoy 1991), this research was carried out over eight months, September 2007 - March 2008, and August 2008.
The primary sources of data collection were semi-structured interviews, conducted in Sharchop, Khengkha, Nepali, or Dzongkha, with an interpreter (61 interviews), or English, without an interpreter (30 interviews). Research assistants/interpreters were Dzongkhag staff, as assigned by the Dzongdag or District Engineer of the respective dzongkhag. Interviews took place in people’s homes, in offices, in restaurants and taxis, and at festivals. I conducted semi-structured interviews like conversations, so that informants could raise issues of interest and importance to them. As the direction of the interview was not predetermined, informants were free to bring up issues that concern them. Building on a previous structured study of rural to urban migration by the Ministry of Agriculture (RGOB 2005b), and a concurrent quantitative study of municipal solid waste by the Ministry of Works and Human Settlement (Phuntsho et al. 2008), this study aimed to collect qualitative data to help make household waste management more effective and practicable.

Data Collection Methods

I conducted interviews and/or participant observation in six of Bhutan’s twenty dzongkhags, or districts. I began my fieldwork in Thimphu, the capital of Bhutan, in Sept. 2007. In October and November, 2007, I carried out interviews and participant observation in eastern Bhutan, in Trashigang and Trashi Yangtse districts, where I had worked previously, and still had a few contacts. I spent December 2007 in Zhemgang, a remote southern district in central-eastern Bhutan. I returned to Thimphu, January – March 2008, and conducted participant observation at a town
clean up in Haa, in western Bhutan, in March 2008. I conducted additional interviews and was a participant observer at Bhutan’s first National Waste Management Conference, and visited Gasa, the district north of Thimphu, with another researcher studying waste management, in August 2008 (Allison 2008). Participant observation, the study of people in their everyday lives, in both village and urban settings, was essential for triangulating on the statements that informants made about the issues and challenges in waste management (Emerson et al. 1995).

Several different research assistants helped conduct village interviews: Prem Kumari, a Village Water Supply worker, in Trashigang; Sonam Gyamtsho, the Tongzhang Administrative Officer, in Trashiyangtse; and Karma Yangzom, the Dzongkhag Accountant, in Zhemgang. Prem, a class ten graduate originally from southern Bhutan, spoke Nepali, Sharchop (the language of Trashigang and Trashiyangtse), Dzongkha and English. Sonam, a recent college graduate originally from western Bhutan, spoke Dzongkha (the language of western Bhutan), Sharchop and English. Karma, a class ten graduate from Zhemgang, was fluent in Khengkha (the language of Zhemgang), Dzongkha and English. Interviews often included a local guide, who accompanied us to each house.

Additional data sources, which I used to triangulate with my interview and observational data, included government documents, attendance at National Environment Commission-sponsored waste management meetings and trainings, and newspaper articles. I gained useful information from queries posted on Bhutan’s
Solution Exchange internet listserv, and on the Asia Regional Mountain Forum listserv. In both cases, I joined an email discussion list that allows researchers and practitioners to post queries and learn from other participants. Listserv participants responded to my queries with suggestions about informants, relevant books and materials, and their own thoughts on my research topics.

As a researcher “attached” to a government agency, I was able to be a participant-observer while working in the office and participating in the agency’s first national waste management conference. I attended meetings about the solid waste management bill, which the National Environment Commission was preparing in consultation with MOWHS. I also attended events intended to raise awareness of waste and environmental issues among young people. As a resident of Thimphu, the capital, living in a rented flat, I participated in daily life, purchasing vegetables in the market, walking to work and observing habits of waste disposal and of religious practice on my daily forays around town. I regularly read all three Bhutanese newspapers, which are issued two or three times per week. These papers are mostly widely read in their English versions, as many educated Bhutanese find the Dzongkha version difficult to read. Finally, as a visitor in rural villages, I participated in daily life, attending festivals and celebrations (autumn is the main festival season) and visiting temples on auspicious days, allowing me to learn about religious belief and practice in action.
Participant Selection

Participants were selected to provide as representative a sample as possible under the circumstances. We sought to include a cross-section of villagers and urban residents. To provide a qualitative look at current attitudes and practices around waste management, village respondents were selected by availability, interest in participating in the research, and on recommendation of the Gup or other official with knowledge of the villagers. Survey interview respondents were mainly farmers, along with small business people, homemakers, and retired people. Effort was made to select a cross-section of the population that would include all age groups, and relatively equal proportions of men and women (see Demographics of Informants). I used snowball sampling, beginning with my contacts in the Ministry of Works and Human Settlement, and with local district officials to locate knowledgeable key informants, such as government officials, health workers, school teachers and principals, religious leaders, geog officials, government workers, domestic and international NGO workers.

Demographics of Respondents

With my research assistants, I interviewed approximately equal numbers of men and women, representing a range of ages from 18 to well over 60 (see Table 2 and Table 3).

Table 1-2: Ages of Interview Respondents.

<table>
<thead>
<tr>
<th>Ages of Respondents*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dzongkhag</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Trashigang</td>
</tr>
<tr>
<td>Trashiyangtse</td>
</tr>
<tr>
<td>Zhemgang</td>
</tr>
<tr>
<td>Thimphu</td>
</tr>
<tr>
<td>Bumthang</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

* Not all respondents provided their ages, as keeping track of birthdates was not common in the past. Also, key informants were not asked for their age.

Table 1-3: Gender of Key Informants and Survey Interview Respondents.

<table>
<thead>
<tr>
<th>Gender of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
</tr>
<tr>
<td>56</td>
</tr>
</tbody>
</table>

**Site Selection**

Rural areas in three dzongkhags were selected so that a comparison of traditional village waste management methods with urban waste management methods could be developed. Trashigang was selected because it is the source of the largest number of rural to urban migrants, and government officials wanted to know more about the causes of this movement (IPE and Gyaltshen Consultancy 2007). They asked me to include questions about the motivations of rural to urban migration in my study. In addition, I was familiar with Trashigang and Trashiyangtse dzongkhags from my previous research in eastern Bhutan. In consultation with the District Engineer, Bartsam, Bidung and Radi villages were chosen as interview sites, based on his assessment of the most relevant sites for carrying out my study.
In Trashi Yangtse, Tomijangsa, a village in Tongzhang geog, or “block” (a subdivision of a district) were selected as interview sites, based on government officials’ observations that many rural to urban migrants have been departing from these areas. Additionally, my previous research in Trashi Yangtse in 2001-2002 (Allison 2004b) provided a foundation of knowledge of the cultural and ecological characteristics of the area. According to the Population and Housing Census of Bhutan, 2005 (RGOB 2006), the largest number of rural-urban migrants to Thimphu, 6745, came from Trashigang. Trashigang was losing population rapidly: the district experienced a net loss of 16,697 out of 67,831, or nearly 25%, in 2005. Large numbers of migrants have departed from Tongzhang geog, in southern Trashi Yangtse, according to Dzongkhag and Ministry officials.

Zhemgang was losing population even more rapidly. In 2005, Zhemgang experienced a net population loss of 8509 people, out of a population of 27,145, or more than 30%, according to the Population and Housing Census of Bhutan, 2005 (RGOB 2006). Zhemgang was chosen to provide a contrast with the eastern two dzongkhags. Within Zhemgang, my itinerary was planned by the Dzonggrab, the second-in-charge of the Dzongkhag, and his colleagues. The second part of my journey coincided with the Dzonggrab’s tour to educate villagers about HIV/AIDS. Therefore, from Gomphu to Pantang, I traveled with the Dzonggrab, and his assistants. The Assistant District Education Officer accompanied us for part of the journey.
In Thimphu, I interviewed key informants, and assessed urban waste management attitudes and practices through participant observation and survey interviews. A visit to Haa town (pop. 2495), also in western Bhutan, allowed me to be a participant observer in a town clean up, and to learn more about local religious and spiritual beliefs and practices.

Table 1-4: Locations of Interviews.

<table>
<thead>
<tr>
<th>District</th>
<th>Key Informants (A)</th>
<th>Survey Interviews (incl. group interviews) (C)</th>
<th># survey interview respondents (B)</th>
<th>Total # of interviews conducted (A+C)</th>
<th>Total # of people Interviewed (A+B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trashigang (rural)</td>
<td>15</td>
<td>14</td>
<td>18</td>
<td>29</td>
<td>33</td>
</tr>
<tr>
<td>Trashiyangtse (rural)</td>
<td>2</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Zhempang (rural)</td>
<td>1</td>
<td>28</td>
<td>36</td>
<td>29</td>
<td>37</td>
</tr>
<tr>
<td>Thimphu (urban)</td>
<td>13</td>
<td>5</td>
<td>6</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Bumthang (rural)</td>
<td>1</td>
<td>--</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>32</strong></td>
<td><strong>59</strong></td>
<td><strong>73</strong></td>
<td><strong>91</strong></td>
<td><strong>105</strong></td>
</tr>
</tbody>
</table>

**Chronology of fieldwork in Bhutan, and challenges along the way**

When I reached Bhutan in September 2007, I conducted interviews and meetings with government officials and other key informants concerned with urban environmental issues, urban and rural infrastructure, and waste management in the capitol city of Thimphu. I then traveled to three rural districts in eastern and central
Bhutan, where I conducted 72 semi-structured interviews, involving 85 people, with villagers, local government leaders, health workers, and religious leaders. Village home stays (the longest of which was 10 days) allowed me to be a participant-observer in daily life and festivals.

During the fall months of Oct. – Dec. 2007, I traveled constantly in rural districts of eastern and central Bhutan. The Ministry of Works and Human Settlement (MOWHS), and the District Engineers responsible for its field services, requested that I ‘cover’ as large an area as possible in my research, visiting one village per day, rather than the lengthier stay, necessary for ethnographic fieldwork, called for in my research prospectus. When I protested that my in-depth interviews required more time, I was allowed to spend two to three days in each village, but was not allowed to take more time to get to know any one area especially well. In our negotiations, I was aware of my somewhat precarious position as an invited guest – if I had been invited, I could also easily be asked to leave. The short and hurried interviews prevented me from getting more deeply into the issues I wanted to address. I believe that the mandate to ‘cover’ as much area as possible resulted from both an unfamiliarity with ethnographic fieldwork among the engineers with whom I worked, and a desire to keep me moving to prevent me from gaining too much insight into the challenges of any one area. Therefore, instead of doing an in-depth study of one village, as I had planned in my original proposal, I ended up with a broader look at resource use and traditional religious and cultural beliefs in several villages.
The government officials and their designees monitored my behavior closely. I was never alone, even sharing a room with my various female assistants. I had hoped to hire an assistant in Thimphu, and have that person accompany me throughout several months of fieldwork. I was prepared to use my own (grant) funds for this purpose. However, because I was attached to a government agency, I was not allowed to hire my own research assistant. Instead, I was assigned various female research assistants as I passed through different districts. This situation had the result of slowing down my research considerably, as I was continually explaining the purpose, methods and structure of my research to a changing cast of characters. One woman was assigned to me in the evening, long enough to reach the village with me, and then was greeted with a message that she was needed back in the district headquarters the following morning, necessitating a quick search for a replacement in the village, and a repetition of the explanation.

Ironically, the most productive and thorough period of research occurred when my hired vehicle broke down while running an errand away from the village I was staying in, stranding me in one village for ten days. The female assistant assigned by the District Headquarter had been called back to her office, and the Geog Administrative Officer, a young man who had recently graduated from college and was based in the village, became my default assistant. This young man, used to the more active pace of life in the urban towns of Western Bhutan, took a lively interest in the project, and helped me make a thorough survey of the immediate area. Because I
was stranded in the village due to vehicle malfunction, I was able to learn more about
this village than any other area.

In January through March 2008, I was based in Thimphu, the capital, where I
carried out semi-structured interviews with key informants. I conducted participant
observation at a town clean-up day in the district of Haa, and at various festivals and
public meetings. I collected relevant newspaper articles, government documents, and
participated in online discussions. I also presented a report for the government on my
research findings from my research in the rural areas. I returned to Bhutan in August 2008,
when I was a participant observer at a week-long national conference on solid waste
management, and visited the district of Gasa, to the north of Thimphu.

Table 1-5: Chronology of Research.

<table>
<thead>
<tr>
<th>Month</th>
<th>Location</th>
<th>District</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 2007</td>
<td>Western Bhutan – capital city</td>
<td>Thimphu</td>
<td>Key informant interviews, participant observation</td>
</tr>
<tr>
<td>Oct. – Nov. 2007</td>
<td>Eastern Bhutan</td>
<td>Trashigang</td>
<td>Key informant interviews, survey interviews, participant observation</td>
</tr>
<tr>
<td>Oct. – Nov. 2007</td>
<td>Eastern Bhutan</td>
<td>Trashiyangtse</td>
<td>Survey interviews, participant observation</td>
</tr>
<tr>
<td>Dec. 2007</td>
<td>Central-eastern Bhutan</td>
<td>Zhemgang</td>
<td>Survey interviews, participant observation</td>
</tr>
<tr>
<td>Jan. – March 2008</td>
<td>Western Bhutan</td>
<td>Thimphu</td>
<td>Key informant interviews, survey interviews, participant observation</td>
</tr>
<tr>
<td>March 2008</td>
<td>Western Bhutan</td>
<td>Haa</td>
<td>Participant observation</td>
</tr>
<tr>
<td>August 2008</td>
<td>Western Bhutan</td>
<td>Thimphu</td>
<td>Participant</td>
</tr>
</tbody>
</table>

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### Data analysis

Interview guides (Appendix B and Appendix C) helped structure the interviews, but, as noted above, respondents were free to bring up issues of concern. I kept notes during the interviews, and transcribed these notes into Microsoft Word documents, stored on a password-protected computer, shortly after the interviews. I found that keeping handwritten notes allowed me to pay closer attention to the interview respondent, and to more quickly identify areas of confusion than tape recording interviews (cf. Lofland and Lofland 2006: 87). As I was working with an interpreter, I had plenty of time to write notes and consider the next question. I then analyzed interview transcripts for emergent and repeated themes. These documents were analyzed by hand for major themes for a report prepared for the Ministry of Works and Human Settlement in spring 2008. A second, more in-depth coding and sorting was conducted using Atlas.ti qualitative analysis software (Lofland and Lofland 2006: 186 - 197). Repeated sorting and resorting of the coded interviews led to the generation of analytical categories, used to generate grounded theory (Glaser and Strauss 1967; Lofland and Lofland 2006: 186 - 197).
Social location and political realities

Conducting fieldwork in Bhutan entails a set of challenges absent from fieldwork in most other locations. A key difference is that gaining entry into Bhutan is either expensive or time-consuming. Unlike many countries where foreigners can get tourist visas, which allow independent travel around the country, the Bhutanese government requires that all foreign visitors (other than Indians) either travel as tourists with an approved tour company, paying an all-inclusive fee of $220-$250/day, or receive an official invitation from a government or NGO office. Because of these restrictive policies, Bhutan’s insistence on keeping ownership of its own knowledge resources, and Bhutan’s general isolation and seclusion, few outsiders, and only one other American, have conducted dissertation research in Bhutan.

Bhutanese government agencies and NGOs are highly selective in the types of foreign consultants and volunteers they invite. Agencies seek out highly credentialed individuals to provide consulting and technical assistance on specific projects already underway. Government agencies will not entertain proposals to conduct research that does not directly address issues of current government priority. Without government approval, it is impossible to get a visa: in Bhutan, the researcher must be an invited guest of the government, and must conform to government wishes and expectations.

For example, my 2007-2008 research visit was originally conceived as a follow-up to my master’s work, in which I would test hypotheses arising from my master’s work relating to the persistence and efficacy of the belief in nature-dwelling
deities for forest conservation. Much of Bhutan's environmental rhetoric is based on
the idea that indigenous religious and spiritual beliefs protect the forests, but these
ideas have received no empirical testing. During visits in 2001 – 2003, I was able to
document and gain an initial understanding of these beliefs. At that time, a colleague
at the Nature Conservation Division concurred that it would be useful to have a more
thorough analysis of these beliefs. Based on a concept paper I wrote at that time, he
agreed to arrange a subsequent visa to allow me to conduct dissertation fieldwork.
However, preceding the first-ever democratic elections in Bhutan (December 2007 and
March 2008), many senior government officials resigned their posts to run for elected
office, and the remaining officials were shuffled to new posts, causing my concept
paper and research proposal to fall through the cracks.

Eventually I received an invitation to conduct research from the Department of
Urban Design and Engineering Services at the Ministry of Works and Human
Settlement (MOWHS). MOWHS was interested in issue pertaining to rural to urban
migration and solid waste management, and would issue the required invitation if my
research fell within MOHS interests. In conjunction with my counterparts at the
Ministry, I quickly developed a new proposal that led me to the same goal – an
analysis of environmental imaginaries, and religious contribution thereto – by
examining changing attitudes and practices of household waste management as rural
villagers move to urban areas, and as they receive more access to manufactured and
processed goods through the development of Bhutan's road network.

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As in many Asian countries, connections are important. As a master's student at Yale School of Forestry and Environmental Studies, where a dozen or more Bhutanese involved in Bhutan's environmental sector have earned their master's degrees, I had a relatively easy time getting an invitation from a government-affiliated NGO. However, as a doctoral student at the University of California, Berkeley — equally highly regarded in the United States, but not as well known to the Bhutanese — I had a much harder time getting a subsequent invitation. Other than Tshewang Dhendup, the well-known television journalist who got his journalism degree at UC Berkeley, few in Bhutan have been here or heard much about the place. In a country where connections and introductions are vitally important, this posed a barrier.

Once in the country, foreign visitors are subject to very close supervision. Tourists on approved tours are accompanied at all times by their guide. They may not deviate from their pre-planned itinerary. Similarly, the inviting person or agency must take very good care of their foreign guests, ensuring that they are accompanied throughout their travels by a Bhutanese "counterpart." The Bhutanese government requires written requests and approvals for all travel outside of the Thimphu and Paro valleys, where the capital and airport, respectively, are located. Most foreign visitors do not venture much beyond these areas in the western part of the country because of the prohibitive amount of time required to travel around Bhutan on winding mountain roads. Therefore, the central and eastern parts of the country are not necessarily equipped to receive foreign guests, and the Bhutanese are generally reluctant to send
foreigners to these areas that require eight hours or more of driving from the capital
(which itself is 1.5 hours from the airport.)

Even with in-country experience, on-the-ground contacts, language skills and cultural competency, the researcher is subject to the political exigencies of the field site. Thus, my research interests and priorities were subsumed to the changing political priorities in Bhutan. The first national democratic elections had captured the attention of most of the senior government officials, along with the populace. With the impending celebrations for the Centenary of the Wangchuk monarchy, the formal transition from monarchy to parliamentary democracy, and the coronation of the fifth king (who remains the head of state, but can be impeached by a two thirds vote in Parliament), government leaders wanted to spruce up the country, and gain control of the waste problem that had been on the agenda for nearly a decade (RGOB 2004). These emergent conditions required rapid adaptation, to harmonize my research interests with the goals of the Bhutanese government, on which my research visa was dependent. Thus, as is so common in developing countries, the research required a high degree of improvisation and flexibility.
Chapter 2   A Place In The World: Ecological And Spiritual Relations

Introduction

Throughout this dissertation, I put political ecology – a perspective that examines how social, political and economic factors affect the environment – into conversation with the emerging field of religion and ecology, which examines the religious and moral frameworks that inform human relationships with the environment. As environmental ethicist J. Ronald Engel points out in his call to research and action on the relation of religion and biodiversity conservation, a growing body of literature documents the decisive impact of world view, cultural norms, and psychological attitudes and perceptions on the human treatment of nature. Although it is possible to exaggerate the role of ideas, values and beliefs in human history, the best minds working in the field recognize the dialectical interplay between social consciousness, social structure, and physical context (Engel 1993: 185).

Political ecology addresses the political-economic structure and historic-physical context in which environmental change occurs. The concern with power relations and distributive justice shown by political ecologists carries an implicit normative moral agenda, which dovetails with religion and ecology’s concerns about the moral foundations of environmental decision-making. In challenging the equity of existing political and economic structures, political ecology places the study of humans and the natural environment into its larger context. Within the foundational
assumptions of this approach are the notions that the burdens and benefits of environmental change are unevenly – and thus unjustly – distributed, and that such wrongs should be righted. However, in analyzing the political and economic causes of environmental degradation – and working towards applied solutions in the areas of policy and management – political ecology often gives short shrift to the religious, spiritual and symbolic aspects of people's relations with their surrounding environments. Messages about morally appropriate relations with the natural environment are carried in the metaphors, symbols and narratives of religion. To bring attention to the religious and spiritual aspects of environmental perceptions and practices into political-economic discussions of environmental issues requires tackling an epistemological challenge of bridging the gap between materially-grounded political ecology, which directs attention to the historical and material specificities of particular situations, with a philosophical view of cosmology that locates human perspectives in the realm of ideas and worldviews. Grounded in the field of religious studies, religion and ecology takes seriously human religious, spiritual, and moral perspectives, viewing them as central, rather than epiphenomenal. This perspective from religion and ecology has allowed me to engage with the Tibetan Buddhist epistemology found in Bhutan that recognizes realms of existence unfamiliar to some Western observers, and to ask how this epistemology, and its associated ontology, influence and shape Bhutanese interactions with the natural and built environment. Concomitantly, the political ecology approach has guided me to ask how these
interactions are produced, re-produced, and constrained by political and economic structures at the micro and macro levels.

Signposts pointing the way: moral economy to moral geography

Two starting points for harmonizing these differing epistemologies are Raymond Bryant’s (2000) observation that the mutual constitution of moral discourse and socionatural place has not been fully theorized; and Fikret Berkes’ (2008) work on “sacred ecology,” which documents the ways in which local knowledge contributes to scientific ecology, but does not discuss the political and epistemological barriers to bringing the two fields of knowledge into reconciliation (Robbins 2004: 119). Thus, ecologists, of both the political and wildlife types, recognize that the moral and sacred dimensions of life may contribute to our understandings of the biophysical world, and the human place within it. Indeed, a thread of moral concern is evident in the studies of human-environment relations that build toward political ecology, beginning with articulations of “moral economy” (Polanyi 1944/2001; Thompson 1971; Scott 1976), which describe the moral values that shape mutual support to tolerate environmental risks in rural societies. This strand continues in discussions of “moral ecology,” the value-laden methods by which locally communities manage their common lands and resources, described in both religiously-oriented and politically-oriented studies (Gold 1998; Jacoby 2001); culminating most recently in “moral geography” (Bryant 2000), which addresses the moral terrain upon which environmental understandings are generated and decisions are made.
Working in the vein of discursive political ecology, Bryant recognizes that “deep [or embedded, as opposed to instrumental or rhetorical] discourses [are] reflective of often fervently held worldviews” (2000: 676), an insight that suggests greater understanding of the sources of those world views could be helpful in illuminating environmental debates. To illustrate this point, Bryant describes two contrasting conservation efforts in the Philippines: a “top down” externally-generated protected area management scheme that involves state institutions and international NGOs, which gained little favor with local people, and a project based on protecting ancestral domains that recognized the local people’s ethical claims and responsibilities. In contrast to the technical solutions for the protection of flora and fauna imposed by the top down project, the ancestral initiative recognized that environmental degradation is inseparable from its moral aspect: social actions and its place-based consequences require moral reflection (Bryant 2000: 695). This observation reflects that of environmental ethicist J. Baird Callicott who wrote: “purely secular programs – bureaucratic, technological, legal, or educational – aimed at achieving environmental conservation may remain ineffective unless the environmental ethics latent in traditional worldviews animate and reinforce them” (Callicott 1994: 234). Nonetheless, we have yet to figure out exactly how to do this. Callicott (1994) proposed a global postmodern, science-based, evolutionary-ecological ethic because the “modern scientific worldview has become a cognitive lingua franca” and “Western ideas have become a pervasive cognitive ether that nearly everyone breathes” (187). As feminist theorists of science have shown, this scientific “lingua
franca” obscures positionality, political interests, power differentials, and relevant details of the issue under study (Merchant 1980; Haraway 1988; Fortmann et al. 2008). Further, those who study indigenous or traditional ecological knowledge suggest that it may contain insights that Western science obscures (Gadgil et al. 1993; Nygren 1999; Berkes et al. 2000; Colding and Folke 2001).

Bryant’s discursive deconstruction seems a more promising path for theorizing moral geographies and environmental protection. He shows that the practice of environmental conservation is a matter of envisioning, in which political, economic, cultural and discursive forces are mutually constituted around nature (Bryant 2000: 677). Inherent in the process of envisioning social relations is the process of envisioning the moral discourse, “because each and every conservation project tells us much about what participants believe to be good and proper” (Bryant 2000: 677). Moral values are carried within decisions over what to protect and how to protect it, as can be seen in the vehement stances of biodiversity advocates (Terborgh 1999; Wilson 2002). However, until the early 21st century, scholars and practitioners rarely addressed the moral valence of conservation decisions explicitly. While attention to the moral and ethical aspects of environmental conservation is gaining ground, it is still insufficiently studied. This lacuna requires greater attention to local moral geographies, and, more broadly, cultural worldviews, which are contained in religious cosmologies, and expressed through religious and spiritual rituals and symbols (Tucker 2006: 400). At the same time, researchers using materialist or structuralist
social science approaches may be limited in their ability to comprehend all facets of religion, as much of religious meaning is found in symbolism, myth and metaphor (Bernbaum 2009).

The journey of this chapter

Building on the discursive turn in political ecology that examines the ways in naturalized and naturalizing narrative and conceptual practices reflect and shape human interactions with our environments, I describe the environmental imaginaries (Watts and Peet 1996b) that encapsulate perceptions of and interaction with the natural environment in Bhutan. I suggest that they are distinctive, and, as such, suggest useful perspectives for examining and addressing environmental issues in other locations. This discursive analysis leads me to question a number of binaries commonly used in discussions of environmental issues, including the binary that separates ‘green’, or conservation and biodiversity issues, from ‘brown’, or waste, pollution and urbanization issues. Building on Val Plumwood’s (1993) arguments about the dangers of dualism, Tim Forsyth’s (2003) arguments for examining the social construction of knowledge, and a Tibetan Buddhist phenomenology of being, I argue that green and brown issues, like other binaries, are different manifestations of a set of processes or orientations, and that breaking down these binaries allows us to more fully understand the underlying dynamic. Similarly, the binary that puts religion in opposition to the biophysical and social sciences, to be studied as a cultural epiphenomenon or set of symbols and practices, devoid of inherent value, demeans the cosmologies of the
world’s believing people (87% of the world’s population (Carballo 1999)) and the lived experiences of those with a personal, or dare I say, spiritual, connection with the natural world. The Western ontological and epistemological foundations that have separated spirit from matter have led to a dead end (Merchant 1980; Abram 1996), where lives short on meaning lead to ever increasing, yet ultimately unsatisfying, consumption (Kaza 2005).

One gulf that spirituality may seek to mend is the excision of humanity from nature. As Raymond Williams shows, the distinction between nature and God allowed for analyses of biogeochemical processes – that is, ways of understanding the intricate material functioning of nature – but also allowed for the definition of nature as everything that was not human (Williams 1980: 76-77). While the rise of rationalism released humans from the need to propitiate their gods to secure good health and well-being, the ‘disenchantment’ of nature also established an unbridgeable gulf between humanity and nature (Merchant 1980). In the mechanistic understandings that followed the Scientific Revolution, nature that was no longer imbued with or possessed by gods was simply deadened material that could be used for human ends (Merchant 2005). It is a short step from seeing nature as deadened material to seeing other humans, especially those who are “other,” as inert material, since humans and other living beings are composed of the same substances. In this mechanistic worldview, in which parts are assumed to be interchangeable and technology rules,
humans become ripe for class exploitation along the lines Marx describes (Merchant 2005).

I show how healing the splits in dichotomous thinking allows us to take religion and spirituality seriously in our analyses of environmental issues, potentially leading to more life-affirming and enlivening approaches to environmental dilemmas. This chapter begins with a mapping of the history of political ecology, and, in particular, trajectories of discourse that highlight issues of distributive justice. It is this concern with justice, and the shared goal of an equitable, just and sustainable world that nurtures both humans and other life, that brings political ecology to an intersection with religion and ecology. I then discuss the streams that contributed to the study of religion and ecology, and discuss its potential contributions to political ecology.

**Political ecology**

Within the study of people and their environments, political ecology provides a particularly robust framework for examining the contingent, mutually constitutive actors and conditions that contribute to specific natural resource dilemmas at particular historical moments. Political ecology’s emphasis on multi-scalar examinations that move from local micro-politics and economic structures to the global political economy of natural resources helps us see how the options available to local actors can be constrained by national or international dynamics. Similarly, examining the historical trajectories that led to particular conjunctures at particular moments shows...
how situations are historically contingent. Locating particular situations historically helps de-naturalize claims about how things “must” be or have “always” been. The historical lens allows us to see changes over time, as well as the multitudinous factors that collide to create particular historical situations. Finally, political ecology’s attention to power flows shows how class, gender, ethnicity, and other categories have been used to marginalize certain groups through social and historical processes established and maintained through power structures. These marginalizing categories are neither natural nor inevitable. This attention to power highlights issues of distributive justice in relation to natural resources (environmental “goods”) and degradation (environmental “bads” or harms), bringing attention to the needs of excluded or marginalized groups (Thompson 1971; Scott 1976; Peluso 1992; Bryant 1998).

The specialized study of unequal distributions of environmental burdens and benefits has come to be known as ‘environmental justice,’ a field which has been primarily concerned with North American urban communities, where poor people are more likely to live in environments with polluted air or water, or contaminated by industrial effluents (Bhagat and NCCC 1994; Bryant 1995; Bullard 1996). Globally, neoliberal capitalism and unequal power relations between rich and poor countries constitute a third world environmental crisis, subjecting the poor to inadequate living conditions, including hazardous air and water, and “natural” disasters (Bryant and Bailey 1997). In less developed nations, deforestation, devastated fisheries, polluted
drinking water and climate change induced droughts challenge the lives of millions. While wealthier populations can currently buffer themselves from many of the impacts of environmental degradation, the poor lack the economic and health resources to do so, and suffer greater harms because of the ecologically destructive patterns of consumption of the wealthy.

The emergence of political ecology

Mountain people and environments have played a crucial role in the development of the approach that has come to be known as political ecology. Returning to the Himalayas, which were among the original sites of fieldwork in political ecology, this study seeks to advance a thread within political ecology that gives greater attention to the moral, spiritual and religious dimensions of environmental change. Given the constraints of time and space, I will describe those threads in the development of political ecology out of which my argument grows. (For detailed accounts of the development of political ecology, see Neumann (2005) and Robbins (2004)). Political ecology, as an approach that incorporates the power-laden and political aspects of human-environment relations, developed out of threads in radical development geography and cultural ecology in the 1970s, as these schools of thought responded to neo-Malthusian claims that the growing world population was the critical factor in the environmental crisis (Bryant and Bailey 1997). Among the earliest usages was that of anthropologist Eric Wolf, who used the term “political
ecology” in 1972 in an article on economic and social change in the Alps that called for

combining our inquiries into multiple local ecological contexts with a greater knowledge of social and political history, the study of inter-group relations in wider structural fields (Wolf 1972: 204-205).

**Cultural Ecology**

The cultural ecology of the mid-twentieth century built upon the homeostatic conception of the ecosystem, placing humans, particularly those of ‘isolated’ cultures, in closed, self-regulated systems characterized by adaptation, feedback loops, and equilibrium (Neumann 2005: 18-19). An influential anthropological work of this time, *Pigs for the Ancestors*, saw human rituals as regulating and re-inscribing relations between people and their environment (Rappaport 1968). Such a view posited isolated, bounded communities, and did not contextualize traditional societies within the larger political-economic milieu, in which later research showed them to be active participants (Wolf 1982). Though subsistence societies were thought to be isolated, subsequent studies showed that there are vanishingly few places on earth that are unaffected by extra-local forces, including the global circulations of capital, commodities and labor (Neumann 2005: 20-21). Further, studies that are more recent have shown that human agency has been integral to the production of what we think of as ‘natural’ landscapes (Hecht 1993; Fairhead and Leach 1996; Neumann 2005). With current understandings of climate change and the flows of bio-accumulating toxic compounds, it is probably safe to say that there is no place unaffected by extra-local

**Natural hazards studies**

In addition to critiquing the autarkic, self-regulating human-environment relations posited by cultural ecology, political ecology also arose in critique of the natural hazards studies within geography in the 1950s – 1970s. Natural hazards studies suggested that cultural adaptation and rational choice were the key to weathering ‘natural’ hazards, without recognition of the historical, economic and political conditions that would play into creating hazards and conditions of vulnerability (Neumann 2005: 24). Thanks to the scholarship of Michael Watts (1983) and others, we now see hazards as occurring at the confluence of anthropogenic and biophysical conditions, where patterns of vulnerability are the result of political and economic exclusion and marginalization rather than simply resulting from natural disasters (Dove and Khan 1995).

**Regional political ecology**

In the 1970s, Nepal became the poster-child for environmental degradation: deforestation and the resulting erosion were believed to be the cause of downstream flooding that threatened millions (Blaikie 1985; Thompson et al. 1986; Ives and Messerli 1989; Guthman 1997; Ives 2004). Nepal was identified as a “classic area for the study of land degradation” because of its varied ecological conditions, low
economic development, dense rural populations and extensive terrace agriculture (Blaikie and Brookfield 1987: 35). In the 1980s, neo-Malthusian concerns about increasing populations farming ecologically fragile hillsides in the Himalayas and elsewhere brought about some of the first scholarly attempts to contextualize local human-environment dynamics within larger structures of state and institutional political-economic forces of power (Blaikie 1985; Blaikie and Brookfield 1987).

Using, among others, examples from Nepal where he had worked, Piers Blaikie (1985) showed how social relations of production, including land, labor, resources, and power, were key to understanding soil erosion in developing countries. Piers Blaikie (1985) observed that soil erosion in Nepal and other developing countries was not solely the result of biophysical processes, but was affected by state structures and activities, by economic factors and by the generation and deployment of knowledge, a process that is inherently political. Soil erosion was seen as a sign of underdevelopment: famine was caused by socio-economic inequality rather than lack of resources (Blaikie 1985). Problems of degradation were thus linked to problems of structural social inequality, suggesting that fundamental social change was necessary for management of environmental dilemmas.

The term “regional political ecology” took into account “environmental variability” and “spatial variations in resilience and sensitivity of the land” through time together with “the concerns of ecology and a broadly defined political economy” (Blaikie and Brookfield 1987: 17). This new method of analysis extended analyses of
land-based resource dilemmas outward, from a focus on the local land/ resource managers, to encompass the regional forces, such as non-place-based actors, that impinge on a resource manager’s choices and options (Blaikie 1985; Blaikie and Brookfield 1987). This analysis recognized that the locus of control was not simply in the hands of the peasant who farmed, or did not, on steep hillsides, and that the state, rather than being neutral, had political interests that affected the creation and implementation of policy, which had ecological effects. This regional context took on the historical and geographic framework within which resource use/ degradation occurs, identifying resource degradation as a social problem, located within causal chains of explanation (Blaikie and Brookfield 1987).

This analysis shows the influence of Marxist political economy, with its emphasis on the constantly changing material and historical basis of social and cultural conditions, on political ecology. Struggles over land and labor are sources of environmental dilemmas, and these struggles are often provoked by the capitalist mode of production, which requires the extraction of surpluses (Robbins 2004: 46). In disagreement with idealists, who might locate the foundations of particular conditions in philosophy or cosmology, Marxist political ecologists ground their arguments in the material and historical realities of the system under study. This insistence on the particularity and historical contingency of specific situations overrides previous structuralist explanations, requiring fine-grained analysis of lived experience, leading to more nuanced analyses. The material basis of political ecology also recognizes
some agency on the part of biophysical nature, elevating it from a mere stage on which human history plays out, to an actor in its own right (see, e.g., Forsyth 2003; Zimmerer and Bassett 2003). With increasing ecological understandings of chaos and stochasticity of natural systems, and a greater acceptance of the indeterminacy of social/ecological phenomena, the agency of nature is again recognized as a potent historical player. However, the addition of human history and political economy to the picture circumvents a return to arguments of historical determinism.

The discursive turn in political ecology

With the discursive turn in the 1990s, political ecologists turned greater attention to the role of language and power in negotiating natural resource dilemmas. Critical insights from the humanities, including those of literary theorists and historians, contributed to the discursive turn of political ecology, which highlighted the politics inherent in the construction of knowledge, including the social construction of nature (Cronon 1995; Bryant and Bailey 1997; Bryant 1998; Escobar 1999; Forsyth 2003; Robbins 2004; Neumann 2005). As a “specialized branch of critical social theory,” political ecology embraces both the material struggles for livelihood and resources, and the contested ideas and discourses that surround livelihoods (Watts and Peet 1996b: 37; Bryant and Bailey 1997).

The moral implications of liberation ecology

Building on liberation theology, a theology developed in Latin America in the late 1960s among activist priests and socially-concerned laypeople protesting the
failures of development and the brutal dictatorships (as first articulated in Gutiérrez 1971; see also discussions in Boff 1995; Boff 1996; Gebara 1999; Lorentzen and Leavitt-Alcantara 2006), Peet and Watts’ (1996) call for a “liberation ecology” that combines the critical political economy approaches with poststructuralist thought (260). They point to the “potential liberatory or emancipatory potential of current political activity around the environment and resources,” particularly with regard to development in Third World countries (Peet and Watts 1996: 2). In highlighting struggles related to resources and meaning as these articulate with new social movements, transnational alliances, and multilateral governance, Peet and Watts highlight the normative ethical vein of political ecology. What the Christian Church calls “the preferential option for the poor” (Ruether 2009: 336) – the choice to serve the most those who have the least – is reflected in Watts and Peet’s comment:

development, in whatever form it appears on the Third World’s doorstep, often has the effect of destabilizing the systems of access and control over local resources, and to this extent nature-society relations become objects of struggle, negotiation and contestation (1996a: 266).

The need to critically examine modern development, together with the societal articulations with nature, analyzing power, knowledge, and practice (Watts and Peet 1996a: 264-265), implies that development is not an unremitting good for its recipients – indeed, it is “destabilizing” (see Norgaard 1994 for further discussion). The comment further suggests that those who experience this destabilizing influence are in need of the reader’s support or concern, implying a moral claim on the reader.

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4 Surprisingly though, no references to liberation theologians appear in their citations.
Central to the way Peet and Watts describe these struggles over meanings and resources is the concept of ‘environmental imaginaries,’ the place-specific – and regionally variable – conceptions of nature that shape the ways that people perceive, discuss, work and play in nature, that reflect a community’s values with respect to its environment (Watts and Peet 1996b). “Nature, environment and place,” as well as being both materially and socially constructed, are also sources of perceptions and ideas: the natural constructing the social (Watts and Peet 1996a: 263). This view does not represent a return to environmental determinism, but instead takes account of the agency of nature in shaping people’s livelihoods and perceptions. Nature is no longer a backdrop or static stage on which the activities of human affairs – history and culture – play out. Instead, the materiality and activity of nature shape the ways that people think about and work in it.

A place-specific concept of environmental imaginaries has profound implications for the delivery of international development interventions, in that it implies the recipients and the donor of such aid may have quite different perceptions of what is actually at stake. As political ecologists who study household micropolitics have shown, even within localized places, perceptions and uses of resources can be highly stratified by gender, ethnicity and other factors (Schroeder 1999; Kosek 2004). I suggest that the inclusion of religious and spiritual understandings of place, space and resources into investigation of environmental imaginaries could lead to more
effective and potentially less destabilizing conservation and development interventions, in that a more comprehensive and nuanced understanding of what is at stake, in terms of meanings and resources, could be developed. As in Bryant’s (2000) case study of two conservation projects in the Philippines, in which an externally-generated conservation scheme was not embraced by local people, while a project that recognized local people’s ethical claims and responsibilities, with regard to ancestral domains, received greater enthusiasm, the recognition and inclusion of the spiritual components of environmental imaginaries adds a level of nuance and specificity to understanding what is at stake in struggles over resources.

Habitus and social practices

If Peet and Watt’s notion of environmental imaginaries describes how the material surroundings of place shape locally- and regionally-specific mental models, sociologist Pierre Bourdieu’s concept of *habitus* (1994/1998) describes how social “conditions of possibility” lead to durable dispositions enacted through unconscious sets of practices and norms (88). As Bourdieu explains

Habitus are generative principles of distinct and distinctive practices – what the worker eats, and especially the way he eats it, the sport he practices and the way he practices it, his political opinions and the way he expresses them are systematically different from the industrial owner’s corresponding activities (1994/1998: 8).

Habitus can be understood as the internalization of meaningful practices and meaning-giving perceptions that shape and individual’s practices, creating taste, or desire for specific styles, out of the necessity that the social milieu presents. But what
creates the social conditions of possibility? In Bourdieu’s view, these conditions are class-based, “differentiated, but ... also differentiating” such that “the same behavior or even the same good can appear distinguished to one person, pretentious to someone else, and cheap and showy to yet another (Bourdieu 1994/1998: 8). Habitus are so ingrained that they provide a natural

feel for the game.... While the bad player is always off tempo, always to early or too late, the good player is one who anticipates, who is ahead of the game. Why can she get ahead of the flow of the game? Because she has the imminent tendencies of the game in her body, in an incorporated state: she embodies the game [emphasis in the original] (Bourdieu 1994/1998: 80-81).

In becoming naturalized to specific classes, the segmentation of this differentiation takes on a moral tone, causing distinctions based on taste and necessity to become tinged with good/ bad and right/ wrong (Bourdieu 1994/1998: 8). As I will discuss in later examples of Bhutanese practices of waste management, the durable dispositions of habitus are not easily changed in changing surroundings.

Habitus and environmental imaginaries are two useful paradigms for understanding the regional variability of local human-nature perception and practice, allowing for the mutual conditioning of people and their environments. However, I argue that, having been developed in the Western secular context, these concepts have not encompassed a key dimension to understanding human-nature relations: religious and spiritual perceptions of the natural environment. Watts and Peet (1996a) nod in this direction when they point out that “environment imaginaries are frequently,
indeed usually, expressed in abstract, mystical and spiritual lexicons” (263). However, far too little is understood about how these lexicons articulate with canonical religion and environmental practices. My research in Bhutan, where the religious, spiritual, political, and ecological realms are tightly interwoven, discussed in the second half of this dissertation, provides a historically and materially specific empirical example that turns the religious lens on human-nature relations, to support the textual and practical bases that scholars of ethics and religion have identified for an eco-centric environmental ethic (Kaza and Kraft 2000; Merchant 2003; Merchant 2005; Gottlieb 2006). This dissertation responds to Bryant’s call for “‘nuanced, richly textured empirical work’ (Peet and Watts, 1996: 38) that ought to be at the core of a discursively-inclined political ecology” (Bryant 2000: 700).

The Social Production of Knowledge

Building on Marx’s historical materialism, political ecologists recognized that, given the extent of human endeavor, there is no longer any nature that is unaltered by humans and therefore, “under global capitalism, nature is produced on a global scale” (Neumann 2005). Beyond the production of nature through discursive practices (Williams 1973; Williams 1976; Cronon 1995; Peet and Watts 1996; Forsyth 2003), nature is produced and reproduced through neoliberal conservation and development schemes (McAfee 1999; Goldman 2001). Forsyth (2003) employs the tools of science and technology studies (STS), the most recent incarnation of epistemological inquiry, which examines the social processes that contribute to the production of scientific
thought, to bear on the environmental dilemmas examined in political ecology. In contrast to the earlier Marxist-materialist political ecologists, he critiques political ecology for relying too heavily on the forces of capitalism for causal explanations of environmental degradation, without examining the production of scientific knowledge and the ways that this shapes understandings of and interactions with the natural world. By identifying capitalism as the central cause of environmental degradation, political ecologists ignore the underlying biophysical realities separate from capitalism, and fail to recognize that the experience of degradation depends upon one’s social location (Forsyth 2003: 117-118). Furthermore, Forsyth contends that the condemnation of capitalism denigrates the entrepreneurial activities that may be improving the lives of the very people with which political ecology claims to be concerned.

He argues that political ecology must give serious attention to the biophysical bases of environmental problems, but should not accept scientific knowledge uncritically (Forsyth 2003). To do so undercuts political ecology’s attention to social justice, potentially leading to greater degradation or loss of livelihoods for those in developing countries (Forsyth 2003: 2). At the same time, he asks “how far it is possible to deconstruct scientific laws, and still achieve a biophysically-grounded form of explanation that is socially relevant in places where such science is applied” (Forsyth 2003: 13). To balance these aims, he, like many other political ecologists, adopts the critical realist approach of Roy Bhaskar ((1975), cited in Forsyth 2003: 16),
in which he acknowledges the ontological independence of social and physical structures, while accepting that any knowledge of this reality will be partial and situated (Forsyth 2003: 16). This caveat builds on the feminist critiques of science, such as those of Donna Haraway (1988) who destabilize the omniscient, disembodied and dislocated scientist with a ‘view from nowhere.’ Haraway argues for ‘situated knowledge,’ which recognizes and reflects the social location and embodiment of the researcher. She insists that knowledge is partial, and only by bringing together various knowledges – including scientific, traditional, religious and spiritual – together in conversation can we begin to approach a more complete understanding of the world (Haraway 1999).

*Situating knowledge in networks*

Partial and situated knowledge develops within power-laden networks of people and institutions that shape the questions that are asked, the resources available, and the discoveries of research (Foucault 1978; Latour 1987). As Arturo Escobar asks at the end of his essay “After Nature:” “How do we situate ourselves in the circuits of power-knowledge (say, in the apparatus of biodiversity production) that we seek to understand?” (Escobar 1999: 15). Environmental research questions are pursued in the ‘politicized environment,’ where environmental problems cannot be understood outside of the context in which they are created (Bryant and Bailey 1997; Forsyth 2003: 16). Thus an actor-oriented approach is needed to gain comprehensive understandings of motivations, interests and actions within the political context
An actant, in Latour’s terminology, is “whoever and whatever” that acts and has a “spokesperson” to represent it (Latour 1987: 84, 71). Thus, his realm of actors is greater than Bryant and Bailey’s, which seems to be limited to human actors and their institutions and processes. Using Latour’s definition of actants, we can revive the agency of nature in epistemological terms (granting that nature had agency all along), in its materiality, which some claim political ecology neglected in its focus on capitalism (Forsyth 2003). In Forsyth’s view, capitalism leads to capitalist nature, a subdued and controlled nature, “uniform, legible, manageable, harvestable, Fordist” (Escobar 1999: 7), clearly under the thumb of anthro-economic forces. Zimmerer and Bassett (2003) allow some room for the agency of ‘nature’ by recognizing the increasing importance of environmental issues in global discourse. In their description of ecological modernization, a perspective that “recognizes the enlarged importance of environmental issues… and sees environmental management as central to the overall workings of present-day and future societies,” they highlight institutional reforms that have led to improvements in environmental quality, suggesting that this train of thought will continue to be important (Zimmerer and Bassett 2003: 4). At the same time, Zimmerer and Bassett’s emphasis on “management” – which suggests that humans can use technology to gain a degree of prediction and control over nature – returns humanity to the dominant position of a human/nature dichotomy, re-inscribing the separation between human

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5 I am grateful to Louise Fortmann for suggesting this approach to reclaiming the epistemological recognition of nature’s agency.
and nonhuman nature. The discourse of ecological modernization suggests that environmental concerns can be incorporated into existing social practices of neoliberal capitalism and governance, without a major overhaul of these systems. Ecological economists and other critics of late modern capitalism, and the associated machinery of development, are highly skeptical of this claim (Polanyi 1944/2001; Repetto and World Resources 1989; Peet and Watts 1993; Daly 1994; Ferguson and Lohmann 1994; Norgaard 1994; Peet and Watts 1996; Merchant 2005).

**Knowledge networks, rationality, and the scale of influence**

Other recent political ecology has attempted to revive the agency of nature, recognizing that biophysical realities exists “out there” and cannot be reduced to social constructions. The critical realist stance accepts the a priori existence of material nature, while identifying the discursive construction of views, attitudes and actions in nature (Forsyth 2003; Robbins 2004; Neumann 2005), and moves beyond Blaikie and Brookfield’s (1987) causal chains to emphasize the “networks” of explanation necessary to understand environmental problems.

Western science is an accretion of mobile, stabilized, and combinable information, supported by allies, into self-reinforcing networks (Latour 1987). The mobile and apparently stable quality of scientific knowledge is often contrasted with the particularity and locality of traditional knowledge. However, the scientists does not chose a topic of study in isolation: idiosyncratic interests and life histories drive the scientist’s pursuit of knowledge (Abram 1996: 33). Further, Latour points out, the
question of locality has to do with one’s operational scale. Further, the appearance of irrationality has less to do with a breakdown of logic than with the observer’s displacement in space and time from that which is being observed (Latour 1987: 12). For example, a Saudi fisherman remarked that there were no fish in the nearby ocean “because of all the naked sunbathers on the beach” (Ruitenbeek and Cartier 2001: 9). While Western science might point to a proximate material cause, such as over-fishing or pollution from new hotels, the fisherman identified the cause that most upset the harmony of his world and could thus be attributable for the lack of fish in the sea.

Such perceptions are not limited to one region. In central and southern Africa, “territorial cults” linked the moral equilibrium of the society with ecological conditions: an upset in one realm could cause problems in the other (Schoffeleers 1979), while Bhutanese villagers may attribute a landslide or hailstorm to deities who are angry because of the violation of some social rule. To restore harmony between people and the deities in Tibetan cultures, a ritual specialist merges the phenomenal world with an ideal, and inveigles the deities on the more malleable spiritual plane, leading to restoration of order on the material plane (Ramble 1999: 7). In traditional cultures around the world, taboos – social mechanisms – often have the practical affect of protecting endangered plants or animals (Ramakrishnan 1996a; Colding and Folke 1997; Colding and Folke 2001; Anoliefo et al. 2003; Bhasin 2008; Barre et al. 2009). In these ways, religious knowledge is reflected in new understandings of complex systems theory, which calls for “look[ing] for linkages in unusual places” because
causality may not be found in the places we expected to find it (Ruitenbeek and Cartier 2001: 13). The various ways of understanding the antecedent of the problem in the original Saudi Arabian example – the lack of fish – suggest that each way of approaching the problem is partial, and combining multiple knowledges and perspectives can create better understandings of the world (Haraway 1988).

Challenging binaries to gain more complete knowledge

Epistemological fault lines lead to inaccurately schismatic environmental ontologies. Agrawal and Sivaramakrishnan (2000) show the importance of breaking down Western-imposed divisions between agrarian studies, typically focused on power and production in human constructed environments of high agricultural production, and environmental studies, commonly focused on peripheral mountain regions, in India. Social and biophysical environments are intimately connected; urban and nonurban environments affect each other; arable and non-arable land influence production and conservation choices; and none of these can be understood accurately apart from each other (Agrawal and Sivaramakrishnan 2000). Monolithic categories – such “community” and “environment” – must be broken down to reveal their nuances, complexities, and interconnections (Agrawal and Sivaramakrishnan 2000). In a parallel manner, Messerli and Ives (1997) have argued for the development of a holistic field of mountain studies, or ‘montology,’ – the study of the socio-economic, cultural and biophysical aspects of mountains. They note that mountains have received a great deal of attention for the biophysical aspects of
conservation, because of their large number of ecological niches and biological riches, at the expense of cultural, historic, and spiritual aspects (Messerli and Ives 1997). The studies of sacred mountains by Asian studies scholar Ed Bernbaum have contributed to a greater understanding of the cultural and spiritual aspects of mountains (Bernbaum 1990; Bernbaum and Purohit 1999; Bernbaum 2006a), as have studies of the cultural and spiritual aspects of biodiversity (Ramakrishnan et al. 1998; Posey 1999). However, more remains to be done to create a truly interdisciplinary study and practice of conservation in mountains.

During the 1990s and early 2000s, scholars employing the political ecology approach challenged the fault lines dividing knowledge into reified binaries – such as “indigenous” versus “scientific,” “local” versus “state,” and “traditional” versus “Western” knowledges – in studies of people and their environments (Agrawal 1995; Agrawal and Sivaramakrishnan 2000; Bryant 2000; Robbins 2000). They showed that the categories dividing knowledges do not hold up to scrutiny. Furthermore, knowledge is not evenly distributed in, nor monolithically held by, particular groups. We should “dismantle the divide” between indigenous and Western knowledge because the substantive, methodological/epistemological and contextual distinctions between “indigenous” and “scientific” knowledge are not epistemologically significant (Agrawal 1995). Indeed the act of classifying knowledge as “indigenous” or “scientific” is a political one, because “[t]he same knowledge can be classified one way or the other [that is, as indigenous or scientific], depending on the interests it
serves, the purposes for which it is harnessed, or the manner it is generated,” and thus, we should consider “multiple domains and types of knowledges, with differing logics and epistemologies” (Agrawal 1995: 433).

Similarly, the epistemological distinctions between “local” and “state” knowledge do not hold in an examination of perceptions for the forest in Kumbhalgarh Wildlife Sanctuary in Rajasthan, India (Robbins 2000). While the standard rhetoric positions the views of local people against those of foresters and professional land managers, Robbins (2000) finds that views of the forest do not align neatly along the presumed categories. Instead, environmental “knowledge communities” can be distinguished based on their views of the most important purposes and qualities of the forest, views that cut across professional and gender groups (Robbins 2000).

Identifying the power and politics inherent in the reification and deployment of knowledge, Robbins argues that “the state... seizes and reproduces locally powerful knowledges and enforces management through alliances with locally powerful groups” (Robbins 2000: 127). Thus, the content of the knowledge – whether local- or state-generated – becomes less important than the political power of those who possess and wield the knowledge. This analysis suggests that we might more accurately think of gendered and class-based knowledges – clustered in distinctions reflective of social power – than of ‘local’ and ‘state’ knowledges. Local elites may have more interests in common with the state than with marginalized people living nearby.
The problem of essentialization

Classifying knowledge as gendered or class-based creates another set of problems. Ecofeminists have argued both for and against knowledge that is specifically ‘feminine’ (Leach 2007), linking the idea of gendered knowledge to continued subjugation of women (Ortner 1972; Merchant 1980; Plumwood 1993), as well as to a specific, embodied way of knowing (Mies and Shiva 1993; Shiva 1993; Gebara 1999). Even this dichotomy is a false one, pitting feminists against one another, as a “transformative feminism” (Warren 1995: 118) requires both the recognition of the social construction of knowledge (and thus acknowledges that our knowledge systems have oppressed women); and a perspective on epistemology that takes seriously the lived experiences of women (and thus recognizes that women’s embodied experience creates a particular way of engaging with and thinking about the world). Further, categorizing knowledges risks suggesting that ‘women’ or ‘elites’ are homogeneous, when such categories are likely to have many sub-segments within them. As women of color and third world women have noted, the Euro-American formulation(s) of feminism and eco-feminism come from a particular perspective that is not inclusive of the experiences of all women, as, among other problems, it give inadequate attention to the problems of racism and classism (Walker 1983; Lorde 1984; Douglas 1999; Gebara 1999).
While reflective of divergent perceptions, dichotomies obscure as much as they reveal, eliding commonalities across groups and suggesting that within-group views are monolithic. Dichotomies use the logic of dualism (Plumwood 1993) to re-inscribe the hegemony of Western/scientific/state knowledge by positioning it over and against static, essentialized versions of ‘alternative’ ways of knowing. Thus, the problematic or disowned aspects of scientific knowledge— for example, the places where it is fuzzy, context-dependent, or based on incomplete data—can be separated out and projected onto ‘traditional’ knowledges, creating a purified and idealized version of scientific knowledge. My research, which examines the potential contributions of religious and spiritual perceptions to ecological knowledge, and analyzes the politics of knowledge construction and deployment, falls within this stream of political ecology. When I turn to discussing local perceptions and practices related to forests and waste in Bhutan, I address such questions as: What counts as knowledge? To whom does it belong? Who gets to decide what knowledge is relevant? How does ecological knowledge relate to larger worldviews?

The politicization of knowledge is reflective of differing stances on what to see and how to see—different visions of the forest that arise from differing social, political and geographical locations (Bryant 2000: 677). The metaphorical use of seeing and vision builds on Haraway’s contention that the gaze from nowhere is that of the “unmarked positions of Man and White” (1988/1999: 176). Knowledge is always
embodied and located, giving rise to a specific view (Haraway 1991b). Furthermore, an embodied, geographically-, socially-, and politically-located being will have a moral compass, indicating the difference between right and wrong, good and bad. The sources of morality embedded in embodied and situated knowledges have not been fully probed. Feminist ethicists, such as Margaret Farley (1994) have discussed embodied moralities in the construction of feminist theological ethics. For example, a feminist ethics of care serves as a counterweight to the more universalizing moral principles of medical ethics, and addresses the situated aspect of knowledge in relation to morality. Standing in similar relation as situated knowledge does to the scientific "view from nowhere," feminist ethics of care insists on the embodied and interpersonal nature of bioethical decisions. Feminist ethics of care prioritize the caring relationship of individuals, including such subjective feelings as compassion, love and empathy, over more universalistic principles as utility or the categorical imperative (see Beauchamp and Childress 2001: 369 ff for a discussion). However, we need to work in the other direction as well: we need to discover the embodied moralities carried in situated knowledges, to more deeply understand choices about environmental practice. In generating knowledge, we must seek to compile and combine the views that provide the best and most complete accounts of the world (Haraway 1991b). Arising from particular places and situations, these situated knowledges incorporate context into their understandings.
Reconnecting the city and the country in political ecology

As we have seen, political ecology grew out of fields of study primarily concerned with rural and wilderness areas: agrarian studies, natural hazards research and cultural ecology, mainly in developing countries. First world political ecology attempts to shift attention to political negotiations over resources in the developed world (McCarthy 2002; Walker and Fortmann 2003). Similarly, Robbins (2004: 216) suggests political ecology turn its attention from the ‘green’ topics of wilderness and rural areas to the ‘brown’ issues in the urban environment. Cities are the sites of dense flows of resources and materials, of unjust distributions of environmental goods and bads, and political and ecological conflicts are interwoven (Robbins 2004: 216).

As I have discussed above, sharp bifurcations between categories obscure the bases on which the categories are built, and the discursive political purposes they serve. Dichotomizing rural and urban areas for the purpose of research similarly obscures the interconnections and interactions of places. In this dissertation, I show how rural-urban migration has local effects perceived by people in both rural areas from which migrants depart, and the urban areas where they resettle. These effects accrue to both ‘green’ sector – in the shape of fallow fields and increased crop predation – and the ‘brown’ sector – in the form of uncontrolled garbage and litter. Recent political ecology analyses have extended the approach from the natural resource issues in rural areas of developing countries, that were the focus of early political ecologists – who came out of traditions of rural development, cultural
anthropology, hazard studies, and cultural ecology – to issues of urban areas, including pollution and waste management (Robbins and Sharp 2003b; Myers 2005; Njeru 2006; Gille 2007; Moore 2008). Thus, in keeping with the global process of urbanization, political ecology is growing beyond its agrarian and hazard studies roots to address issues in the environments where more than half the world’s population now lives. Its attention to place and scale makes political ecology a particularly useful framework for understanding the interrelationships and flows of people and materials between urban and rural areas. This new attention to cities brings political ecology closer to the concerns of environmental justice studies, which investigate the causes and consequences of unequal distributions of environmental burdens and benefits, typically in urban areas. Justice and livelihood issues are particularly salient in South Asia, where much of the landscape is a working landscape, on which the livelihoods of hundreds of millions of people depend.

*Political Ecology and South Asia*

Although the modern environmental movement followed the intellectual lineage of Britain, with its appreciation of naturalism and rural romanticism, these values do not have universal applicability (Arnold and Guha 1995). Environmental concerns in South Asia relate to livelihoods, rural poverty and well-being, with the preservation of pristine land taking a back seat. Further, religion and politics are often deeply intertwined, with political power being subservient to religious authority in many of the ancient principalities along the crest of the Himalaya. In India, struggles
over use, access, control, and ownership of forests – pitting local and extra-local interests against each other – and conservation of land-based resources for the use of the state have been contentious at least since the 1800s (Gadgil and Guha 1993; Arnold and Guha 1995; Sivaramakrishnan 1999; Agrawal and Sivaramakrishnan 2000). Indian intellectuals have played a significant role in advancing political ecology through their engagements with agrarian studies and subaltern studies, two key influences on political ecology, as well as in political ecology itself (Agarwal 1988; Guha 1990/2000; Gadgil and Guha 1992; Agarwal 1994; Agrawal 1995; Arnold and Guha 1995; Agrawal and Gibson 1999; Agrawal and Sivaramakrishnan 2000; Rangan 2000; Nagar et al. 2006).

In their exploration of Indian history, Gadgil and Guha (1992: 4) endeavor to understand how what they call the “hardware” of natural resource use – such as forces and relations of production, including the technological infrastructure and property systems – and the “software” or belief systems, including religion, tradition and science – that legitimize such uses come together to shape human interactions with nature. They find religion and belief systems to be important in shaping the Indian experiences of nature, particularly among gathering and industrial modes of resource use. While Marxist analyses may be relevant to the Europeanized world, they are insufficiently attentive to religious, cultural and ideological attributes of societies; lacking in emphasis on political structures and struggles; and inadequately inclusive of the ecological infrastructure of society (Gadgil and Guha 1992: 12). To a large extent,
these critiques have been addressed by the discursive turn and the increasing attention to nature's agency in political ecology. However, their first critique: the lack of attention to the religious, cultural and ideological attributes of societies has not been sufficiently addressed. Contrary to the expectation that traditional societies are the most religious, Gadgil and Guha suggest that religion is important to moderating resource use in industrial societies where scientific knowledge is incomplete (1992: 52-53). Reflecting Donna Haraway's (1988) insight about the situated knowledges, Gadgil and Guha (1992) suggest that, rather than acting as if we are in possession of complete knowledge, Western societies might turn to religion and custom, which could provide a better mechanism of managing the uncertainty and incomplete knowledge of optimum levels and modes of resource use. The following examples of histories of local land use in India demonstrate the necessity of analyzing the "software" of human/nature interactions, as Gadgil and Guha advocate.

**Religion and local land use in India**

Our first example of local land use in India examines Chipko, a social movement to protect forests in the western Himalaya of India that attracted attention from numerous scholars interested in local political movements to protect resources (Shiva 1988; Guha 1990/2000; Rangan 2000; Agrawal 2005). Guha (1990/2000) notes the importance of religion in supporting the Chipko movement. In a scene reminiscent of American civil rights marches, he describes the reading of the Bhagavad Gita for inspiration at a Chipko demonstration (Guha 1990/2000: 166).
Though he does not contextualize this action by discussing the content of the text or the circumstances that led to its reading, the incident seems to emphasize the moral content of the protest. Rather than simply demanding material (timber and trees) of which extra-local loggers were depriving them, the villagers were stressing the rightness and propriety of their claim by appealing to religious authority through the reading of the texts.

Intrigued by Chipko, Agrawal visited the western Himalaya in 1985, eventually returning to complete an extensive study of Indian Kumaon, that shows how knowledge, power and politics come together to shape environmental subjects who internalize particular attitudes toward natural resource use (2005). While Guha (Guha 1990/2000) saw the movement as a protest against imposition of new norms of resource use by the state, Shiva (1988), who focused on the struggles of women who were responsible for collecting water and wood to maintain their families, saw it as evidence of resurgent feminine power (Robbins 2004). Guha’s *The Unquiet Woods* explores the history of forest management and tenure in two politically different areas of Uttarakhand in the Indian Himalayas, showing that environmental change was associated with changing and competing human perceptions of nature (Guha 1990/2000: xiv). Similarly, the essays in Arnold and Guha’s anthology show how the state, in its colonial and post-colonial forms, assumed control over resources that previously had been under local and decentralized management (Arnold and Guha 1995: 13).

The resulting acts of resistance – such as the Chipko movement – were not, in Guha’s
estimation, environmental or feminist protests, as Shiva suggested, but rather were social movements, protesting the shifting norms caused by state imposition into the forest. The introduction of scientific forestry for the efficient production of timber and resin brought a re-ordering of social relations around the forest. The state employed a divide-and-conquer strategy, dealing with households on an individual basis, rather than recognizing customary uses of the forest as sanctioned by the village (Guha 1990/2000: 55). Customary uses were criminalized, which in turn led to further re-conceptualization of the forest: today, villagers are thoroughly alienated from the forest, seeing it as a source of animals that destroy their crops (Guha 1990/2000: 58). Guha’s careful history shows the tight interplay of ecological conditions and changing social perceptions and practices in the forest, presaging Peet and Watts’ notion of ‘environmental imaginary:’ the place-specific conception of nature that shapes the ways that people perceive, discuss, and work in nature (Watts and Peet 1996b).

However, as Rangan points out, the valorization of Chipko depends upon romanticization, nostalgia and myth-making for its resonance.

Indeed, since the early British explorations of the 18th century, the Himalayas have had a hold on the Western imagination (Bishop 1989). The soaring peaks, verdant valleys, and exotic human and wild inhabitants have been magnets for the projections—both positive and negative—of outsiders. Human residents of the high mountains have been depicted in high relief, either as surly and barbaric (in the case of the Bhutanese (Pommaret and Iniaeda 1991)) or as generous, hospitable and
welcoming (in the case of the Sherpas of Nepal (Adams 1996; Fisher and Hillary 1997)). Similarly, wildlife is seen as exotic, rare, mysterious, and even mystical, as in the case of the yeti. Rangan’s (2000) discussion of the power-laden ways in which the myth of Chipko was produced and reproduced by various actors shows how Chipko was transformed into a symbol that transcends its context, but at the same time, strips the local people of their political identity. This same dynamic is at work in other parts of the Himalayas as well. Three concepts – isolation, environmentally-pristine and Buddhist – dominate the English language discourse about the landscape of Bhutan. While based in the landscape, these three concepts take on lives of their own in creating an international myth of Bhutan. Analysis of these concepts in relation to Bhutan shows how Bhutan’s identity is socially created, and even a seemingly material identification, such as “isolated” cannot be accepted as simply given.

Religion and Local Land Use in South India

A second analysis of the “software” of human/nature interactions comes from Madras, in southern India. Seeking to understand the symbolic and religious aspects of the human-environment relationship in South Asia, “which is traditionally mediated by religion (i.e. beliefs, rituals and institutions)”, Mulali turns to classical literature, local chronicles and travelogues, and oral tradition (Murali 1995: 86). Travelogues from the 1800s note that forests are linked with “famous temples of all faiths, pilgrim centres, sacred rives and springs associated with curative miracles, fruit-bearing groves, ponds and so on” (Murali 1995: 97). Following the nationalization of forests
under the Madras Presidency in the 1880s, local communities lost their access to the
forests for shifting cultivation, collection of forest produce, grazing and fuel wood
(Murali 1995: 101). More important, perhaps, they lost access to traditional places of
worship, which contributed to resentment toward the colonial government and its
claims on the forest (Murali 1995: 110-111). As in the Chipko example, the struggle
over forest access took on a moral tinge, as the local people linked their need for
material resources with the moral authority of their religion. In shifting the boundaries
of public spaces – forest reserves that had long been subject to tribal and communal
rights – closer to homes and cultivated lands, the colonial law imposed a burden that
was seen as unjust, alien and immoral. Resentment against the colonial government’s
land grab led to the radical agrarian and tribal movement in Andhra in 1920-4 (Murali

These two examples of local land use and spiritual beliefs in South Asia,
presented by a range of South Asian intellectuals, show a sensitivity to the moral,
religious and spiritual concerns that animate natural resource dilemmas much needed
in a field of thought that has tended to focus on the material aspects of such dilemmas
through analyses of land, labor and capital. With the discursive turn, and attention to
environmental imaginaries and other poststructuralist analyses of struggles over
material and meaning, political ecology has given greater attention to the moral and
symbolically meaningful aspects of environmental dilemmas. However, most Western
political ecologists have largely tended to shy away from direct investigations of the
spiritual and religious aspects of people's constructions of meaning around nature, resources, and place, a lacuna to which these and other South Asian political ecologists have importantly responded. As the ground of people's most cherished values (Tucker and Williams 1997), religions — including textual traditions, personal belief and lived practices — hold the key to a deeper understanding of the ways in which moral discourse and socionatural place interrelate (Bryant 2000).

**Spiritual issues in natural resource management**

Until the 1990s, there were relatively few biologically and ecologically-oriented studies on sacred natural sites, and fewer that explored the role of religion and spirituality, together with political economy, in natural resource management (Ramakrishnan 1996b). In southern Africa, American anthropologist Colson (1948) applied a structural interpretation to the 'rain shrines,' viewing them as foci of authority and political integration for shifting communities that did not otherwise express much cohesion. This interpretation does not investigate the *emic* meaning of the ritual for the local community, nor did it engage with the biophysical realities of the surrounding environment. Other anthropologists in Central Africa saw religion and “territorial cults” as resistance against externally-imposed political change (Werbner 1984). Earlier humanistic studies by anthropologists and scholars of religion documented the intimate ties that ritual practices established between people and their environments (Rappaport 1968; Turner 1969; Tambiah 1970; Reichel Dolmatoff 1976; Rappaport 1979; Dove and Kammen 1997). In *Guardians of the Land*, historians and
anthropologists discuss the territorial cults of Central Africa, land-based communal institutions that shape local agricultural, economic and moral interactions with the land, whose “satisfactory functioning” depended not only on the ecological activities of people, but on the moral well-being of the whole society (Schoffeleers 1979: 41). Seen as a method of communally responsible land use, these territorial cults were expected to fade away in the face of world religions and bureaucratic governments (Schoffeleers 1979), a prediction that assumes them to be operating in self-enclosed autarkic societies, rather than within a globally-interconnected world. The perspectives on the role of human beings in the landscape reflected their time:

[T]he landscape is never completely humanized – everywhere places remain which have never been subjected to man’s [sic] ecological transformations or which, once used, have been abandoned again (Van Binsberger 1979: 55).

Predicting political ecology’s concern with the moral and material aspects of environmental issues, Van Binsbergen (1979) noted:

Territorial shrine cults aim at ensuring the success of the ecological activities in which the population is engaged (horticulture, fishing, hunting, husbandry) and hence the material, and ultimately moral, well-being of this population (51).

The title of this book was reiterated, perhaps unwittingly, for a publication by the nongovernmental organization Worldwatch, addressing the role of indigenous people in environmental conservation (Durning 1992). However, this early attempt at reconciling religion, politics and ecology has been largely neglected in the scholarly study of religion and ecology, many of whose proponents study Asian cultures and

Ecological studies that address religion and spirituality in relation to natural places and wild species can be classified into at least four types:

1. *Religion as institution for allocating scarce resources* (e.g., Lansing 1987; Malhotra et al. 2000). For example, Balinese rice farmers traditionally managed their irrigation water to optimize rice harvests through a complex system of water temple rituals and offerings (Lansing 1987). Yet, this system was relatively invisible to outside consultants, who encouraged the farmers to make use of Green Revolution innovations by ignoring the traditional cropping patterns and purchasing additional fertilizers and pesticides to “improve” their rice harvests. The consequence of the breakdown of system-wide traditional fallow periods was an increase in bacterial and viral diseases, as well as insect and rat populations (Lansing 1987). Still convinced of the validity of their traditional methods, local farmers sought advice at the water temples for dealing with the increase in pests (Lansing 1987). Modeling analysis showed that the regional water temple system led to higher average harvest yields and an increased ability to handle ecological perturbations over either autonomous local control or centralized hierarchical control (Lansing 1987: 112). Within a system of temples and offerings, the
Balinese had developed a way to manage pests and irrigation needs that was culturally-intelligible and turned out to be more efficient than the "modern" methods.

2. *Religion as taboo mechanism for protecting and maintaining scarce resources*, for example through sacred natural sites. Sacred groves, which serve to honor deities or ancestors, offer sanctuary for local spirits, serve as sources of important ritual or medicinal plants, or spiritually-important animals, and protect sanctified places from exploitation, have been shown to protect species that are under severe pressure outside of the groves (Chandrakanth and Romm 1991; Dorm-Adzobu C. et al. 1991; Ramakrishnan 1996b; Decher 1997; Sharma et al. 1999).

3. *Religion as taboo mechanism that protects particular species*. A study of 70 species-specific taboos found that 30% of the identified taboos prevented any use of species that were also listed as "threatened" by the IUCN, suggesting that such religious taboos can serve to protect imperiled species (Colding and Folke 1997; Colding and Folke 2001).

4. *Religion as institution for maintaining moral, social and ecological relations*. As discussed above, religion has been seen as a method for maintaining the simultaneous moral, social and ecological orders (Bourdillon 1979; Schoffeleers 1979; Van Binsberger 1979).
The issues outlined here are discussed in greater detail in Chapter 3: Sacred Natural Sites: Places of Resistance and Resilience.

The natural environment in religious traditions

The natural environment may be the site of hierophany, or self-presentation, of the god or gods; it may be a site for mystical contemplation and spiritual rejuvenation; particular locations may be identified as the *axis mundi*, or central axis around which the world is created (Eliade 1959). Throughout history, mystics and religious leaders have retreated to the wilderness, to contemplate and seek enlightenment away from the distractions of human society and worldly cares. Seekers and naturalists, including Jesus, Moses, Siddhartha Gautama (the historical Buddha), John Muir, Thomas Merton, and Edward Abbey sought solace in fierce desert and mountain landscapes. For true wisdom, which apparently can be found only outside human society, contemplatives must leave behind human *culture*, and venture into undisturbed *nature*, to places untrammeled by humans, where they will be able to commune with the ultimate. Upon finding the answers they sought, spiritual seekers then return to the conviviality of human culture, sharing insights gained through mental and physical hardship. Freed from social bonds, seekers are privy to unusual insights.

Natural places, such as mountains and deserts, are also places for contemplation, meditation and spiritual insights. Extreme environments may be more likely to yield spiritual insight. As theologian Susan Bratton notes, “Deserts and mountains are better places than cucumber fields and royal palaces to see God. This
may be a carryover from very ancient religious traditions, but it may also reflect a human reality that isolation and natural settings favor reflection and unprejudiced spiritual vision” (Bratton 1993: 56). Such a perception distinguishes the mundane, domestic sphere from the structures of official power, suggesting that in the course of daily affairs, humans are unable to encounter the Divine. However, it is not only the domestication of those spheres that limits spiritual insights, but also the busyness and distraction they provide. One who is engaged with mundane concerns may not be able to hear the “still small voice.” “Mystics seek seclusion outside society because a person addicted to social busyness cannot become adequately detached, and the most direct way to break the attachment is to withdraw from society” (Corbett 1991).

The god or gods may be more easily encountered in the wilderness. For example, in the Jewish and Christian Old Testament, God reveals Godself in the Burning Bush, and through the gift of the Ten Commandments on top of Mount Sinai. The story of Moses on Mount Sinai, recounted in chapters 19 and 24 of the biblical book of Exodus (RSV RSV 1962), provides an archetypal example of the spiritual quest and hierophany in the wilderness. While wandering in the desert with the people of Israel, Moses is called to the summit of Sinai, where he receives the Ten Commandments from Yahweh, and returns with new information that will structure the society and set it apart from other nations. The desert wanderings show that Moses and his people are on the margins of the known world. By reaching the very edge of this liminal space, through many tribulations, Moses receives new insights.
Religious adherents also demonstrate their faith by following tenets that restrict their actions with relation to the natural environment. To take an example from another faith, the Qur'an of Islam contains specific guidance about agriculture, land, animals, plants, and water integrated into the overall directives for righteous moral conduct. Some undeveloped lands are set aside as harim or hima lands. Harim is a protective zone of undeveloped land, often used for fuel or pasture, owned by the owner of the developed land with which it is associated. Serving as a public good, himas are undeveloped lands set aside for the general benefit of the community, or for those who are especially needy, and must remain as they are in perpetuity. Himas may be used for fuel, fodder, or pasture, depending on community decisions (Khalid and O'Brien 1992). Wild lands are recognized as God’s lands, differentiated from the spaces made and re-made to suit human desires. “In seeing the great goodness of wildlands, we realize that the man-made world is not-yet-good, that the earth’s human dimension is still inharmonious and uncompleted” (Corbett 1991: 83). Some of the many volumes address the role of the natural environment in various religious traditions will be surveyed in the section, Religion, Ethics and Ecology, below.

Connecting Political Ecology with Religion and Ecology

Seeing the myriad environmental crises of the twentieth century as moral crises, scholars of religious studies launched the field religion and ecology in the late twentieth century to examine the moral guidance of the world’s religions in relation to the natural world. The founding and evolution of this scholarly movement, which the
Forum on Religion and Ecology catalyzed and led (Tucker 2006), is discussed in detail in the next section. Hundreds of historians of religion, environmentalists, and international scholars participated series of conferences on religion and ecology held at Harvard’s Center for the Study of World Religions in the late 1990s. Three multidisciplinary concluding conferences were held at the American Academy of Arts and Sciences in Cambridge, and at the United Nations and the American Museum of Natural History in New York in 1998. These concluding conferences involved leading scientists, economists and policymakers, including Maurice Strong, first director of the United Nations Environmental Programme; Tim Wirth, director of the U.N. Foundation; Jane Lubchenco, past president of the American Academy of Arts and Sciences; Ismail Serageldin of the World Bank; and George Rupp, president of Columbian University, in the discussions of the role of religion in creating a more sustainable future (Tucker 2006: 409). Incorporating interdisciplinary perspectives from scientists, economists, policymakers and educators, these conferences, and the resulting publications (Tucker and Williams 1997; Tucker and Berthrong 1998; Chappie and Tucker 2000; Hessel and Ruether 2000; Girardot et al. 2001; Grim 2001; Chappie 2002; Tiros-Samuelson 2002; Foltz et al. 2003; the Shinto volume is published in Japanese), launched the field of religion and ecology as an area of scholarly inquiry, with the Forum on Religion and Ecology (FORE) blazing the trail. The Forum on Religion and Ecology’s website (http://fore.research.yale.edu) provides essays and bibliographies that link the world’s religious traditions and ecology, along with discussions of other fields of study (science, ethics, economics, education, public
policy, gender) that intersect with religious approaches to environmental concerns. In highlighting both the intersecting fields of study, and engaged religion and ecology projects that are employing religious approaches to pressing environmental dilemmas, FORE has sought dialogue with variety of partners concerned with the environmental crisis (Forum on Religion and Ecology 2004).

Political ecology can benefit from engagement with religion and ecology through a deeper understanding of the moral and religious perspectives that inhere in people's interaction with the environment. In the analysis of environmental issues, many of which are global in scale, it is essential to incorporate all possible explanatory variables. "Wicked problems," which have "no definitive formulation, no stopping rule, and no test for solution" such as climate change, forest conservation and biodiversity preservation "involve a host of academic disciplines that cannot be separated from issues of value equity and social justice" (Ludwig et al. 2001: 482). Engaging with religion as a potential factor in influencing human-nature interactions can help political ecology gain a better understanding of the needs and perspectives of the hundreds of millions of people, particularly in developing countries, who follow religious traditions. While the secularization of biophysical and social sciences created a chasm between the sciences and religion (Merchant 1980), most of the developing and non-industrialized world still finds religion compelling (Carballo 1999).
In addition, religion and ecology can benefit from political ecology’s engagement with the power relations embedded within historically- and materially-specific environmental dilemmas. In some accounts of environment dilemmas, nature is “backgrounded” (Plumwood 1993) as a stage upon which religious and historical trends develop, but does not contribute to the development of these trends. That is, the materiality of ecology can go missing from accounts of religion and ecology. Plumwood encourages us to develop a view of nature that recognizes intention within a relevant context and scale. The religious/historical approach can benefit from political ecology’s emphasis on multi-scalar examinations, from local micro-politics, including religious practices, and economic structures, to global political economy of natural resources and religious institutions. With attention to the power-laden material particularities of social-political-economic systems as they relate to specific environmental dilemmas, political ecology provides a particularly robust framework for examining the contingent, mutually constitutive actors and conditions that contribute to particular historical moments. Efforts toward retrieval and reconstruction within religious traditions that situate the generation of religious imperatives within the relevant political economy/ecology are especially compelling. I suggest that connecting with the tools of political ecology can bring a more empirical and grounded approach to religion and ecology. Political ecology helps with that by bringing attention to the particularities of the natural resources involved in specific cases, and attention to political and economic power and multiple scales.
In the past two decades, theologians and religious scholars have drawn increasing attention to religiously-based imperatives to protect and preserve natural resources embedded in religious texts. Numerous anthologies, including the Harvard series on World Religions and Ecology, and others (Tucker and Grim 1994; Hallman 1996; Ruether 1996; Tucker and Williams 1997; WWF 1999) highlight the connections between religious teachings and environmental protection. Although Native Americans and some Buddhists had long recognized the connections between spirituality and ecology, Christian theologians and ethicists were among the first to make the scholarly links between religion and ecology with their efforts to retrieve, re-evaluate, and reconstruct ecological messages within religious texts, and to make these teachings more widely accessible (Sittler 1961; Santmire 1970; Cobb 1972; Santmire 1985; McFague 1993; DeWitt 1994; Rasmussen 1994; Gebara 1999; Tucker and Grim 2001; Farley 2002). Such theological work unseats humanity from the pinnacle of Creation, and, in emphasizing interconnection and interdependence, allows biodiversity loss, habitat destruction, and climate change to be recognized as theological issues because they damage God's Creation. In the early years of the 21st century, the Evangelical Environmental Network launched an anti-SUV campaign, asking Christians to consider “What Would Jesus Drive?” (www.whatwouldjesusdrive.org), implying that Jesus would be concerned enough about the problems of fossil fuel consumption to choose something other than a gas-guzzling behemoth for transportation. Building on the connections between political ecology and world religions that South Asian political ecologists have developed, my
study seeks to extend political ecology by connecting it with innovative work in the field of Religion and Ecology.

**Religion and Ecology**

*The field and the force*[^6]

Over the past twenty years, scholars, theologians and activists have worked to bring forward the distinctive contributions that religious worldviews can make toward addressing environmental crises. These activities of reflection, study, analysis and outreach helped religion and ecology coalesce into a distinctive field of academic study, and a significant activist force (Tucker 2008). Like political ecology analyses, which tend to contain implicit normative moral perspectives, as described in the first half of this chapter, religion and ecology analyses contain moral perspectives, which, because they are grounded in religious traditions, tend to be much more explicit than those of political ecology. Along with explications of the world's religious traditions, the activist force of religion and ecology urges changes in practice that are believed to be more life-sustaining and in keeping with the moral exhortations of religious traditions. Responding explicitly or implicitly to a five-page article historian Lynn White, Jr. published in *Science* in 1967 describing what he saw as the “the historical roots of our ecologic crisis,” these approaches investigate the ways that cosmological worldviews shape human actions with relation to the environment.

The Field of Religion and Ecology

More than 800 historians of religion, environmentalists, and international scholars attended a series of conferences on religion and ecology held at Harvard's Center for the Study of World Religions in the late 1990s. The conferences resulted in the publication of ten volumes of the Harvard series on World Religions and Ecology that address the perspectives of the world's religions on ecology (Tucker and Williams 1997; Tucker and Berthrong 1998; Chapple and Tucker 2000; Hessel and Ruether 2000; Girardot et al. 2001; Grim 2001; Chapple 2002; Tirosh-Samuelson 2002; Foltz et al. 2003; the Shinto volume is published in Japanese). Recognizing the gap between ancient religious texts, and modern environmental dilemmas, these scholars employed a method of "retrieval, reevaluation, and reconstruction" (Tucker 2006: 407). At the heart of this effort is the notion that human ideas about the natural world shape the way that people act in the world: what discursive political ecologists call environmental imaginaries (Peet and Watts 1996). With this jumpstart for systematic, scholarly study of religion and ecology together, the Forum on Religion and Ecology, now based at Yale University, was established. The American Academy of Religion has recognized Religion and Ecology as a field of study, and numerous college campuses have established courses in religion and ecology.

The Harvard gatherings built on efforts to address the spiritual and ethical aspects of ecological degradation that began years earlier. A group of scientists issued the statement "Preserving the Earth: An Appeal for Joint Commitment in Science and
Religion” at the Global Forum meeting in 1990, calling for “radical changes not only in public policy, but in individual behavior. The historical record makes it clear that religious teaching, example, and leadership are powerfully able to influence personal conduct and commitment” (cited in Tucker 2006: 402). As will become clear in this chapter, the world’s religious traditions contain teachings and perspectives on the proper human relationship with the natural world. However, it was not until the environmental movement gained momentum that ethicists and scholars of religions brought these perspectives together, allowing a scholarly area of inquiry to coalesce. The recognition of global and transboundary environmental problems, including the global loss of biological diversity, and to an even greater degree, climate change, caused observers to begin to look for solutions beyond the science and policy that had been effective in addressing local and national environmental problems in the 1960s – 1980s, through such policy as the Clean Air and Clean Water Acts.

Building on the previous decade of work by scholars of religion and ecology, who were primarily historians of religion, a group of 57 leaders from diverse fields with an interest in the environment, convened by Yale School of Forestry and Environmental Studies, concluded in 2007:

[W]e must seek the help of fields not regularly associated with environmental issues. We have many sophisticated scientific and policy analyses of climate change, species loss, and other environmental issues, but our situation also requires the knowledge and wisdom of psychologists and philosophers, poets and preachers, historians and humanists to help us see and communicate hard truths and inspire individual and social change (Leiserowitz and Fernandez 2008: 13).
This statement, by a broad-based group of leaders concerned with the environmental crisis showed that the religion and ecology approach had solidified its influence on a larger audience. Appeals to audiences of religious practitioners, scholars of religion and theologians highlight the urgency and severity of the environmental crises, and called on religions to become engaged:

[The] environmental crisis calls the religions of the world to respond by finding their voice within the larger Earth community. In so doing, the religions are now entering their ecological phase and finding their planetary expression (Tucker 2003: 9).

**The Force of Religion and Ecology**

These entreaties built on prior discussions about the role of the faith communities in responding to environmental degradation. In the early 1990s, senior leaders of Jewish and Christian groups in the United States noted with increasing concern the condition of the environment, and discussed what a distinctively religious response would look like. Identifying ancient religious teachings with powerful relevance to current problems, senior leaders of the Jewish and Christian faiths began a series of consultations and deliberations, leading to the founding of the National Religious Partnership for the Environment (NRPE), as an association of the US Catholic Conference, the National Council of Churches, The Coalition on the Environment and Jewish Life, and the Evangelical Environmental Network, in 1993. The Partnership works “to encourage people of faith to weave values and programs of care for God's creation throughout the entire fabric of religious life” (NRPE). Similarly, discussions about the role of the faith in environmental conservation at an
international World Wide Fund for Nature (WWF) meeting in 1986 in Assisi, Italy led to the founding, in 1995, of the Alliance for Religions and Conservation (ARC) in the United Kingdom. ARC works with eleven of the world’s major religions to develop and implement conservation projects in line with religious teachings (ARC).

While theologians and engaged leaders, including Pope John Paul II, who, in his World Day of Peace message in 1990, called on Christians and non-Christians alike to “recognize their obligation to contribute to the restoration of a healthy environment,” galvanized the religious turn toward ecology, environmental leaders also realized the power of religion in motivating followers (NRPE). In May 2000, the Yale School of Forestry and Environmental Studies, the Yale University Divinity School, the Wilderness Society and the National Religious Partnership for the Environment, jointly hosted a conference entitled “The Good in Nature and Humanity.” The conference brought together scientists, environmental practitioners, ethicists and theologians to discuss an environmental ethic that would help address “two of the most imperiling crises of our time – global environmental destruction and an impoverished spirituality,” and resulted in a book by the same name (Kellert and Farnham 2002: xiii).

Recognizing the role of religion in shaping cultural perceptions and influencing views on nature, members of the Society for Conservation Biology established a Religion and Conservation Biology Working Group in 2008. The Working Group coalesced around the insight that “understanding of religious concepts
and how they are applied to governance and daily life is essential to the implementation of effective and lasting conservation management strategies” (RCB 2009). The Working Group conducts outreach activities in which scientists and representatives of religious traditions can discuss issues of common concern to encourage broad conservation stewardship, develops curricular materials to help communities of faith understand conservation biology, and works to help conservation professionals understand the shared values and disjunctures between conservation biology and the faith communities (RCB 2009). It sends out an email newsletter several times a month, advising its membership of book, articles, websites, conferences, workshops, and other resources that address the connections between religion and conservation biology. What scholarly and activist activities in the field of religion and ecology have in common is their approach to environmental change in the realm of ideas: their contention that worldviews matter in constructing ecologically sustainable ways of life, and their belief that ideas will prompt action.

**Religious worldviews as a cause of environmental degradation**

Within this realm of ideas, religion and ecology analyses trace history back in time to identify problematic and libratory conceptual resources. Historians, theologians, feminists, and scholars of religion have analyzed the sweep of history to locate and reclaim threads that offer greater justice and emancipation in the face of oppression, and to identify the trends and patterns of thought that exclude and marginalize. Building on Romantic trends of appreciation of nature, such as the
spiritual nature writings of John Muir and Henry David Thoreau, and the Hudson River School painters’ appreciation of the sublime in the landscape, conservationist Aldo Leopold conceptualized an early environmental ethic. He saw the extension of ethics in Western culture as a process of “ecological evolution” that built from the Mosaic Decalogue to the Golden Rule, and then, to the land, and the plants and animals living on it (Leopold 1949/1966: 238-239). He proposed to change “the role of Homo Sapiens from conqueror of the land to plain member and citizen of it” (Leopold 1949/1966: 240). In his Land Ethic, he spelled out appropriate relations between humans and their surroundings: “A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise” (Leopold 1949/1966: 262).

Leopold drew on the religious and historical roots of Western tradition in his essays, collected in *The River of the Mother of God* (1904-47/1991), ultimately leading to his articulation of the Land Ethic, in *A Sand County Almanac* (1949/1966). In Leopold’s call for a Land Ethic, he wrote,

An innumerable host of actions and attitudes, comprising perhaps the bulk of all land relations, is determined by the land-users’ [sic] tastes and predilections, rather than by his purse. The bulk of all land relations hinges on investments of time, forethought, skill and faith rather than on investments of cash. As a land-user thinketh, so is he (Leopold 1949/1966: 263).

Similarly, White asserted, “Human ecology is deeply conditioned by beliefs about our nature and destiny – that is, by religion” (White 1967: 1205). In drawing on
the history of ideas to demonstrate the roots of current attitudes toward and actions in
the natural world, these authors showed the importance of worldviews. Both White
and Leopold went so far as to assert that ecological concern would not take root until
Western culture experienced an ethical change of heart. As Leopold wrote,

No important change in ethics was ever accomplished without an
internal change in our intellectual emphasis, loyalties, affections, and
convictions. The proof that conservation has not yet touched these
foundations of conduct lies in the fact that religion and philosophy have
not yet heard of it. In our attempt to make conservation easy, we have
made it trivial (Leopold 1949/1966: 246).

Locating the source of the ecological crisis in Christianity

White took up this challenge, accusing religion in the West – specifically,
Christianity – of disregard for the natural environment, and calling for a rethinking of
the current religion, or the adoption of a new religion. White argued that the tandem
workings of science and technology, which form the basis for modern society, are
uniquely occidental. He asserted that additional scientific and technological effort
would not ameliorate environmental problems, which require internal changes in
values. This strand of thought continues in contemporary arguments against
‘ecological modernization,’ a theory that suggests that current social, political and
economic structures can internalize care for the environment (Hajer 1995: 25). Rather
than depending upon technological fixes to resolve environmental dilemmas, White
explained, we must look at the roots of our understandings about humanity and its
place in the world, which can be found in religion – for the West, in Christianity.
White called Christianity “the most anthropocentric religion the world has ever seen,” and claimed that Christianity “established a dualism between man and nature” and that it “insisted that it is God’s will that man exploit nature for his proper ends” (White 1967: 1205).

White’s article spoke to the concerns of his time. It followed the publication of Rachel Carson’s *Silent Spring* (1962/1994), which alerted the public to the toxic hazards of pesticides in fluent, accessible language, by five years, and coincided with the rise of the American environmental movement. The passage of the Clean Air Act (1963), the Wilderness Act (1964), and the Water Quality Control Act (1965), had all established, via legislative means, a responsibility for caring for the surrounding environment. But why were people not fulfilling this responsibility? White’s article offered a compelling hypothesis – and perhaps convenient excuse for the abrogated responsibilities: North Americans were hindered by our deeply inculcated Christian worldview.

Geographer Clarence Glacken’s massive history of the complex interactions of nature and culture in the Western tradition, *Traces on the Rhodian Shore* (1967), analyzed views of nature and culture in Western thought through the examination of three main themes – the creation of earth, its physical influence on human cultures, and the ability of human cultures to shape the physical earth – providing a subtler and more thorough reading of human-nature interactions than White’s brief article. In contrast to White, Glacken (1967) cautioned that we should not read Genesis 1
anachronistically, particularly on the subject of dominion. Instead, we must consider the ancient context, in which societies were developing their ability to culture plants and animals. In this context, Genesis 1 could be seen more as a reflection of, and explanation for, then-current social reality, than as a justification of wanton overuse.

*What was at stake: Christianity, Genesis and the Ethos of Domination*

At the center of White's argument is his analysis of the creation stories Genesis 1 - 3, texts that are shared by the Jewish and Christian traditions. White argued that these texts hold the roots of an androcentric and anthropocentric perspective, contributing to a separation from and an exploitive ethic toward the natural world. While political ecologists would locate this separation in historical and material dynamics that result in alienation, White posited an ideological cause. Genesis 1 tells the story of the six-day creation of light and dark, heavenly bodies, the earth and all its inhabitants. Adam is created last, suggesting that he is the pinnacle of creation, and Eve is created as an after-thought to keep him company (White 1967).

Theologians and biblical scholars generally understand the beginning chapters of Genesis to represent two different creation stories. Interpretive attention has focused primarily on Genesis 1 – 2:4a, a Priestly (P) account, concerned with order and structure, and the blessing of God, because it was thought that creation of humans in the image of God represented a unique approach (Westermann 1984: 141). However, later scholarship revealed that this type of creation story was widespread (Westermann 1984: 37). In the Priestly account, God makes light and dark, water and
land, plants and animals, and eventually human beings in God's image over the course of six days (RSV 1962: Genesis 1:1 – 27). Created last and given dominion over the other creatures, humanity seems to stand at the top of the hierarchy of creation, legitimizing an attitude of exceptionalism. As Val Plumwood (1993) has shown, logical structures of dualism and hierarchy support oppression. Genesis has sometime been read to grant humans special privileges, based on Genesis 1:28: "And God blessed them, and God said to them, 'Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth'" (RSV 1962: 2). Interpretations of the words *subdue* and *dominion*, have led many, including White, to argue that the inherent hierarchicalism of the text allows humans to dominate, control, use and abuse other life (Collins 1996: 72).

In the dominionistic reading of Genesis, in which an all-powerful God creates the earth and its inhabitants for the use of "men," White found the seeds of contempt for and selfish use of the natural world. Because of what he saw as a fundamental flaw in the Western approach to the natural world, White argued that we must re-think our basic assumptions. In locating the problem of environmental destruction in human understandings derived from religion, White also pointed the way to a solution: religion that included positive teachings about the natural world could serve as a powerful engine of environmental preservation.
An Ecological Reading of Genesis

The Yahwist creation story of Genesis 2:4b - 3:24, the second and older version, is often seen as presenting a more ecologically connected and less exceptional place for humanity. Adam is fashioned from dust by God the potter – a motif that connects this creation of human beings to “the most common and most widespread creation motif” (Westermann 1984: 35) found throughout the ancient world. In this way, humanity literally comes from the earth, bearing within the essence of that from which it derives (Fretheim 1994). Both humans and animals are made from the dust of the earth. In this chapter, too, humanity receives dominion over the animals by naming them. The potent combination of being made from the earth, and also having dominion over the animals of the earth, makes a profound statement about the paradoxes of human identity (Fretheim 1994: 350).

The tree of the knowledge of good and evil, and instructions about it provide a key insight about limitations that is not present in Genesis 1, where humanity is given great responsibility with few rules. In Genesis 2, people are given rules, and consequences for breaking them. The acceptance of limits appears to be central to living a creaturely life. Genesis scholar Terence Fretheim quotes theologian Walter Brueggemann, who explains

The tree and the command together define the limits of creatureliness; to transgress these limits entails deciding about one’s own best interest, to become autonomous, independent of the will of God for one’s life.... This creational command presents a positive use of law, wherein
certain limits are recognized as being in the best interests of human life and well-being (Brueggemann 1994: 351).

The firm expression of limitation and boundary in Chapter 2, leading to the expulsion from the garden following the transgressing of a boundary provides a balance to the human power and potential suggested in Chapter 1. Chapter 2 shows that human dominion still falls within God’s rules and that serious consequences befall those who ignore such boundaries. The Yahwist account read together with the Priestly account of human creation reveal humanity as both exceptional and constrained to live within God’s laws. The two sources reveal different aspects of humanity’s role and relationship with the rest of creation. These facets of humanity revealed in each story are incomplete without the balancing description from the other story. In the creation of humans from dust in Genesis 2, we find a balance to the potentially idolatrous imago Dei of Genesis 1. In the transgressing of boundaries and subsequent punishment, we find checks on the over-reaching authority that the blessing to “have dominion and subdue the earth” might give rise to. Thus, Genesis 2 counters and balances the view of the human exceptionalism offered in Genesis 1.

Two ways to ecologize religions: retrieve and reinterpret, or begin anew?

These two readings of Genesis provide a broader context for White’s proposition that we need to “find a new religion, or rethink our old one” (White 1967: 1206). While White’s argument was based on the more prevalent and dominionistic reading of Genesis 1, Genesis 2, as described above, offers a counterpoint and a
moderating tone to the hierarchical themes of Genesis 1. Had he given more attention to Genesis 2, White might have seen more potential for “rethink[ing] our old [religion].” White’s roadmap has shaped subsequent scholarly work in religion and ecology, which can be roughly divided into two approaches: those that work to retrieve and reinterpret ecological themes within existing religious traditions (often associated with John Grim, Mary Evelyn Tucker, and the Forum on Religion and Ecology); and those who believe that we need entirely new forms of religion (often associated with Bron Taylor, professor in the Religion and Nature program at the University of Florida, and editor of the *Encyclopedia of Religion and Nature*). The literature on new religious movements, including new ecological religions, is extensive (see, e.g., Taylor 2001b; Taylor 2001a; Partridge 2004; Clarke 2006; Taylor 2007). However, my study focuses on retrieval and reinterpretation within existing religious, cultural and spiritual traditions, and in particular, on interpretation of current beliefs and practices to understand their discursive and material effects.

*The pioneering work of ecofeminists and ecotheologians*

The theologians and scholars of religion who believe that it is necessary and possible retrieve and reinterpret ecological themes within existing religions build on the work of feminist and liberation theologians who have recovered non-misogynist and egalitarian themes within biblical texts. In critiquing the ways in which the

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dualistic, hierarchical worldviews promulgated in the traditional understanding of Christianity have oppressed and marginalized both women and nature, ecofeminism has raised an important prophetic voice in theology. Ecofeminists' analysis of the interstructuring of forms of oppression, including sexism, racism, classism and destruction of the natural environment, implies that dominance relationships must be challenged on all fronts. A common basis of all forms of dualistic oppression is the positing of a pair of polar opposites – male/ female, mind/ body, culture/ nature, first world/ third world – in which one pole, associated with matter, is thought to be inferior, while the other pole, associated with spirit or mind, is elevated (Plumwood 1993; Griscom 1994). Through this hierarchical dualism, women and nature have often been linked through their physicality (Merchant 1980). While social analysis and the hard work of feminists have done much to overturn the historical oppression of women, the use and objectification of the natural world frequently still goes unchallenged.

Many have argued that dualistic thinking lies at the root of oppression. The Cartesian split between body and spirit allowed the “higher” functions, such as reason, to be split off from the body, while the body, with its irrational passions and urges, could be seen as sloppy and uncontrollable, and was viewed as an affront to the cool lines of reason, by Platonists and neo-Platonists (Douglas 1999: 25-26). In early modern times, the uncontrolled physicality of the body, especially the mysterious female body, was linked with other uncontrolled and uncontrollable forces, such as
those of nature (Merchant 1980: 127). Thus, the same patriarchal dualism that
oppresses women also oppresses nature, and their association with presumably non-
sentient nature furthers the diminution of women (Ruether 1992; Plumwood 1993).
Through dualism, nature and associated categories, such as women, have been defined
as the background, non-agent, non-active condition upon which the (male-identified)
events of history and reason are played out (Plumwood 1993: 4). In Plumwood’s
account, dualism includes *backgrounding*, as described above; *radical exclusion*
which emphasizes differences and elides similarities so that two categories can be
viewed as completely and hierarchically separated from each other; *incorporation*
such that the underside of a dualistic pair is defined by its lack in terms of the upper
side of the pair; *instrumentalism* in which the upper side of the pair uses the underside
for its own ends without recognition of the underside’s own needs and directions, and
*homogenization* in which the differences among those of the denigrated side of the
pair are erased (Plumwood 1993: 48-60).

Feminist theologians seek “to develop a view of human relations characterized
by equality and mutuality, in which both autonomy and relationality are respected”
(Farley 1994: 196). This pattern of relating stands in contrast to the traditional
hierarchies of domination and subjugation in which the way of being in the world
attributed to elite, propertied white males is situated as superior. To understand who
the human person is who is involved in “equality and mutuality” and “relationality,”
we must understand that being in context. As ecofeminist Ivone Gebara explains, “relatedness” is the

First and most basic characteristic of the human person…. Relatedness is the primary and the ultimate ground of all that exists . . . . Both the world we see around us and humanity within it are expressions of the relatedness that characterizes all things (Gebara 1999: 103).

In Gebara’s view, relatedness is the grounding of all things, “the constitutive relationship of communion we have with all beings” (1999: 83). Therefore, the individual is not just a singular, atomic being, but a node in a web of relations with the political systems in which oppression of women and nature takes place (Mies and Shiva 1993; Ruether 1996; Merchant 2003). To overturn or transcend dynamics of dualism and dominance, we must analyze the political economy of oppression, along with its roots in ideology.

Ivone Gebara describes the first steps in this process as recovering of stories of women in the Bible, reclaiming women “as key actors in the history of liberation,” and then rediscovering the “submerged feminine expressions of God in the Bible” (Gebara 1999: 209). Similarly, other living things on the planet, and indeed, the Earth itself, have been oppressed by the structures of patriarchy, hierarchy and dualism entwined in the Christian tradition (McFague 1993; Habel 2000; Habel and Wurst 2000; Hobsgood-Oster 2001).
Retrieval and reinterpretation in the Christian tradition

Along with thorough analysis of the roots and fruits of the historic conflation and oppression of women and nature, creative re-imagings of the historical texts speak more clearly and relevantly to current situations. Scholars note the various ways that political contexts have shaped interpretation over the thousands of years since the texts were written, insisting that the modern context does not have to be constrained by outdated political or social relationships. "A theology which is not up-to-date is a false theology," (Gutierrez 1975 cited in ; Gunnlaugur 1988). Articulations that provided appropriate guidance to small-scale agrarian societies thousands of years ago become problematic when read literally for guidance in current contexts. The blessing "be fruitful and multiply and fill the earth," once a sign of abundance and fruitfulness, is now, in the context of an over-populated earth, a hazard. Similarly, blessings to "have dominion" and "subdue" made sense when the physical conditions of life were more difficult than they are now.

Working on retrieval, reassessment, and re-interpretation of the Bible requires reading through a particular lens, specific to the conditions of inequality and injustice in late modern capitalism (Daly et al. 1989; Ruether 1992; McFague 1993; Hallman 1994; Rasmussen 1994; MacKinnon and McIntyre 1995; Warren 1995; Jones 2000). Such a reading does not necessarily seek the "original intentions" of the authors, nor does it search for "objective" meaning. Instead, constructive re-reading asks what messages we can discern for modern issues. This approach is followed in the Earth
Bible series which reinterprets various books of the Bible according to modern ecological principles, highlighting environmental themes and messages (Habel 2000; Habel and Wurst 2000; Habel and Wurst 2001). In this series, the authors use a set of “Six Ecojustice Principles” to guide biblical interpretation, a novel interpretative approach that stems from feminist theologians’ hermeneutic of “suspicion and retrieval” – suspicion about the anthropocentric and androcentric motives of authors of the text, and retrieval of previously suppressed, unnoticed or hidden aspects of the text (Habel 2000: 39). As Gene Tucker points out,

Most of us were taught to avoid imposing our preconceptions on the text, or even deciding in advance, what we wanted to discover. Preferred has been an inductive rather than deductive approach: just read the text and see what comes out. But we were kidding ourselves. Principles of interpretation are both essential and inevitable. Until recently, our unacknowledged principles for the most part were Western, male and historical....One cannot enter new territory without both a map and some idea of destination or goal....Principles, including principles of interpretation, can and must open up new problems and possibilities of the terrain (Interview by Earth BibleTeam 2000, in Habel and Wurst 2000).

Thus approaching the Bible with an explicit concern for the text’s attitude toward the natural environment can both problematize and reveal aspects that may have been overlooked previously. As ethicists and theologians are engaged in a constructive and normative task, they can point the way to a more just and sustainable future. As Jay MacDaniel points out,
The task of theology – at least Christian theology, influenced by prophetic biblical traditions – is not simply to interpret inherited symbols of thought; its task is to imagine new and hopeful ways of thinking and feeling in light of existing needs in the present. It is to exercise what biblical scholar Walter Brueggemann calls ‘the prophetic imagination,’ whose task is ‘to nurture, nourish, and evoke a consciousness and perception alternative to the consciousness and perception of the dominant culture around us (McDaniel 1990/1995: 302).

**The responsibility of stewardship**

Following White’s brief article, Australian John Passmore’s *Man’s Responsibility for Nature* (1974) was the first book-length treatment of environmental ethics by an environmental philosopher. Passmore critiqued Leopold’s (1949/1966) earlier formulation of the Land Ethic, claiming that the formation of a community with moral import – such as Leopold claimed was necessary for ethical concern – was impossible because humans and other species did not share common interests, and could not share mutual obligations (1974: 116). Subsequent philosophers, including Callicott (1989) and Attfield (1991) have criticized Passmore’s view, asserting that the human and non-human communities do share common interests, and that there are many members of the human community, such as criminals, the mentally handicapped, and infants, who are unable to recognize moral obligations.

Rather than a wholesale rejection of the Western tradition, historian of ideas and philosopher Passmore (1974) argued that a retrieval of environmentally-responsible strands within the Western tradition would be more fruitful. He disagreed with White’s (1967) reading of Genesis as implying human despotism, and instead
saw an indication of human responsibility to be stewards of nature. In valuing the active pursuit of technology to solve ecological problems such as pollution, overpopulation, and resource conservation, Passmore predicted the concept of ecological modernization that contends concern for the environment can be incorporated into current systems of production and governance. Working within the Christian/Western tradition, rather than rejecting it as White proposed, Passmore advocated for reclaiming and reinvigorating ideas that could contribute to environmental solutions. Passmore worried that turning away from the Western tradition would lead to mushy-headed mysticism obliterating the genius of Western culture: the rational use of science. In the 35 years since the publication of his book, Passmore’s optimism in technology has been both questioned and born out. While criticism of scientism and late modern capitalism has grown more vociferous, including the critique launched by political ecology scholars, who had not yet gotten underway in 1974, technology — including technology for environmental protection — plays a vastly expanded role in our lives. Theologians and Christian activists have picked up Passmore’s task, identifying biblical themes of stewardship and encouraging believers to adopt practices that reflect them. The National Religious Partnership for the Environment and the Evangelical Environmental Network described in the discussion of “the Force” at the beginning of this section have responded to the call to reclaim ecological themes within Christianity.
Within the Western tradition, White (1967) advocated retrieval of a formerly heretical saint as a salient model of ecological concern. He suggested the adoption of St. Francis of Assisi, the patron saint of animals and founder of the Franciscan order, who is often depicted preaching the Gospel to birds that had alighted on his outstretched arms, as the patron saint of the environmental movement. That White had to seek a role model outside of the mainstream of Christianity shows how far gone he believed the tradition was. White saw St. Francis as a role model of a more egalitarian relationship between humans and nature, and felt that Christians would do well to imitate him.

White’s suggestion was eventually enacted: St. Francis of Assisi was proclaimed the patron saint of ecology by Pope John Paul II in 1979 (Pope John Paul II 1979). Pope John Paul II continued to raise ecological awareness among Catholics in his World Day of Peace message, Jan. 1, 1990, in which he proclaimed,

In our day, there is a growing awareness that world peace is threatened not only by the arms race, regional conflicts and continued injustices among peoples and nations, but also by a lack of due respect for nature, by the plundering of natural resources and by a progressive decline in the quality of life. The sense of precariousness and insecurity that such a situation engenders is a seedbed for collective selfishness, disregard for others and dishonesty.

Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past. The public in general as well as political leaders are concerned about this problem, and experts from a wide range of disciplines are studying its causes. Moreover, a
new ecological awareness is beginning to emerge which, rather than being downplayed, ought to be encouraged to develop into concrete programmes and initiatives.

2. Many ethical values, fundamental to the development of a peaceful society, are particularly relevant to the ecological question. The fact that many challenges facing the world today are interdependent confirms the need for carefully coordinated solutions based on a morally coherent world view.

For Christians, such a world view is grounded in religious convictions drawn from Revelation. That is why I should like to begin this Message with a reflection on the biblical account of creation. I would hope that even those who do not share these same beliefs will find in these pages a common ground for reflection and action (Pope John Paul II 1990, italics in the original).

Pope John Paul II goes on to offer the Christian creation story, as he says this revelation is the source of religious belief, which can help believers better understand the appropriate relations between humans and the rest of Creation. He notes the moral character of the environmental problem in the indiscriminate use of technology, and the lack of respect for life, and calls for an internationally coordinated response to ecological problems that transcend the boundaries of individual states (Pope John Paul II 1990).

More recently, Pope Benedict XVI has proclaimed in his Caritas In Veritate (Charity in Truth) Encyclical:

The environment is God's gift to everyone, and in our use of it we have a responsibility towards the poor, towards future generations and towards humanity as a whole. When nature, including the human being, is viewed as the result of mere chance or evolutionary determinism, our sense of responsibility wanes. In nature, the believer recognizes the wonderful result of God's creative activity, which we may use
responsibly to satisfy our legitimate needs, material or otherwise, while respecting the intrinsic balance of creation. ... 

*Nature expresses a design of love and truth.* It is prior to us, and it has been given to us by God as the setting for our life. Nature speaks to us of the Creator (cf. Rom 1:20) and his love for humanity. ... But it should also be stressed that it is contrary to authentic development to view nature as something more important than the human person. ... This having been said, it is also necessary to reject the opposite position, which aims at total technical dominion over nature, because the natural environment is more than raw material to be manipulated at our pleasure; it is a wondrous work of the Creator containing a “grammar” which sets forth ends and criteria for its wise use, not its reckless exploitation. ... Our nature, constituted not only by matter but also by spirit, and as such, endowed with transcendent meaning and aspirations, is also normative for culture. Human beings interpret and shape the natural environment through culture, which in turn is given direction by the responsible use of freedom, in accordance with the dictates of the moral law. Consequently, projects for integral human development cannot ignore coming generations, but need to be *marked by solidarity and inter-generational justice*, while taking into account a variety of contexts: ecological, juridical, economic, political and cultural (Pontifical Council for Justice And Peace 2004). (excerpts from paragraph 48, Pope Benedict XVI 2009; previous citation within the original).

These proclamations from the Vatican exemplify the type of corrective moral leadership White sought in reconciling the relationship between humanity and nature.

**Critiques of white’s perspective**

Through the deep controversy it aroused, White’s five-page attack on Christianity contributed to the rise of studies in environmental history, environmental ethics, and religion and ecology (Crosby 1995; Jenkins 2009). A few years after White’s article, a rebuttal, also published in *Science*, asserted that a broader spectrum of causes were responsible for the ecological crisis, claiming “America is the
archetype of what happens when democracy, technology, urbanization, capitalistic mission, and antagonism (or apathy) toward natural environment are blended together” (Moncrief 1970: 510). Moncrief (1970) saw ignorance of future consequences, lack of personal moral direction, overoptimistic confidence in technology, and institutions inadequate for protecting open access resource as contributing to the environmental crisis. Moncrief allowed that the Judeo-Christian tradition could have some influence on shaping these factors, but believed that White (1967) had overemphasized this single factor, for which there was little historical or scientific evidence. Subsequently, White has been critiqued for giving inadequate attention to economic and sociopolitical factors (Marangudakis 2001). White's thesis spawned of virtual cottage industry of scholars challenging and debating it (see, e.g., Cohen 1985; Greeley 1993; Minteer and Manning 2005; Swearer 2006; Attfield 2009; Jenkins 2009).

**Protestantism and Nature in America**

Refuting White's contention that Christianity was a largely negative force with relation to the natural environment, historian Mark Stoll's *Protestantism, Capitalism and Nature in America* (Stoll 1997), examines of the role of the Protestant tradition in shaping both capitalism and environmentalism in America. Like Passmore (1974), Stoll does not see the Christian tradition as monolithic: rather its diversity provides fodder for both those who view the natural world as a source of unlimited resources for human disposal, and for those who those who see that natural world as deserving of ethical or religious contemplation. Indeed, as Stoll suggests, these two ideas can
coexist simultaneously. Noting that most of the founders and early leaders of the United States were Protestants, Stoll seeks to uncover the specific contribution of Protestantism to the American take on the natural world. He points out that the United States has both the most productive capitalist economy, which some have claimed is bent on destroying the natural environment, and the most robust and active environmental movement in the world, dedicated to protecting the natural environment. How can these two seemingly contradictory facts co-exist? Stoll locates the cause of the ecological crisis in the industrial revolution, whose factories and worldwide system of resource exploitation developed most prominently in the Protestant countries of Britain, Germany, and the United States (1997: 30). Somewhat paradoxically, the romanticism that gave rise to a contemplative view of the natural world also arose most strongly in these same three countries. Germany blended these themes of rationalizing and appreciating nature in inventing the science of ecology in the nineteenth century (Stoll 1997: 30). Stoll sees both of these trends of thought as growing out of the Protestantism, with its emphases on productive work, individual action, and anti-authoritarianism. The religious values of Protestantism, including industry and frugality, became dominant values in the US, infecting both capitalist production and environmentalism. Industry and frugality could lead to financial success, which would be seen as a sign of the individual’s elect status before God. This wealth could then be distributed to the deserving needy – the moral marginals – as a further sign of one’s election: doing good by doing well. Similarly, much of the environmental movement hinges on exhortations to productivity and action, and on a
degree of asceticism that can be linked to the Protestant suspicion of pleasure and materiality. This asceticism, I would argue, may contribute to the failures, as much as the successes, of the environmental movement.

Moving toward a more inclusive ecological ethic

Though the academic study of religion and ecology as a field coalesced in the United States, it drew on observations of scholars all over the world who noted strands of ecological thought and practice within the religious traditions they studied, and indeed, the Harvard conferences addressed the full range of world religions. Leading the way, historians of religion identified and retrieved ecological strands within religious traditions. Feminists and eco-theologians advanced studies of religion and ecology, working in the Christian tradition, by identifying pathways for retrieving and reinterpreting feminist and ecological strands of the tradition. Though working specifically within the Christian tradition, the path-breaking work of feminist theologians contributed to creating the intellectual space for thinking about religions in ecological ways. Further, the feminist insistence that the particularities of lived reality matters to the understand of environmental dilemmas has shaped my interpretation of the practice of Bhutanese Buddhism, allowing space for experiential, and not only canonical, Buddhism in my understandings (Fortmann et al. 2008).

Environmental historian Carolyn Merchant endeavors to move us toward these new relations between humanity and nature by tracing the historical and philosophical trajectories of Western and scientific thought that allowed nature to come to be treated
as inanimate “stuff,” (Merchant 1980; Merchant 2003). While White (1967) locates the source of ecologically-destructive Western science and technology in the Christian tradition, Merchant describes the political-economic and social changes that contributed to the Scientific Revolution as the source of the mechanistic world view that contributes to the mutually reinforcing domination of women and nature, and continues to dominate science (1980). Merchant shows how Cartesian mind-body split led to the assignment of qualities of materiality to nature and to women, thus conflating the domination of women and nature, and ensuring (white, rational) male superiority. After tracing the dominant narrative of the Western tradition that created our current relationship with nature, Merchant constructs a ‘partnership ethic’ that seeks to establish more equitable relations between humanity and nature (Merchant 2003). Recognizing that human lives are lived in and through narratives, Merchant identifies a mainstream Recovery narrative that describes humanity’s fall from the Garden of Eden and subsequent efforts to reclaim Eden through human effort and civilizing progress. This narrative allowed for the colonization and transformation of “empty” lands. She also identifies feminist and environmentalist declensionist counter-narratives that move in the opposite direction, having identified a time of pristine, Edenic harmony in the ancient past, from which humanity has fallen through dominant social relations and environmental destruction. This counter-narrative also seeks to reclaim Eden, but suggests that certain unjust structures must be undone before this is possible. Recognizing the difficulties of both these teleological narratives, as well as the resources of the New Sciences, such as complexity theory,
chaos theory, and studies of complex adaptive systems, Merchant proposes a partnership ethic that would recognize “the greatest good for the human and non-human communities is in their mutual living interdependence” (Merchant 2003: 223). This framework suggests that non-human species would have an equal ‘place at the table’ in environmental decision-making along with the human representatives. Though intriguing, this idea poses challenges related to power dynamics. Who would get to represent non-human nature, under what conditions, where, and when? How could we know or ensure that non-human nature was accurately represented? Wouldn’t the human representative of non-human nature always have his or her own political agenda? Given the currently unequal power dynamics between human groups – let alone between humans and non-humans – how could we overcome these inequalities to make space for the still, soft voice of non-human nature to be heard? Further, a human speaking for non-human nature re-inscribes the human/nature divide. These pragmatic issues are not insurmountable, but they require focused attention to make human/non-human partnership possible.

Ecological philosopher David Abram has offered one possibility in grounding the human experience to the “more-than-human” world (Abram 1996). Abram proposes that the human consciousness is “rooted in, and secretly borne by” the sensuous and sensory forms of the more-than-human world around us (1996: 49). He argues that perception is actually participation in the surrounding world: “at the level
of our spontaneous, sensorial engagement with the world around us, we are *all* animists*" (1996: 57, italics in the original).

**The search for a new environmental ethic**

White's complaint with Christianity – “the most anthropocentric religion the world has ever seen” (White 1967: 1205) – was addressed when philosophers took up the issue of environmental ethics in the 1970s and 80s. At first, some saw environmental ethics as a type of applied ethics, like bioethics or business ethics, which appeared around the same time. The task of the philosopher, then, was to apply his or her standard moral theory – Kantian deontology, Rawlsian justice, or utilitarianism, for example – to the new issues affecting the environment (Callicott 1989: 2). This type of environmental philosophizing remained strictly anthropocentric, revolving around human welfare in the light of various environmental interventions. Some then sought to extend the realm of moral considerability to other beings, enlarging the circle of concern, as Leopold (1949) had suggested when he described the extension of moral values from the Mosaic Decalogue to the Golden Rule (see, e.g., Singer 1977; Regan 1982; Regan 1983). A third group, saw the environmental crisis as a repudiation of Western attitudes and values in relation to nature, requiring a sweeping philosophical overhaul (Callicott 1989: 3), as White had called for. These philosophers work on shifting the "locus of intrinsic value" from the individual to the ecosystem, building on the ethical foundations that Aldo Leopold (1949) laid in *A Sand County Almanac* (Callicott 1989: 3).
Environmental ethicist J. Baird Callicott took this tack in his investigation of Eastern religions as a potential source of alternative viewpoints for establishing a more ecologically-oriented ethic in the West.8 Building on the insights of authors from diverse religious traditions in his edited volume, Nature in Asian Traditions of Thought (Callicott and Ames 1989), and a survey of the environmental ethics of the world’s religious traditions, Callicott endeavored to synthesize a global ecological ethic grounded in concepts from the world’s many traditional cultures in Earth’s Insights (Callicott 1994). His “postmodern evolutionary-ecological environment ethic” (185) is developed from Leopold’s Land Ethic, with a greater emphasis on “preserving natural processes and other biotic wholes,” and less on “sorting out the mutual obligations among specimens” with which ethics is more commonly concerned (Callicott 1994: 205). The ethic incorporated postmodern understandings of the importance of relationality down to the level of quantum particles, seeing the self and other as mutually constitutive and interdependent, within a unity of nature more Eastern than Western (Callicott 1994: 207-209). Based on a relatively rapid global survey of environmental attitudes and values, Callicott’s ethic suffered from a vagueness and dominant Western flavor, based in the Western postmodern scientific worldview, that critics believed was too culturally specific (Elliott 1998). Nonetheless, Callicott’s 1994 book was a powerful achievement of survey and synthesis that contributed to efforts toward examination, retrieval and reinterpretation.

8 Note that investigation of ethical and spiritual resources of other existing religions is distinct from the “new religious movements” mentioned earlier, in that the latter are alternative religions, not connected with existing religious bodies, denominations, or churches.
of the environmental ethical resources of world religions. It sparked a special issue of the journal *Worldviews*, in which specialists in the various global religious traditions responded to Callicott's depictions (Taylor et al. 1997).

**Buddhism and ecology**

Though White (1967) recognized that a religion rooted in a markedly different historical background would be unlikely to thrive in the West, and considered retrieval of ecological strands of Christianity to be a more promising direction, the Zen Buddhism of the Beats as a more ecological religion, which offered the "mirror image" of the problematic "man-nature" relationship promulgated by Christianity (White 1967). In her explanation of Buddhist principles, activist and scholar of Buddhism Joanna Macy shows how the application of these principles to daily life resonates with ecological concerns (Macy 1991b). Though Eastern religions in general, and Buddhism and Taoism in particular, appear to be ecological in that they venerate life and the processes of life, authors subsequent to White and Callicott have warned against an uncritical acceptance of the superficial similarities (Sponberg 1997). Callicott's efforts to understand the environmental ethical resources of the world's religious traditions surely helped pave the way for later anthologies that examined the connections between Buddhism and ecology. In anthologies such as *Buddhism and Ecology* (Tucker and Williams 1997) and *Dharma Rain* (Kaza and Kraft 2000)

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scholars have attempted to unravel the threads connecting Buddhism and environmentalism, while challenging the facile assumption that Eastern religions promote harmony with nature (Eckel 1997). While both Buddhism and ecology speak of interdependence, connectedness, and care for other living beings, they arise from quite different epistemological backgrounds. For example, Thai monks, who promote protection of local forests, counsel participants not to use the word “environment” because it is a Western concept that assumes, and therefore reinscribes, a distinction between humans and other living beings (Bhikkhu 2000: 211). The biophysical science of ecology posits nature as ‘out there,’ while Buddhism, along with many other non-monotheistic religious, does not make such sharp distinctions between subject and object. In this way, Buddhism resonates with the arguments of discursively-inclined political ecologists who see nature as socially constructed, and therefore critique sharp boundaries between the nature that deserves protection (for example, that of contiguous wilderness areas) and that which does not (for example, that of an urban weed lot) (see, e.g., Cronon 1995).

At the same time, fresh interpretations are essential to maintain the liveliness of religious traditions. New interpretations that address political positionality and offer greater liberation to those who have historically been oppressed may create backlash and repression by the guardians of the tradition. Nonetheless, this is necessary to maintain a living tradition, as discussed previously with regard to the work of eco-theologians and ecofeminists. While strict constructivists interested in
The original meaning of the texts may have no interest in reinterpretation, other insist that ancient texts must be re-engaged in the contemporary context for full revelation of the depths (Kaza and Kraft 2000: 81).

The value of a Buddhist environmental ethic is that it is a virtue ethic. A virtue ethic focuses on the virtues and character of the individual, unlike a utilitarian/consequentialist ethic, that focuses on the outcome of the act, or a deontological ethics, that addresses the duties carried out (Sahni 2008: 94). Buddhism emphasizes the cultivation of particular virtues (to be discussed subsequently) that are believed to lead to the escape of the continual cycle of rebirth into the ordinary samsaric world, into nirvana (Sahni 2008: 4-5). Thus, a Buddhist environmental ethic is a virtue ethic that asks both what specific actions are necessary to preserve the environment and what virtues we must cultivate in order to perform in such a way (Eckel 1997; Sponberg 1997; Sahni 2008).

The fundamental insights of Buddhism

The fundamental insight of Buddhism is that genuine freedom and liberation can be achieved only when our ignorance and habitual misapprehension of reality is overcome (Gyatso and Thupten 1995). Buddhism, which assumes that all beings want to be happy, teaches Four Noble Truths:

1) Life is suffused with suffering: pain, frustration, and lack are part of the human condition;
2) The origin of this suffering is desire and egoistic craving;

3) Cessation of suffering is possible, through the attainment of nirvana; and

4) The way to achieve this is by following the Noble Eightfold Path (Ray 2000: 74-75): right understanding, right thinking, right speech, right actions, right livelihood, right effort, right mindfulness and right meditation, understood as the practice of the teachings of the Buddha, which can lead to nirvana or enlightenment (De Silva 1998: 55). Adherence to this path, which integrates the three facets of moral conduct, meditation and mental discipline, and wisdom, will eventually lead the practitioner to freedom from earthly suffering, in a realm of insight in which the emptiness of material phenomena becomes clear. Those who become enlightened, the bodhisattvas, may remain on earth for the good of all beings, to assist others in reaching enlightenment (Ray 2000). As noted above, the cultivation of these qualities along the path is the cultivation of virtues that are taught within Buddhism.

Essentially, the Four Noble Truths assert the principle of causality. His Holiness the Dalai Lama, in speaking to a Western audience (Gyatso and Thupten 1995) has remarked that

All of Buddhist thought and practice can be condensed into the following two principles: (1) adopting a world view that perceives the interdependent nature of phenomena, that is, the dependently originated nature of all things and events, and (2) based on that, leading a non-violent and non-harming way of life (p. 16).
This pithy summation of Buddhist thought is crucial for investigating Tibetan Buddhist attitudes and practices with regard to the natural environment. Contained within this summary is the notion of a relational ontology – “the dependently originated nature” – which views all things as interdependent and mutually constitutive, a concept similar to the Western notion of “actor network theory” (Latour 1987). In Buddhist thought, the lines between subjective and objective truths or between the physical and the spiritual are not sharp, and the physical and spiritual are very much interpenetrating (Tshewang et al. 1995).

Buddhists focus on the habits of mind that create the conditions for happiness and enlightenment (Ray 2000). The doctrine of karma teaches that one always reaps the benefits or harms of one’s actions, further impetus to treat other living beings compassionately and considerately (Sahni 2008: 4-5). For example, Tibetan Buddhist endeavor to treat all beings with the gratitude and kindness that they would offer their mother for having given birth to them, because, through the doctrine of reincarnation, any being could have been one’s mother in a past lifetime.

Buddhism teaches that it is wrong to take life or even to cause others to take life (Kabilsingh 1987: 11). The great 14th century teacher of Buddhism in Tibet, Tsongkhapa taught, “the abandonment of harm to sentient beings is to forsake all thoughts and deeds as – beating men or beasts, binding with ropes, trapping or imprisonment, piercing the noses, overburdening with loads beyond their strength, and similar activities” (Tsongkhapa 1960). Within the Mahayana tradition, followers are
taught, “since the doctrine of Buddha specifies compassion, those who take refuge in it should forsake harming the sentient beings with a compassionate heart” (Tsongkhapa 1960).

Because no earthly manifestations have any permanent or fixed existence – things are continually arising and falling away – attachment causes suffering (Tashi 2001). Even the self is not permanent, not uniquely identifiable. A great Buddhist teacher is said to have asked a student to locate the place where he could pinpoint his “self.” The student variously pointed to his mind, his heart, and his hands, but none of these locations completely captured the essence of himself. Even to locate the self within the confines of his physical body became problematic, as the student realized that he was dependent upon his family for raising him, his teachers for insights, and the animals and plants that provided food for him. Along with the impermanence that Buddhists identify at the heart of all things, this story imparts the Buddhist understanding of an interdependent universe, in which all things are the result of “co-dependent origination,” a great chain of inseparable cause and effect, in which beginnings and endings cannot be identified as such, but only collapse into one another (Tashi n.d.). Because the individual is inseparable from the family and surroundings that supported his life, much effort goes into honoring and maintaining ties in the corporeal, geographical, and spiritual realms.

Trees are regarded with special respect in Buddhism because the for major events of the Buddha’s life – his birth, enlightenment, first teaching in the Deer Park
in Saranath, and death occurred under trees (RGOB 1998a: 19). Monks are thus prohibited from cutting down trees, and many lay people refrain from cutting trees unnecessarily because of their sympathy for the tree’s life, as well as the lives of those beings, such as bird and insects, that make their homes in trees (interviews with Bhutanese villagers). According to one story, a monk cut off a tree’s main branch, and the spirit of the tree complained to the Buddha that the monk had cut off his child’s arm (Kabilsingh 1987: 10). Another story describes a band of travelers who had rested in the shade of a banyan tree, and then began cutting it down. Their actions were condemned, because the tree had acted as a friend by providing them with shade, and harming a friend was clearly an evil act (Kabilsingh 1987: 10).

Activist Buddhist scholars link Buddhism’s tenets of compassion and reverence for life with the need for planetary compassion and reverence, and connect Buddhism’s teachings about “co-dependent arising,” “mutual causality,” and “no self” with current developments of physical science and general systems theory that point to the inextricable interdependence and self-organizing and -regulating nature of life systems (Kabilsingh 1987; Macy 1991a; Macy 1991b). With its focus on meditation and self-transcendence, Buddhism has been criticized as being “other-worldly” and insufficiently concerned with human affairs. However, engaged Buddhism involves followers directly with worldly problems, and many prominent Buddhist leaders, including the Dalai Lama and the Venerable Thich Nat Hanh, have been outspoken on the need for environmental protection and the tools that Buddhism can provide.
Thus, a Buddhist environmental ethic addresses both the external and internal changes that must happen to create a more equitable and sustainable world. This notion parallels the assertions that many ecofeminists and ecotheologians have made about the changes of mind and habit they see as necessary (Ruether 1992; McFague 1993; Mies and Shiva 1993; Plumwood 1993; Merchant 2003). A Buddhist environmental ethic is appealing in that it provides a systematic set of time-tested teachings and tools, for virtue development through meditation and the eight-fold path, and a path to make such internal changes. While these tools may be, to some extent, culturally-bound and certainly not appropriate in every setting, they do fit well within their own cultural contexts – where much of the work of environmental conservation is currently happening.

**Conclusion**

In this chapter, I have described the intellectual history and approach of political ecology, and the implicit strands of moral concern within it. I have shown how political ecologists took up epistemological questions with political ecology’s discursive turn, which led to greater attention to the politics and ethics inherent in the construction of knowledge. I have described the environmental imaginaries (Watts and Peet 1996b) that encapsulate perceptions of and interaction with the natural environment in Bhutan. I have suggested that they are distinctive, and, as such, suggest useful perspectives for examining and addressing environmental issues in other locations. Healing the splits in dichotomous thinking allows us to take religion
and spirituality seriously in the analyses of environmental issues, potentially leading to more life-affirming and enlivening approaches to environmental dilemmas. The concern with justice, and the shared goal of an equitable, just and sustainable world that nurtures both humans and other life, brings political ecology to an intersection with religion and ecology. I described the streams that contributed to the establishment of the field of religion and ecology, and explored its potential contributions to political ecology.
Chapter 3 Sacred Natural Sites: Places Of Resistance And Resilience

Another challenge for the 'culture and nature link' is that less is known [sic] about the indigenous people, their culture, rituals and practices and relationship to nature. There is [sic] very few documentation of these and therefore awareness on how culture can be used as a tool of conservation largely lacks. Due to the same reason, approaches to cultural approach to conservation are still applied vaguely and remains fuzzy (Government of Nepal (GoN) et al. 2007: 9).

This statement, from a project documents of the Sacred Himalayan Landscape conservation project, which is to encompass Himalayan lands from eastern Nepal through Bhutan to India, developed by the Government of Nepal and the World Wildlife Fund, points out both the potential of, and the currently limited knowledge available for, incorporating religion and culture into environmental conservation. To work toward filling this gap, this chapter describes the global phenomenon of natural sacred places, situating it in the larger social science theoretical context, through a review of the literature and a re-analysis of empirical data that I collected in Bhutan in 2001 and 2002. I review the largely celebratory ecological and anthropological descriptions of natural sacred places to situate the beliefs and practices of sacred natural sites in social theories about space and place, and conclude by offering a tentative theoretical framework for understanding sacred natural sites. I suggest that natural sacred places serve as nodes or focal points for multiple issues facing indigenous and non-Western cultures, including sovereignty, cultural continuity and preservation of lifeways. Further, natural sacred places are places of resistance and
resilience, where local and traditional norms place humans and the landscape in particular I-Thou reciprocal relationships, through which non-human nature is respected as comprised of active, agentic beings (Tillich 1952; Buber 1958; Merchant 2003; Merchant 2005). In the I-Thou or subject-subject relationship, two (or more) beings reveal their presence through encounter in which each participates (Nelson 1983; Abram 1996). Such an encounter is quite different from the subject-object relationship, in which non-human nature is seen as subject to scientific laws, and is devoid of agency or sentience. As Carolyn Merchant has shown, the changes in ecology, commerce, technology and society during the 16th and 17th centuries ushered in the Scientific Revolution, and its mechanistic worldview that assumed the laws of nature to be consistent and unchanging (Merchant 1980: 102). Most profoundly, the change away from the organic worldview meant that matter was now inert and passive, subject to external force, rather than animated from within, and thus, nature could be technologically manipulated for human ends (Merchant 1980: 102-103). Though this perspective on non-human nature reigns broadly today, justifying an I-It, or subject-object, relationship between humans and non-human nature, in which nature becomes simply ‘stuff’ of constructing human ends, the I-Thou relationship persists in some places, particularly among practitioners of indigenous and traditional religions, uniting humans and non-human nature in a mutually reciprocal relationship that poses a direct contradiction to late modern global capitalism. It is the nature of this relationship, between people and particular places on the landscape in Bhutan, that this chapter investigates.
Throughout the world, humans respond to the subtle energies in particular places that connect them to the spiritual and sacred in the world. Chinese chi gong, Tai Ch‘i, feng shui and acupuncture all represent means by which people recognize, interact with, and channel subtle energies, within the human body and in the surrounding world. The ancient Greek, Roman, German and Nordic peoples recognized gods in their surroundings; contemporary African and Australian tribes identify the sacred in the landscape; the Japanese locate a kami spirit at the base of Shinto shrines; mountain peoples through the world revere singular peaks as homes of gods (Bernbaum 2006b). All these traditions have expressed connection between people and the spirit world, through particular, powerful places on the landscape (Hayward 2000). Powerful places may be identified by their unusual landforms, patterns of active animal use, or particularly lush or vibrant vegetation. Human visitors may experience unusually vivid dreams or other types of visions linked to the place (Krippner et al. 2003). Pilgrims may travel to such areas out of a belief in their healing or restorative powers, leaving both destructive and restorative material traces on the landscape (Bernbaum 1997; Bernbaum and Purohit 1999; Huntsinger and Fernandez-Gimenez 2000). Religious monuments are often built on ancient power places (Gyatso 1987; Hayward 2000). In contrast to a strictly materialist viewpoint that seeks to improve human well-being through the accumulation of greater material comfort, the spiritually-generated perspectives place humans within networks to which humans and other living and non-living beings contribute and respond. Such a view sees forests, rivers, and soils not simply as natural resources to be used with maximal
efficiency, for the greatest good for the greatest number over the longest time, as in the
utilitarian environmental ethic proposed by Gifford Pinchot would have us think
(Pinchot 1947/ 1993), but as beings with their own inherent value, purpose, meaning
and destinies.

In describing sacred natural sites in Bhutan, I will show how these particular
places are sites of on-going negotiation between local people and the landscape, in
which features of the landscape, and the landscape itself, are understood as active
beings whose needs and wishes must be respected. This agency of the landscape is
personified by the deities and spirits believed to inhabit the landscape. This active
engagement with and respect of the landscape and its features as dynamic beings with
their own needs and requirements stands in stark opposition to a view of landscape as
an inert canvas on top of which human history plays out. Through this analysis of the
role of sacred natural sites in village life in Bhutan and around the world, I will
demonstrate a perspective a perspective that takes the agency of no-human nature and
landscape seriously.

Sacred natural sites around the world

Sacred natural sites have been documented on every continent except
Antarctica,¹⁰ and include a variety of ecological habitats, including coastal, cultivated,

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forest, lake, montane, riparian, savanna and woodlots (Bhagwat and Rutte 2006).

Though there are religious beliefs, traditional practices, and resource use taboos that protect coral reefs and other marine areas (Dickinson 2005), this chapter will address only terrestrial sacred natural sites. Much of the research on sacred natural sites and sacred groves has taken place in India, which is believed to have 150,000 to 200,000 sacred groves (Gadgil and Vartak 1976; Gold and Gujar 1989; Chandran and Hughes 1997; Malhotra et al. 2000; Wild and McLeod 2008). Sacred natural sites are prominent in other parts of Asia, including China (Xu J. et al. 2004; Anderson et al. 2005; Xu et al. 2005; Salick et al. 2007), Japan (Kawanabe 2003), Thailand (Tambiah 1970), Nepal (Allison 2004a), and Bhutan (Allison 2004b). Mongolia is home to an estimated 800 sacred natural sites (Urtnasan 2003; Wild and McLeod 2008). The Australian Aboriginal tradition of venerating features of the landscape is well known (Chatwin 1987), and the Maori of New Zealand recognize sacred natural sites associated with creation stories and ancestor (Sole and Woods 1996). In Africa, sacred natural sites have been documented in, among others, Morocco (Anderson 1996), Zambia, Malawi and Zimbabwe (Schoffeleers 1979), Nigeria (Anoliefo et al. 2003), Mozambique (Virtanen 2002) and Tanzania (Mgumia and Oba 2003). Ghana is estimated to have 1900 sacred natural sites (Dorm-Adzobu et al. 1991; Decher 1997; Wild and McLeod 2008). The Native peoples of North and South America have also protected sacred natural sites (Reichel Dolmatoff 1976; Hughes and Swan 1986; Nelson 1989; Burton 2002; Bernbaum 2006a; Berkes 2008). Though recent collaborative workshops, organized by IUCN and the World Wide Fund for Nature
(Dudley et al. 2005; Wild and McLeod 2008) have begun to establish the geographic breadth of sacred natural sites, a full accounting of sacred natural sites around the world has not been undertaken. Nonetheless, it is estimated that there may be as many as quarter million sacred natural sites worldwide (Wild and McLeod 2008).

Sacred natural sites are protected at a variety of scales, ranging in size from a few square meters of a water spring or single rock, to dozens or hundreds of acres making up a mountaintop, forest, or entire valley. Typically, the geographical feature designated as a sacred natural site are in ‘natural’ areas, relatively undisturbed by humans or livestock (although they may be surrounded by settlements or agricultural fields). Thus, a standing grove of tall trees in the middle of a settlement area, or a lake around which there is no human development might be identified as sacred natural sites. Religious or cultural restrictions prohibit the harvest, collection or destruction of living plant and animal material from sacred natural sites. These small outposts may also serve as biological corridors within the matrix of agricultural land and human habitation (Daily et al. 2003), a function that can only become more important in the face of increasing urbanization and expansion of human settlements (Liu et al. 2003).

Though sacred natural sites have been recognized in diverse cultures throughout history (Chandran and Hughes 1997), Gadgil and Vartak (1976) brought scientific attention to the potential connections of sacred groves and biodiversity conservation with their early work on ethnobotany in India. Sacred groves and sacred mountains are the forms of sacred natural sites that have been most thoroughly
documented (Gadgil and Vartak 1976; Chandrakanth and Romm 1991; Dorm-Adzobu et al. 1991; Chandran and Hughes 1997; Ball 2000; Malhotra et al. 2000; Mgumia and Oba 2003; Anderson et al. 2005; Bernbaum 2006a; Bhagwat and Rutte 2006). Though the literature contains examples of sacred lakes, rivers, water springs, cliffs and rocks, these forms have received less attention from scholars (Kawanabe 2003; Ramakrishnan 2003; Allison 2004a; Allison 2004b; Haberman 2006). While ‘sacred groves,’ small areas of remnant (Gadgil and Vartak 1976) or anthropogenically-generated forest (Fairhead and Leach 1996) have received the most attention for their potential role in biodiversity conservation, I use the broader term ‘sacred natural sites.’ Sacred natural sites have been defined as “areas of land or water having special spiritual significance to peoples and communities” (Wild and McLeod 2008), encompassing a broader range of geographical features, including lakes, rivers, water springs, mountains, cliffs, caves, and rocks.

Sacred natural sites – or more commonly, sacred groves – have received attention from ecologists and protected areas managers, regarding their potential or actual characteristics as sites of community-based natural resource conservation, specifically as reservoirs of biological diversity (Gadgil and Vartak 1976; Chandrakanth and Romm 1991; Colding and Folke 1997; Decher 1997; Berkes et al. 1998; Malhotra et al. 2000; Bhagwat and Rutte 2006). Sacred groves may be examples of anthropologically-generated or enhanced “natural” landscapes (McDonnell and Pickett; Hecht 1993; Siebert and Belsky 2007). Elsewhere, local
human groups have been found to be integral to what we think of as ‘natural’ landscapes (Hecht 1993; Neumann 2004).

The literature on sacred groves and sacred mountains reveals an interesting bifurcation: the Indian subcontinent is the source of most literature on sacred groves, while sacred mountains feature prominently in the literature of Tibetan Buddhist cultures of the Himalayas. Although sacred groves are present in the Himalayas (Guha 1990/2000; Sharma et al. 1999; Allison 2004b; Salick et al. 2007), they receive far less attention in the Tibetan studies literature than do sacred mountains. It appears that a reverence for natural places has been carried through time, tradition and geography as Buddhism branched off from Hinduism about 2500 years ago, and spread around South and East Asia, carrying with it this respect for living beings, and the abhorrence of taking life (Ramakrishnan 1996b). Though sacred groves are widely found in India, they are less documented in the literature of the Himalayas, and even less in the Tibetan Plateau, where trees are scarce. However, in these high mountain elevations, veneration of mountains, as homes of spirits or as sites of pilgrimage, is quite common. Though the high mountain reaches may not be as rich in useful plants as the sacred groves protected in the lower elevations of India, mountains are equally life giving, as they cache the snow that feeds the rivers essential for life in the arid steppes. Mountain communities often deify the mountain from which their water flows. In recognizing that that their fields, their cattle, their very life, are utterly dependent on the mountain, they adopt a worshipful attitude toward it (Blondeau and Steinkellner 1996). In addition to venerating the source of their livelihoods, such
villagers may be imbuing the local mountain with affiliative value (Kellert 1996),
viewing it almost as a personified being, as it stands an eternal and unchanging
presence in their landscape.

Deities that are believed to inhabit the landscape are a well known feature of the everyday practice of ‘folk religion’ in Tibetan Buddhist cultures (Samuel 1993), yet the material and practical consequences of these beliefs are rarely explored in the literature. This gap becomes all the more important to explore when one considers the image of the “peaceful and enlightened environmentalist” with which Buddhists, and Tibetan Buddhists in particular, have been labeled (Huber and Pedersen 1998). Such essentialization results in a problematic attribution of uni-dimensionality and lack of agency to the group essentialized, and obscures a more thorough and nuanced reading of the situation at hand. In the case of Tibetans living inside the Tibetan Autonomous Region (TAR) of the People’s Republic of China, this may be a self-conscious and purposeful political maneuver, directed at gaining sympathy and outside support for the cause of Tibetan cause. However, when imposed unreflectively by outsiders, such essentialization does violence to the always ambiguous nature of a social group.

Origins of Sacred Natural Sites

The practices of venerating sacred natural sites are thought to date back to pre-agrarian times (Bhagwat and Rutte 2006). Chandran and Hughes (1997) suggest that hunter-gatherer societies recognized sacred sites within forests, and that these sites became more obvious with the introduction of shifting cultivation, when the sacred
sites were spared from burning. It is believed that the ancient Aryans, who migrated from Central Asia to the Indian subcontinent, assimilated the beliefs of the original inhabitants of the subcontinents, and incorporated these beliefs into Vedic Hindu tradition (Ramakrishnan 1996b). Observation of the useful characteristics of particular plants may have led to the veneration of particular species (Ramakrishnan 1996b). In Yunnan, for example, sacred natural sites have been shown to have greater concentrations of useful and endemic plant species (Anderson et al. 2005). Over time, these undisturbed sacred natural sites became repositories of important resources and seed stock, maintaining a larger number of important and useful plants than the surrounding areas (Sharma et al. 1999; Allison 2004b; Bhagwat and Rutte 2006). Within biologically-rich habitats, natural sacred sites have been shown to contain larger trees and have greater forest cover than similar randomly chosen non-sacred sites (Salick et al. 2007). Sacred natural sites are often found within, or within close proximity to human settlements, where they may be subject to incidental disturbance, from livestock, if not from humans. This, along with their location in human-dominated areas, may contribute to the sort of patchy habitat with diverse biological niches that often increases biological diversity (Molino and Sabatier 2001; Daily 2003; Daily et al. 2003).

In addition to their important biodiversity survival characteristics, sacred natural sites may have persisted because of their distinctiveness on the landscape, giving rise to increasing affiliative, or inter-relational, value over time (Kellert 1996).
Salick and Amend, et al. (2007: 702) note that “many anomalous ecological phenomena have been noticed and sanctified around Khawa Karpo” in Northwest Yunnan, China, and go on to hypothesize that these unique forms may have grown up because they were located within a protected area. However, it is equally plausible that the unique forms were venerated because of their unusual character, and sacred natural site developed around them (Salick et al. 2007). Similarly, in Bhutan and eastern Nepal, a rock or tree of unusual appearance may be designated as a sacred natural site. It is unknown whether trees of unusual form were allowed to grow because they were protected by the sanctity of the site, or whether the unusual appearance of the tree caused the sacred site to be designated as such.

Mechanisms of Protection

Venerated by practitioners and followers of Islam, Buddhism, Hinduism, animism, shamanism, and tribal religions, sacred natural sites are largely undisturbed by human activity because of various taboos that circumscribe the activities that may be carried out within or near the sacred sites. The word “taboo” comes from the traditional Polynesian system of protecting reefs, orchards, and wild plants and animals: if a resource was overexploited, unripe, or otherwise not suitable for harvest, it would be declared tabu or kapu until it had recovered (Anderson 1996). Taboos or “religious interdictions,” “declare certain things incompatible, and prescribe the separation of the things whose incompatibility is thus proclaimed” (Durkheim 1965). Taboos contribute to the maintenance of social order, by separating that which is contaminating from that which can be contaminated, in both the material and symbolic
realms (Douglas 1966). Margins, in particular, are dangerous, because it is here that
cATEGORIES begin to bleed into each other, leading to confusion and disorder: the
fundamental shape of experience can be altered in the absence of maintenance of
boundaries (Douglas 1966: 122). Taboos police these boundaries, maintaining the
symbolic and material structure of the society. A taboo differs from a law or
regulation in that it carries the seeds of its own enforcement. The violation of a
religious interdiction has grave consequences: the trespasser will suffer material
disorders as a result of divine judgment on the act, as well as social condemnation,
defamation, and punishment (Durkheim 1965). A profane being, an ordinary person,
cannot violate a taboo without “having the religious force, to which he has unduly
approached, extend itself over him and establish its empire over him” (Durkheim
1965). By crossing a line, or violating a societal precept, an individual unleashes the
inexorable consequences of pollution (Douglas 1966: 114). Overtaking a person’s
body, the religious force is hostile to the profane reality of the individual and leads to
“natural” consequences such as sickness and death.

Classifying Taboos

Taboos can be divided into several types: the most basic is the “interdiction of
contact,” which requires that the sacred and profane should not touch each other.
Other interdictions prohibit observing or speaking of that which is taboo (Durkheim
1965). In the classic formulation by historian of religions Mircea Eliade (1959), the
distinction between the sacred and the profane necessitates that religious taboos
maintain the distinctions between them. The sacred and the profane are defined in
terms of each other, and are mutually exclusive. The sacred is “the manifestation of something of a wholly different order, a reality that does not belong to our world, in objects that are an integral part of our natural ‘profane’ world” (Eliade 1959).

These taboos may require that the area remain undisturbed to avoid offending deities, gods or ancestors, or to avoid disturbing the sacred qualities of the site itself. The historical qualities of the site, as a location of burial or worship of ancestors, as the site of a significant religious revelation or hierophany, or as the location of an important historical personage or event, may dictate the protection of the area. Textual traditions or teachings from a religious authority may require protection or avoidance of a certain site (Dudley et al. 2005; Wild and McLeod 2008). Sacred natural spaces may be protected even when the surrounding environment becomes degraded, because of the grave consequences of violating religious norms, and for this reason have recently become of interest to protected areas managers and others interested in the conservation of biological diversity. For example, a study of seven villages in eastern India found that natural forests in the villages, and indeed, in the entire district, had been decimated for fuelwood and timber by the late 1960s. However, in these same villages, sacred groves were preserved, and persisted as the only natural vegetation. The groves provided important refuges for wild species amidst a depleted landscape (Malhotra et al. 2000). In the Western Ghats of South India, the most sensitive tree species, such as the dipeterocarpus, now occur primarily in sacred groves (Chandran and Hughes 1997).
In some cases, restrictions prevent the introduction of humans or their products (often meat, and ritually unclean items) into these sacred areas. Taboos may limit certain groups of people (such as women, or those who have recently tended to a deceased person) from entering. In the case of some bodies of water protected by religious taboos, nothing may be introduced into the water or collected from it (Malhotra et al. 2000). In other cases, for example, the Ganges in India, the water body is thought to possess such purifying qualities that it cannot become polluted by the introduction of any substance (Haberman 2006).

Colding and Folke (2001) organized the diversity of natural resource taboos into a typology. They surveyed social taboos, under the rubric of informal institutions, described in the literature on traditional societies, to understand the role of these taboos in conserving natural resources. Arguing that informal institutions offered an alternative to parks in protecting natural resources, and noting that biodiversity hotspots were often located in areas inhabited by traditional peoples, they classified the taboos, termed “resource and habitat taboos” or RHTs, into six categories:

- segment taboos, which regulate resource withdrawal by a particular group of people, including specific food taboos;
- temporal taboos, which regulate access to resources in time;
- method taboos, which regulate methods of resource withdrawal;
- life history taboos, which regulate withdrawal of vulnerable life history stages of species;
- specific-species taboos, which offer total protection to species in time and space; and
- habitat taboos, which restrict access and use of resources in time and space (Colding and Folke 2001).
The final category of taboo – the habitat taboo – appears to be the most related to practices that protect sacred natural sites. However, the other five taboos cannot be always be separated neatly from the habitat taboo. For example, the temporal and method taboos are often interrelated with habitat taboos (Allison 2004b). Colding and Folke (2001) point out the discrepancy between the observations of ethnographers, who note that cultural practices have consequences for natural resources, and the reasons offered by local people in interviews that do not address the natural resource consequences of their belief. This gap points out a major divide in the literature around perceptions of natural sacred places: ecological studies tend to focus on the material effects, while anthropological, religious, and ethnographic studies focus on religious beliefs or practices, with less attention to their material effects. Political ecology is a relevant framework for reconciling these perspectives, as it places local resource dilemmas in larger social, political and economic currents. In this case, I bring together the two strands of literature on perceptions of the sacred in the landscape in the Himalaya. Anthropologists and scholars of Tibetan studies have thoroughly described the beliefs and practices of Himalayan peoples, together with their textual and canonical historical referents. Though most of these studies recognize the intimate relation between peoples of the Himalayas and their landscape – and even reflect upon the tendency to perceive the landscape as animated – fewer of these studies have investigated the material consequences of Himalayan religious beliefs on the landscape. Uniting the anthropological and ethnographic work on Tibetan Buddhist societies of the Himalaya with theories of place and space, this
chapter attempts to offer a tentative theoretical understanding of sacred natural sites in the Himalaya.

**Explanatory Theories**

Given the diversity of the taboos and societies that they have surveyed, Colding and Folke conclude “that no single theory can explain why RHTs exist in traditional societies” (2001). Indeed, a universalizing theory could do violence to the historical and geographic specificities of local cultures. At the same time, a global phenomenon as widespread as the protection of sacred natural sites deserves some sort of over-arching explanatory theory. Most studies have appropriately focused on local practices and outcomes, without leaping into generalization. In recent decades, a scientists have published a number of ecological studies identifying new locations of sacred natural sites, and analyzing the ecological consequences of such practices. These studies have offered sacred natural sites as an addition to or replacement for parks and protected areas – a sort of indigenous community-based natural resource management. For example, the taboos that protect sacred groves rich in useful plants may have emerged as a result of the utility of these groves, which served as *in situ* germplasm reserves (Sharma et al. 1999; Bhagwat and Rutte 2006). However, in focusing on the local dynamics and material outcomes of these practices, researchers have shied away from the larger questions about the meaning of such practices for local communities and for the larger global community.

Ecological studies that see sacred groves as *in situ* germplasm preservation centers, a function that they may well serve, do not make connections to larger social
theories about taboos. For example, the conclusion that sacred groves have been set aside to preserve the germplasm of culturally or economically important plants contradicts Durkheim’s assertion that taboos are purely religious and “are not united by external bonds to the different supports on which they alight” (Durkheim 1965). The materialist explanation for sacred groves also contradicts Eliade’s contention that the sacred and the profane are maintained through practices that police the boundaries and serve to heighten the distinctions between the two (Eliade 1959). These hypotheses need not be mutually exclusive, but we may gain greater understanding in the phenomenon of sacred groves and sacred natural sites by bringing together ecological and social theory. As Reichel-Dolmatoff (1976) observed, a cosmology can develop to include beliefs that are reinforced because of their ecologically-adaptive outcomes. The addition of social theories of taboo, place and space to discussions of sacred natural sites adds another layer of understanding to this ubiquitous cultural phenomenon.

*The Value of Sacred Natural Sites*

Preservation of cultural and biological diversity have been shown to be related (Kellert 1996; Posey 1999). Cultural and biodiversity are inter-related and mutually constitutive (Stevens and De Lacy 1997; Posey 1999; Schaaf and Lee 2005). Cultural diversity maintains a diversity of languages and worldviews. Vocabulary shapes the way we can see, experience and describe the world around us, and with the loss of cultures and languages, we face an increasing poverty of ways of interacting with the world (Holthaus 2008). Just as the omniscient ‘view from no place’ is an
impossibility (Haraway 1988), similarly “no one culture or language can provide us with a comprehensive, all-seeing worldview” (Holthaus 2008: 40). We depend on the multitude of languages, and worldviews that they shape, for different perspectives on our world and our place in it. Just as the current mass global extinction of species leads to a “death of experience” (Kellert 1996), the loss of languages and cultures leads to a death of perspectives, and with that loss, a loss of potential alternatives (Gadgil 1987; Maffi 2005).

Religion serves as both a possibility, or method, and an interest, or motivation, for preserving the health of an ecosystem. Simultaneously, religious and cultural survival depend on the very land that they preserve. Many traditional religious practices and beliefs are linked to specific natural elements, such as specific herbs for rituals, and could not persist without their physical bases. In large part, the ability of traditional cultural and religious practices to protect the land rests in a specific group’s close relationship and long-term tenure on the land (Gadgil et al. 1993). Among the best examples of soil conservation – the hill-terraces of the Himalaya – have been created by communities who are deeply invested in the long-term health of their land and have no concern about alienation of resources (Shiva 1996). The transformation of land into alienable property exacerbates social and religious dislocation. The changes wrought when land becomes alienable and families are dislocated, realizing that they will not farm or hunt the same piece of land until the end of time, reduce the determination to protect the land and to worship the gods that reside in it. Similarly, where sacred groves have been protected for hundreds of years, taboos against
harvesting particular species grow out of a people's interaction with a particular environment. Long-inhabited places are haunted by history, the deep-seated knowledge that enfolds many previous generations with a highly localized knowledge of the landscape, blending history, livelihood and spirituality. This sort of “doubly living landscape,” in which geographical forms impart an additional spiritual meaning beyond the material subsistence they offer (Tshewang et al. 1995), is common in the Himalaya.

**Threats and Challenges to Natural Sacred Places**

However, like traditional beliefs and practices around the world, beliefs and practices around sacred natural sites face some degree of challenge from what has been termed the ‘march of the mono-culture’ (Norberg-Hodge 1991). While Western capitalist material culture is by no means monolithic, this phrase highlights the commonalities shared by places where highly-technological Western cultural norms dominate. Western cultural imperialism — with its interconnected trade regimes, globally-distributed entertainment empires, and neoliberal aid policies — tends to overpower and overshadow the traditional institutions of developing countries. The globalized economy and rationalized systems of governance, with practices of legibility, control and territorialization, have contributed to the break down of indigenous, local methods of natural resource management in developing countries, some of which are based in religious and spiritual beliefs and ancestral connections with the land and its species. This argument is not seeking to perpetuate the caricature of the ecologically-noble savage who lives in perfect harmony with the natural
environment. Rather, I concur with Gadgil et al. (1993) in contending that, through long-term interactions with and observation of their local surroundings, diverse local peoples and cultures have developed methods of managing their natural resources that have local advantages. These methods can be disrupted by institutions and processes based far beyond the local region.

Government nationalization of forests, and privatization of land by elites, can lead to loss of customary rights to forests, creating obstacles to the maintenance of sacred groves (Bhagwat and Rutte 2006). The delicate balance between belief and need that protects sacred groves can be disrupted with the introduction of Western notions of progress and ownership. The introduction of Christianity, which locates the god and salvation beyond the material world, can interrupt practices related to propitiating worldly gods, and thus the maintenance of sacred groves. Changes in social and economic conditions, including migration, population growth, academic education, and integration into the global economy can shake traditional religious and spiritual beliefs, leading to decreasing engagement with traditional practices (Bruce et al. 1993; Sharma et al. 1999; Anoliefo et al. 2003; Bhagwat and Rutte 2006). Cultural assimilation with dominant surrounding cultures and increasing connectivity through infrastructure improvements and telecommunications both contribute to the erosion of beliefs and practice (Sherpa 2005). New residents of an area may unwittingly trespass into a sacred natural site, and, experiencing no retribution, contribute to a decline in belief about the power of the place. Taboos may be relaxed, foreign visitors or outsiders may disregard or mock taboos, young people may lose the faith. The
cultural norms and practices that maintain sacred groves and other sacred natural sites tend to be less widely practiced by the younger generations, educated in academic settings and prepared to participate in global capitalism (Fisher and Hillary 1997; Allison 2004a). Bhutanese intellectuals speak of the ‘cultural cringe’ that occurs when people are seduced by the shiny lifestyles they see on cable television (Dorji 2001), and suggested that young people know less about the traditional beliefs, because they receive academic, rather than religious, education (Khenpo Phuntshok Tashi 2001).

The international NGO sector is making an effort to gain broader understanding and recognition of conservation effects of sacred natural sites. Noting the degree to which religious taboo protects some sacred natural sites, international organizations involved in biodiversity conservation have become interested in the potential of sacred natural sites to serve as a mechanism of indigenous community-based natural resource management (CBNRM). Conservationists have begun to view sacred natural sites as possible sites of “borderless and boundary-less” conservation (Chewang 2003), which are protected by “social fencing,” or community-enforced norms (Drijver 1991), which have the potential to reduce personnel and patrolling costs for park managers. Building on the 2007 UN Declaration on the Rights of Indigenous People, and the 1996 IUCN Resolution on Indigenous People and Protected Areas, the IUCN Task Force on Cultural and Spiritual Values of Protected Areas and the UNESCO Man and the Biosphere Programme produced a set of guidelines for protected areas managers, to support the conservation and preservation of sacred natural sites around the world in conjunction with local and indigenous
people and faith groups (Wild and McLeod 2008). These guidelines encourage land managers to work collaboratively with local people and to respect local traditional beliefs that may contribute to biodiversity conservation. They were the result of a number of international meetings on sacred natural sites that occurred in Kunming, China in 2003 (Lee and Schaaf 2003), at the World Parks Congress in Durban, South Africa in 2003, and in Tokyo in 2005 (Schaaf and Lee 2005). Built on numerous case studies of sacred natural sites around the world, these guidelines may help remove obstacles to their maintenance, and encourage land managers to consider approaches to conservation that extend beyond the scientifically materialist.

**Sacred places in the Tibetan Buddhist Himalaya**

The Tibetan Buddhist cultures through the Himalayas and Tibetan Plateau – including Tibet, Mongolia, Bhutan, and parts of northern Nepal and India, and parts of southwestern China – engage in a number of practices that highlight the sacred or spiritual aspects of the landscape. These include identifying particular places on the landscape as being inhabited by deities, sacralizing natural places through their association with historical religious figures, and conducting pilgrimages through the landscape to venerate deities or retrace the paths of historical figures.
MAP KEY

Historic Tibet as claimed by Tibetan exile groups

Tibetan areas designated by the People's Republic of China (PRC)

Tibet Autonomous Region: "Tibet," according to PRC (actual control)

Claimed by India as part of Aksai Chin

Claimed by PRC as part of Tibet Autonomous Region

Other areas historically within Tibetan cultural sphere (note that Mongolia is not shown on this map.)

In addition, beliefs in sacred hidden valleys, or beyul (Tib: sbay yul), and in hidden religious treasures, or terma (Tib.: gter ma), testify to an aspect of the landscape beyond the mundane and material. Each of these practices has multitudinous forms and aspects, but all ground Tibetan Buddhist culture and belief in particular geographical places. Beyond recognizing sacred natural sites, Tibetan
Buddhists mark off the landscape with a variety of religious symbols and structures, such as prayer flags, chortens, and monasteries.

*A Brief Introduction to Tibetan Buddhism*

The historical Buddha, Gautama (approx. 563-483 BCE), now known as Sakyamuni, was born to a wealthy local ruling family in India about 2500 years ago (Ray 2000: 68-69). Gautama lived in the lap of luxury, being groomed to take over the throne and protected from any encounter with sickness, suffering and death. Feeling that something was missing, he eventually left the palace, and encountered an old man, a sick man and a corpse. Shocked to discover the suffering of life, he found his previous life of luxury to be lacking in merit, and vowed to take up an ascetic spiritual path. After years following the most ascetic practices, he found them, too, to be unsatisfactory, as none of his teachers have found liberation (Ray 2000: 69). He realized that the true path out of suffering lies in the middle way between luxury and asceticism. Through his determined mediation, he came to the truth about the nature of suffering and the potential to end suffering (Gyatso and Thupten 1995). As the general tenets of Buddhism were described in Chapter 2, I will focus here on attributes specific to Tibetan Buddhism.
The fundamental insight of Buddhism — that genuine freedom and liberation are achievable only when habitual ignorance and misapprehension are wiped away (Gyatso and Thupten 1995) — mirrors the modern social studies of science that examine the social construction of knowledge to reveal its inherent politics. Similar to the manner in which Buddhist observation of the mind, or meditation, patiently examines the inner workings of the mind to discover how it constructs its understanding of the world, social studies of science follow scientists, and other arbiters of knowledge, in action (Latour 1987). Further, the Buddhist insight about our habitual misapprehension of reality parallels the modern understandings of the obscuring tendencies of hegemonic discourse, and the necessity of discursive deconstruction (Escobar 1999; Forsyth 2003).
Buddhism is divided into the Individual Vehicle, or Hinayana, of which the Theravada system is practiced in Sri Lanka, Thailand, Burma, Cambodia and other countries of Southeast Asia, and the Universal Vehicle, or Mahayana, as practiced in Japan, Tibet and parts of the Indian subcontinent. Mahayana, or the Universal Vehicle, aims to achieve release from suffering for all beings, whereas the Hinayana focuses on self-realization (Gyatso and Thupten 1995). In Mahayana belief, all humans – in fact, all sentient beings – are capable of full enlightenment, just like Buddha Sakyamuni. The bodhisattva is an enlightened being who strives for enlightenment for the good of all beings (Ray 2000: 68). Thus, although some have suggested that Buddhism, and indeed many world religions, are too “otherworldly” focused to have insights applicable to the environmental crisis, the bodhisattva figure could almost be an exemplar for the environmental movement: a figure who recognizes that the salvation of one is wrapped up in the salvation of all.

The Tantric Vehicle, or Vajrayana, falls within Mahayana, and is considered, by Tibetans, to be the most efficient, but also potentially dangerous, route to enlightenment. Vajrayana rituals and meditation techniques must be undertaken under the guidance of an advanced master, known in Tibetan as a lama, to avoid injury. For this reason, Vajrayana has also been known (by outsiders) as Lamaism or Lamaistic Buddhism. Though a lama is a religious teacher, the title does not necessarily imply ordained monkhood. The lama may be the leader of a monastery, who has achieved the highest levels of ordination, but he may also be a hereditary lama, or a reincarnated
lama (known as a Rimpoche ("precious gem")) who has returned to the realm of samsara for the good of all sentient beings. Vajrayana, or Tibetan, Buddhism is practiced throughout the vast region that was once Tibet and its borderlands, and now encompasses the Tibetan cultural sphere (see Figure 1). Vajrayana is further divided into four schools: the Sakya, Nyingma, Kagyu and the Gelug, or "Yellow Hat", led by the Dalai Lama, which has dominated Tibet for several centuries.

Buddhism spread to Tibet sometime before the seventh century CE, and arrived in the Himalayas from Tibet, in the person of Guru Rimpoche, a saint within the Nyingma school, also known as Precious Master, or Ugyen Rimpoche (Skt: Padmasambhava), and other great masters who built monasteries on the south slopes of the Himalayas to spread the Dharma. In Tibetan Buddhist cosmology, sentient beings occupy six levels, in ascending order: hell beings, hungry ghosts, animals, humans, demigods, and gods. All these beings are subject to rebirth within the cycle of samsara. From its Indian roots, Buddhism adopted the Indian tradition of deities guarding the ten directions (four cardinal directions, plus intermediate compass points, and above and below) (Boord 1994). Additionally, each bit of land is considered to be under the guardianship of a nāgā king in charge of all those who dwell there, down to the minutest insects (Boord 1994).

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11 Shingon Buddhism in Japan, and Newar Buddhism in Nepal are also forms of Vajrayana Buddhism that differ in practice from Tibetan Buddhism.
At the ultimate level, all physical places are coextensive with the human mind in the Vajrayana, or Tibetan Buddhist, school of thought. At the level of ultimate reality – the truth of emptiness that lies behind all appearances – the surrounding world is a reflection of the state of mind. In a famous parable, an adept asked why his master, the Buddha, was relegated to this unpleasant world, with its thorny branches and rocky paths, when enlightened beings were known to reside in paradise. The Buddha replied that those discomfiting appearances reflected the impurities of the adept's own mind, but in touching the earth with his toe, the Buddha caused the earth to appear more splendid than any heaven (Boord 1994).

Similarly, the Jataka Tales, ancient fable-like morality tales describing some of the Buddha's previous incarnations, show that all of existence is a spiritual path and that no life form has existence outside the Path (Martin 2000). Each being is endowed with the ability to feel compassion for others in its own way, and animals have their own lives, karma, tests, purpose, aspirations (Martin 2000). The images point to a conception of the natural environment and of human nature that stands at odds with the dominant Western narrative. In this depiction, the dominant paradigm is not competition and survival of the fittest, but cooperation and compassion, in an interdependent web of life. Positing such a relational ontology at the foundation of our understanding of nature, and of the ways that human beings can and do interact with nature profoundly changes both the possibilities for understanding nature, and the ways that we might handle the knowledge gained. As we have seen in earlier
chapters, feminist theorists have argued for situated knowledges and relational ontologies in analyses of nature and culture (Haraway 1988). Here we see that relational ontologies are already extant and operative in the lives of Tibetan Buddhists, and therefore shape the ways that nature/culture dilemmas are addressed in these areas.

Marking the Tibetan Buddhist Landscape

The teachings of Buddhism suffuse everyday life, carried by both lay priests and ordained monks in monasteries and temples that dot the hillsides. Monasteries and temples are but two of the types of ritual structures demarcating the landscape. Prayer flags hang from poles, mountaintops and bridges, and reliquaries known as *chorten* or *stupa* containing sacred relics, often marking promontories, mountain passes, or village boundaries.
Travelers on mountain paths pass long stone walls or large singular rocks known as mani walls (for the prayer *Om Mani Padme Hum* – most commonly translated as “praise to the jewel in the lotus” – frequently carved on them); and imposing monasteries, situated to survey the surrounding valleys. These religious markers serve to bring the Buddha Dharma (teachings) continually to the forefront of the practitioner’s mind. They also create cultural and religious legibility, organizing the land surrounding scattered villages and hamlets in a way that puts the human residents and the larger forces of wind, weather, and landscape into relationship. Prayer flags on peaks and poles contain written prayers that are carried by the wind to the gods. Chortens at promontories and mountains passes serve as obvious landmarks for weary travelers on precarious mountain trails. Monasteries located above the surrounding valleys similarly serve as landmarks and organize the landscape into a mandala, or circular diagram used to focus concentration in meditation or
visualization of specific Buddhist deities, centered around the monastery. In light of this religious organizing principle, Ramble (1999: 28-29) has suggested that

all sacred geography does violence to nature by reorganizing it in ways that are congenial to human terms of reference... Not only is polity irrelevant, but the natural landscape is all but annihilated by the mandala that is imposed, while autochthonous gods are brought into its service.

Although Buddhist sacred geography does reorganize the landscape along human terms of reference – as does every other form of human geography – Ramble overlooks the potentially salubrious effects on the landscape offered by the incorporation of autochthonous deities. The Tibetan and Himalayan religions of Buddhism and Bon did not eliminate these pre-existing deities, as for example, Christianity did in Europe (Schneider 1991). Rather Tibetan Buddhism and Bon incorporated these deities into their pantheons and practices, creating a mechanism that mediates the relationship of people to their landscapes.

Furthermore, it is likely that many of the religious structures that Ramble claims do violence to the landscape are built on sites originally identified as sacred or spiritual through their association with deities and/ or historical religious events (which themselves may have occurred at sites known to be spiritually powerful). Throughout the world, sites felt to have special or unusual power – through observation of their landforms, patterns of animal use, or particularly lush or vibrant vegetation – are designated as sacred. New religions tend to build their monuments on these places, co-opting the sacredness and enfolding the worshippers of that place.
(Gyatso 1987; Hayward 2000). In the past, churches were often built in recognition of the energies of such places (Hayward 2000). Similarly, *chortens* are often built to pin down destructive spirits, and smaller structures, known as *lu khang* (Tib. *klu khang*) or *ney khang* (Tib. *gnas khang*) are built to house spirits, keeping them happy and placated within farms and fields. By providing the spirits clean and respectable shelter, people are able to stay in their good graces and gain continual boons for their harvests and well-being.

**Figure 3-4: Lu khang near agricultural fields in Trashigang.**

*Types of sacred natural sites*

Sacred natural sites range in size from a few square meters to dozens or hundreds of acres, and may be associated with historical religious figures, with pilgrimage sites, or with deities. Observance of sacred natural sites reflects both
canonical Buddhism, by venerating historical events associated with religious masters and particular landforms believed to offer soteriological salvation from this life, and indigenous spirituality, in honoring spirits – such as mountain deities and protector deities – believed to inhere in the landscape (Samuel 1993; Blondeau and Steinkellner 1996; Karmay 1998). The autochthonous spirits and deities of the land are believed to be the original owners of the land who pre-existed Buddhism. When Guru Rinpoche spread Buddhism throughout the Himalayas in the eighth century, establishing the Nyingmapa ("old") school of Tibetan Buddhism, he converted these spirits and deities to Buddhism and made them sworn protectors of the Dharma. The spirits that inhabit natural features of the landscape may or may not be enlightened. Most are still caught up in samsara, the earthly cycle of suffering, death and rebirth, from which enlightenment or nirvana offers an escape.

Some scholars have associated the practice of venerating local deities with Bön (for example Ura 2001b), another religious tradition of the Tibetan realm believed to pre-date Buddhism. However, Samuel has convincingly argued that the spirits and deities are part of the ancient nameless religion of Tibet – a system of cultural beliefs and practices with spiritual and material aspects (Samuel 1993: 11-12). While the ritual practices are different, the philosophy, cosmology, and practice of Bön share an affinity Tibetan Buddhism, and the two religions have mutually influenced each other over the centuries. Today, some see Bön as a fifth strand of Tibetan Buddhism
(Tshewang et al. 1995) and Bön practitioners are found throughout Tibet and the Himalayas.

In Himalayan village perception and practice, it is difficult to disentangle the strands of Buddhism, Bön and the ancient nameless religion: the formal teachings and proscriptions of Buddhism work together with indigenous beliefs in protector deities and mountain deities (Samuel 1993; Karmay 1998; Huber 1999b). Understanding the syncretism of Buddhism, Bon, and animism has troubled Western scholars, without seeming at all problematic to Tibetan Buddhists. According to Samuel (1993),

For Tibetans, the universe in which they live is seen as capable of multiple interpretations, which are not necessarily exclusive. Rationality is not, as it tends to be in contemporary Western society, the single dominant mode of legitimate discourse (p. 23).

This insight is essential for understanding the points that follow. In my interviews throughout Bhutan, respondents seemed to have no problem holding seemingly contradictory positions in their minds and actions. For example, they can profess to be highly devout, implying that they engage in regular practices of prayers and offerings, and also emphasize the role of the gomchens, local lay priests, who provide daily or weekly prayers and offerings, serving as representatives of the entire village. Several pointed out that even if they didn’t have time to do prayers and offerings at home, the gomchen would take care of these routine matters, ensuring continued prosperity for the village. Numerous other examples will arise in the discussion that follows.
Historical Events and Sacred Natural Sites

Stupas and shrines mark every major location associated with the Buddha’s life: the sites of his birth, his enlightenment, his major teachings and miracles, and his death, and are sites of pilgrimage by devotees. In some locations, believers note body prints and footprints preserved in rocks where the Buddha or another great sage walked or meditated. Body prints and foot prints follow an ancient method of representing the Buddha: the earliest representations were of only the Buddha’s footprints, because it was believed that his holy person could not be conveyed by any artist, as the Buddha was one for whom “the state of ‘thusness’ has been reached” (Boord 1994: 8). For example, in Bhutan there are numerous places where Guru Rimpoche, the 8th century teacher who brought Buddhism to Bhutan, is said to have walked or meditated so profoundly as to have left imprints in the rocks. The most famous of these is Taktsang, or Tiger’s Nest, a monastery high on a cliff wall near Paro, in western Bhutan, where the Guru is said to have landed when he arrived on a flying tiger (whose form his consort Yeshe Togyal had taken to assist him). The Guru meditated in a cave which the Takstang monastery now encloses, and is said to have left a body imprint where he sat. The sites of his meditations – including Kurjey (“body print”) Lhakhang and Gom Kora – are highly revered pilgrimage sites more than a millennium later.
Similarly, in the Buddhist highlands of Nepal, invocations by religious leaders carry powerful instructions centuries after their issuance. For example, in the Khumbu district near Mount Everest, Lama Sangwa Dorji introduced Buddhism at the end of the 17th century by constructing gompas (monasteries) at Pangboche, just south of Everest, and Thame in Khumbu. The Sherpa residents of this area believe that the large juniper trees found around Pangboche gompa sprouted when the lama pulled out some of his hair and threw it on the ground. Other gompas in Khumbu then emulated the practice of nurturing forests around the gompas. In Phortse, in the center of Khumbu, the dictum of a high lama contributed to the preservation of the forest.
surrounding Phortse. An ancient lama performed a ceremony in the forest, sprinkling around blood from his own scalp and requiring that the villagers preserve the forest into posterity, or face misfortune. To this day, villagers protect the forest, collecting only leaf litter from it. Forests surrounding the monasteries at Laudo, Thame, Tengboche, Namche in the Khumbu are considered religious, and monk-caretakers at the monasteries will not allow people to cut trees. In community planning meetings throughout Khumbu in early 2004, many people expressed a desire to establish or enhance forests around the gompas (Allison 2004a).

_Spirits, Deities and Sacred Natural Sites_

In the Tibetan Buddhist Himalaya, villagers perceive the existence of nature-dwelling spirits and deities, whose requirements prohibit the use of certain natural resources. Here I distinguish between “protector deities” believe to be the powerful original owner or guardian of the entire area, and autochthonous spirits, whose abodes are more localized. As owners of rocks, trees, lakes and river sections where they are found, the deities resent intrusion or disturbance by human inhabitants, and are thought to retaliate against transgressors by causing illness, wild weather or other misfortune. Resource extraction is prohibited in the homes of the deities. Because of these beliefs, villagers may avoid the places where deities are believed to reside. The deity beliefs and their associated prohibitions protect areas rich in useful resources, located in close proximity to human settlements (Allison 2004b). Without some sort of protection, these areas might have been cleared for homes or paddy fields long ago.
Following an ancient practice common to Buddhism during the summer, Bhutanese monks and other devoutly religious people will not till the soil, or even walk outside of their meditation places, for fear of injuring the insects, earthworms, and other living beings who are active during the summertime. Instead, others bring them food and necessities. While the lay people who provide food may also accrue sin by accidentally stepping on an insect, it is considered less serious for them than for avowed monks. In addition, lay people abstain from working in their fields on the four holy days each month as the sins they cause on these days will be magnified.

In the Himalayas, the naga, or lords of the earth and underworld, are known as lu (Tib. klu) and are particularly associated with marshy areas, water springs and large old trees. A number of other local and protector deities and spirits, known by different names across the mountains, including tsen, gyalpo, yul lha, key lha, tsoman and dud, are also believed to inhabit various places in the landscapes. The tsen, neypo and yul lha are protector deities, who oversee entire valleys or regions are found on rocky cliffs or mountaintops, while the lu, dud, and tsomen are localized, often being found in water springs or lakes. The local and protector deities of Bhutan, and their effects on the landscape, will be discussed in greater detail below, in “Sacred Natural Sites in Bhutan.”

Mountains, in particular, may be identified as homes of local or territorial gods, or they may be associated with deities of the Buddhist pantheon and become
sites of pilgrimage. These designations are qualitatively different. As Diemberger (1998) explains:

[i]n the one case [of the mountain as home to territorial god] the sacred mountain is part of an animated subject, a perception of nature with which human beings interact and as a result of which it is difficult to see the abode of the deity and the deity itself as two separate entities. In the second case, that of the gnas ri [Tibetan: “sacred mountain], the foundation upon which its sacredness is based lies in a discourse which transcends the features of the world as they are perceived by man [sic]. The holy mountain is a site/ object for ritual practice on a soteriological path to liberation (p. 52).

Thus, in the case in which a mountain serves as the home of a territorial god or yul lha, the mountain and the god become conflated, and the mountain is treated as though it were the god. The veneration of the yul lha, gods of the mundane world, is a practice believed to extend back to the mythical founder of Tibet (Karmay 1998).

On the other hand, the gnas ri (pronounced “ney ri”) mountain is a site for spiritual practice that will help the Buddhist practitioner gain release from this life. The term implies a mountain where spiritual adepts have lived and studied, and have perhaps left sacred texts for discovery at a later date (Karmay 1998). Traces of these spiritual masters, such as footprint on rocks, may remain (Karmay 1998). As such, the nature and qualities of the mountain qua mountain become less important, while the mountain’s role in Buddhist discourse gains ascendance. As Karmay (1998: 47) notes, “It is a common practice in Buddhist meditation that one mentally transforms the physical environment in which one meditates into a supernatural abode.” It is here that we can see the importance of Ramble’s (1999) claim that “all sacred geography does
violence to nature by reorganizing it in ways that are congenial to human terms of reference” (p. 28). The mountain that is the gnas ri no longer exists as a normal mountain for Buddhist practitioners. Rather it is transformed into a site along a journey toward liberation, analogous to the way that for the Christian, the bread and wine of Communion are transformed into the Body and Blood of Christ. These things no longer exist in their usual material state, having been completely transformed into ritual objects. To the extant that the mountain ceases to exist as being in and of itself, Ramble’s claim about the violence of spiritual geography is accurate. However, the transformation into a site of potential liberation usually causes Buddhist practitioners to treat the physical place with great respect, and to avoid trespassing in the area except for the purpose of religious practice. In this way, the transformation of the mountain to a soteriological site, on the path to liberation from the earthly realm, causes its physical nature to be treated with respect. However, pilgrims’ heavy used of such mountains can lead to degradation, as well. Badrinath, the major Hindu pilgrimage place in the Indian Himalaya, near the source of the Ganges, became degraded and deforested from heavy use. Restoration efforts built on the spiritual authority of the Chief Priest of Badrinath, who blessed tree seedlings and encouraged pilgrims to plant seedlings to demonstrate their devotion (Bernbaum 1997; Bernbaum and Purohit 1999).

Secret Valleys and Hidden Treasures: The Beyul and Ter Traditions

In addition, the Tibetan Buddhist tradition speaks of entire sanctified valleys within the Himalaya called beyul (Tib. sbas yul), to which the elect will escape during
times of struggle. These places exist on both the material and spiritual levels. As currently existing, geographical places, which often have difficult and obscure access points (Sherpa 2005), they include the Khumbu and Rowaling valleys of Nepal; Pemako in southeastern China (Baker 2004; Sherpa 2005); the Bumthang valley of Bhutan (Tshewang et al. 1995); an area on the Tibet/Nepal border (Diemberger 2008 [1993]); and the area of Sikkim below Mount Kangchenjunga known as Dremoshung (Ramakrishnan 1996a; Balikci Denjongpa 2002; Sherpa 2005), among others. According to the tradition, Guru Rimpoche, the great saint who introduced Buddhism to Bhutan during the eight century, hid these valleys throughout the Himalayas, as sites of refuge in future times of catastrophe and persecution (Sherpa 2005). The beyul are protected by secret doors, accessible only to adepts, which will open at the appropriate time, transporting practitioners to another realm of existence. Because of their association with religious figures and texts, existing valleys identified as beyul tend to be treated with respect. Among the human communities in valleys identified as beyul, Buddhist tenets – including the prohibition against taking life – are followed more assiduously than outside, though this practice, like many other religious practices, is fading (Sherpa 2005). Historically, meat was unavailable in such places (because it requires killing animals), and rituals to appease local autochthonous deities were performed when ever wild land was brought under human use (Sherpa 2005).

These beyul are described in secret texts known as terma (Tib. gter ma), hidden within the ground, as well as in rocks, caves, trees, temples, and lakes by enlightened sages that are discovered and unearthed by tertön (Tib. gter ton), or
treasure revealers, at appropriate times to share enlightening messages with Buddhists.

*Terma* take three primary forms: religious objects, such as statues, bells, and daggers; religious texts; and medicinal substances (Tshewang et al. 1995). Guru Rinpoche hid the *terma* in the eighth century to ensure that the doctrines of Buddhism did not fade away or become muddled by mistaken interpretations. Samten Karmay, (1998) a historian of Tibetan Buddhism and Bon, argues that

This constitutes the driving force of their [Bonpo and *rNyingmapa*] religious movements, a process that has never ended. It is the source of the vitality of their continuing belief in sacred places, for these sites were chosen by their early saints for the concealment of a major part of their scriptures that are either “excavated” from them or in part remain still hidden (p. 48).

Although fieldwork in Bhutan in 2001 – 2003 did not find any evidence of awareness of *terma* on the part of local Bhutanese villages, in part, no doubt because only highly accomplished *tertons* can discover these sacred treasures (Allison 2004b), the *ter* tradition is very much alive in the Tibetan cultural realm. Hanna describes accompanying a spiritually-accomplished female *terton*, who was also known to be a reincarnated *dakini*, or spiritual guide, on a pilgrimage in eastern Tibet (Hanna 1994). During the pilgrimage, the *terton* dug into an oddly-shaped rock, and revealed two *terma*: a small seated figurine of Amitayus, the Buddha of long life, and a ritual dagger known as a *phurba* (Hanna 1994). After their discovery, *terma* are kept under the watchful care of monks in temples or monasteries so that others can view them and experience their transmission of the *Dharma*. Similar to the prophets of other religious traditions, the *terton* maintain the liveliness of the religious tradition into the present.
In addition to material artifacts, _tertons_ may also reveal written spiritual texts, prayers, or “mind terma” (spiritual revelations) that add further insight into the teaching of the Buddha. Through witnessing the demonstration of the revelation of the _terma_, Buddhists strengthen their faith in the Dharma, and recommit themselves to their spiritual practice (Hanna 1994). Through the revelation of these objects, present-day practitioners are connected with a long lineage of Buddhists, whose roots go back to Guru Rimpoche. Though Hanna does not reflect on the environmental consequences of this experience, it seems likely that the experience of witnessing as these religious treasures were pulled from the rock – or even hearing about this experience later – would generate a broad feeling of reverence for the natural features in which such spiritual treasure might be found. Although average people are not in position of the spiritual skills required to locate and produce these treasures, they might have greater reverence for the places from which these relics of their religion could be found. As Chris Butters notes

Thus the entire landscape bears marks and memories; the Termas could also be seen more generally as specific manifestations of the living landscape itself, of the forces available to those whose attitude to their environment is one of constant mindfulness and deep reverence (Tshewang et al. 1995: 13).

Thus, the _terton_ is one whose attitude is one of “constant mindfulness and deep reverence.” The _terton_ uses the habits of mind developed through meditation and other practices to tune in to the signs and omens of the “doubly living landscape” that point to the location of the hidden treasure. Rather than behaving in a miraculous
way, the *ter ton* is displaying a type of finely-tuned mind-body-world mastery that is available to all who follow the Buddhist teachings and practices (Tshewang et al. 1995). Further, the *ter ton* has also connected with the historical tradition that extends from Guru Rimpoche into the present day, using his or her insight to bring forth religious teachings and relics that will reinvigorate and inspire the religious tradition in the present day.

**Building on Buddhist Concepts for Biodiversity Conservation**

The *beyul* and *ter* concepts both provide solid foundations for landscape-level conservation based on traditional religious beliefs. *Beyul* are well-defined landscapes, with borders demarcated by the surrounding mountains. With their historically low human populations due to extremely harsh living conditions, and their altitudinal gradients, *beyul* valleys tend to have wide range of ecological niches and high biodiversity. These cultural and geographical factors have led NGOs to develop a landscape-level conservation initiative that build on the *beyul* concept (Sherpa 2005; Chettri et al. 2007; Lohani n.d.). This transboundary initiatives – spanning parts of Bhutan, India and Nepal – works across an area encompassing 40 spoken languages (Government of Nepal (GoN) et al. 2007). Though the project’s name – The Sacred Himalayan Landscape – is evocative, particularly for Westerners, for whom the Himalayas, and the associated notion of Shangri La, have long gripped the imagination (Bishop 1989; Hilton 1998/1960; Baker 2004), the degree to which religious and spiritual values of the landscape are incorporated into conservation activities is not clear. Project documents assert
Another challenge for the 'culture and nature link' is that less is known [sic] about the indigenous people, their culture, rituals and practices and relationship to nature. There is [sic] very few documentation of these and therefore awareness on how culture can be used as a tool of conservation largely lacks. Due to the same reason, approaches to cultural approach to conservation are still applied vaguely and remains fuzzy (Government of Nepal (GoN) et al. 2007: 9).

This statement – by practitioners of religious and culturally-based conservation – points to the need for additional research into the mechanisms and efficacy of such strategies, along with further development of ways to connect conservation methods based on Western biophysical science with those based in indigenous beliefs and practices. Current “Priority Actions” of the Sacred Himalayan Landscapes project include increasing awareness of spiritual, religious and cultural values that can contribute to effective conservation; mapping of locations of indigenous peoples and their sacred sites; and increasing awareness among policymakers of the “cultural approach” to conservation (Government of Nepal (GoN) et al. 2007: 10). These Priority Actions point to the need for greater research on and understanding of the religious and cultural practices that support and maintain sacred natural sites. Beliefs and practices may be highly specific to a region or even a valley, and must be understood within their context for incorporation into larger biodiversity conservation efforts. At the same time, all of the sacred natural site practices described above recognize a quality to the landscape that transcends the purely material, physical or economic. Through these practices, local people maintain and reproduce their relationship with the landscape and the natural resources upon which their livelihoods depend. These practices are valuable not only for the maintenance of traditional
lifeways and indigenous culture, but also for demonstrating reciprocal relationships with the landscape, built on relational ontologies and epistemologies rather than scientific or materialist epistemologies.

**Sacred natural sites in Bhutan**

Buddhism arrived in Bhutan during the seventh century when a Tibetan king, Srongtsen Gampo, had monasteries constructed at Bumthang in central Bhutan and in Paro in Western Bhutan. These two were among the many temples that he sponsored throughout the Himalaya to pin down a demoness ravaging the region (Mills 2007). Despite the construction of these temples, Bhutan was still known as an “unlit land,” where enlightening Buddhism had not yet penetrated (Karmay 1998). Such an impression created an air of mystery and hiddenness around Bhutan, making it seem like the appropriate place for hiding secret religious treasures of Tibet (Karmay 1998). Relative to Tibet, Bhutan appeared as a barbaric and uncivilized borderland, rich in natural resources and medicinal herbs.

The Bhutanese recognize two broad categories of deities: those enlightened beings who dwell beyond the realm of karmic existence, and are envisioned during Buddhist meditation and prayer, and the “haughty and wrathful” deities, residing within the six realms, who are not enlightened (Ura 2001b). The “mundane” deities have “more pronounced environmental significance in mediating between resources and people” (Ura 2001b). Among the most common mundane deities in Bhutan are the tsen, gyalpo, neypo, yul lha, key lha, lu, tsomen and dud. The mundane deities
exist on the same continuum as humans, but at a different level. They are sentient beings with particular names, personalities, and characteristics, who — though generally invisible — occupy physical space and perform actions with effects in the material world. The lu may appear in the material world, or in dreams, in the form of a snake, often of white or green color. The tsen appears as a red-countenanced horseman, carrying weapons and other implements. Though they have lifetimes of up to millions of years, the mundane deities are not immortal or eternal: like humans, they are caught in the Buddhist cycle of samsara and rebirth.

These mundane deities, broadly grouped into protector deities (tsen, gyalpo, neypo, yul lha, key lha) who are seen as the original owner of particular localities, and autochthonous spirits (lu, tsomen and dud), who may control small areas within the landscape, are believed to inhabit rocks, trees, lakes, forest groves and river sections, proscribing human use and resource extraction from these areas. The mundane deities reflect “a different classification of realms of existence that do not appropriate every part of geography and natural resources for Man’s (sic) uses” (Ura, 2001b). Like a protective homeowner, deities resent intrusions onto their property, and punish those who trespass or harvest resources from it without permission. Belief in various local deities and spirits has been documented in most districts of the nation, with local variation in the types and qualities of deities and spirits (Allison 2004b; Ura n.d.).

Villagers believe that if they disturb a deity — by harvesting timber or clearing the area for crops — bad weather, crop failures and illness will follow. Depending on
the particular requirements of the deity, the following actions may be proscribed, or proscribed at particular times: entering a forested area, collecting any material from the area, removing living timber from the area, making loud noises, excreting human waste, throwing rocks, cooking or burning meat, bringing meat to the area, visiting the area shortly after child birth or handling a dead body, and bathing (in a lake). In addition, deities require certain activities to maintain their good graces. The propitiations include, among others: creating pleasant smell through the burning of incense juniper and wheat flour; making offerings of milk, popcorn, and wheat flour; prayers and invocations; keeping the area clean; and building, maintaining, and cleaning small spirit houses.

_Tsen_

The _tsen_ is the protector deity of an area, who usually resides in places — mountaintops, mountain passes, cliffs, and sometimes large old trees — from which it can oversee its entire territory. _Tsen_ are known to be highly adverse to _drib_, the ritual pollution that results from corporeal activities, and thus, reside at some distance away from villages to avoid _drib_. Villagers sometimes ascribe the origination of a deity to the rebirth of a local person because, depending on the quality of the merit achieved in this life, a human may be reborn in any of the six realms of Buddhist cosmology. For example, one villager explained how the _tsen_ came to reside on a mountain above his village: “Many years back, a man was coming back from Tawang. He was a hunter. He fell off the mountain and died, and took rebirth as a _tsen_ in that place.” People who fail to accumulate positive merit may be reborn as _tsen_. A hunters would fall into
this category, because killing animals is forbidden to strict followers of the religion.

Though tsen are more powerful than people, they are also caught in the cycle of suffering and will eventually die from their tsen body.
A villager in Zhemgang dzongkhag described the local protector deity:

The phodrang [citadel] of Ap [honorific = Mr. or Sir] Tsan is a big, big stone, bigger than a house behind the mountain. We don’t go there
because we may disturb him. Before, people used to visit that place to raise flags, but now they are not going. We do a puja in the lhakhang. In the past, there was no statue of him, but now in the new lhakhang, there's a painting of him and Am Manma [a water deity].

In placing a statue of the pre-Buddhist deity in the local Buddhist lhakhang or temple, the villagers incorporate the local deities into their practice of Buddhism. The villagers conduct pujas for the local deities each month in the lhakhang. Some will also conduct pujas in their homes. The man pointed out the trail to the citadel of Ap Tsen, which can be seen in this photo, leading to prayer flags.

Figure 3-8: Trail to tsen worship site in Zhemgang.

Lu

The lu are spirits that are particularly vulnerable to physical and spiritual
pollution. The lu is white or green, and associated with water – lakes, rivers, streams and springs. As with their relatives in India, the naga, the lu are believed to be the guardians of underground treasure. If they are well-placated, this bounty will accrue to the family who maintains their habitat, through bountiful harvests and other good fortune. However, a lu who is mistreated will cause illnesses, including boils and other skin infections, and may eventually leave the area. This usually has negative consequences for the local family.

A dream of a snake, frog or reptile signifies the lu. The lu, a water deity associated with prosperity, can be found in marshy areas, lakes, and springs under large trees, and is associated with the underground realm. If a lu’s lake home becomes polluted, the lu will either run away or die. A dried-up lake signals the death of the lu in that form, though the lu’s spirit is immortal. The lu is a “very old supernatural entity, right from the time of the Buddha, who is the holder of all sorts of treasures. The lu is the master of wealth, jewels, gems. These treasures come from the river, lakes, oceans” according to Dasho Karma Ura, Director of the Centre for Bhutan Studies (personal communication, 1 August 2001).
Figure 3-9: Painting of Ju at Dechen Phodrang Monastic School, Thimphu.
Figure 3-10: Lu khang, holding the above painting of the lu, at Dechen Phodrang Monastic School, Thimphu.

Figure 3-11: Lu khang in Trashigang dzongkhag.
Lu are sensitive to drib, (Tib: sgrib or grib) a type of spiritual pollution that results from particularly corporeal activities such as birth and death. Those who have recently given birth, or cremated a body, must undergo ritual purification to rid themselves of drib. This spiritual pollution can also result from using garlic, eggs, and other ‘strong’ foods, or from cooking or burning meat, particularly in inappropriate places, such as near lakes or on high mountain passes. Drib makes an individual more susceptible to illness and to encountering misfortune. A person with drib has low spiritual energy, and consequently may be afflicted by one of the mischievous or malevolent spirits.

The lu’s home must be kept clean with milk and water three times per month, on days designated by the tsipa (astrologer). In describing the sensitivity of the lu to pollution in its environment, a woman in Zhemgang, said

If we dirty the area where the lu is, it will affect us. We wash the area with water, then with milk, and offer tsang [incense juniper] and maize powder. The area one meter around the lu chorten has to stay clean. The naughty children don’t touch the chorten [reliquary] and don’t dirty the area, because the older ones advise the younger ones not to disturb the area.

Thus, she explains how the lu will retaliate for disruptions of its environment by attacking the family nearby. Conversely, creating pleasing smells by burning incense and maize flour keeps the lu happy, leading to increased prosperity for the family.
Another woman explained that people could unknowingly foul the lu's place, which could have consequences for the local villagers: “The lu was on the path, so some people unknowingly made the place dirty.” She surmises that someone who was unaware of the lu's presence unknowingly fouled the spirit’s place.

A Western educated professional in Thimphu recalled a time when he fell ill with welts on his head, that did not disappear for years, despite visits to numerous specialists. Finally, his wife called a tsipa (astrologer), who determined that there was a lu in the house that had been disturbed.

The tsipa did two days of prayers and pujas. [The man’s] family offered milk and puffed rice to the lu, and cleaned its area. They continue to keep the area clean. After this, the lu stopped being angry and the welts have disappeared from [the man's] head.

**Dud**

The dud, or “demon,” can be found throughout the Tibetan Buddhist realm (Mumford 1989), and is usually associated with the color black. While the lu may be found living in close proximity to people – even within their homes – the dud is more likely to live away from human settlement, possibly near a river bank, large rock, tree or ruined house. The dud seeks self-satisfaction from the offerings of the villagers, but does not provide benefit in return – only the absence of harm. The dud is never seen embodied, though the offspring of a lu and a dud is represented as a human being who can transform into different shapes.
According to Mynak Tulku, Director of the National Library, *nepo* is a general term that means “protector of a locality.” As the protector of the land, a *nepo* is always a *gyalpo* or *tsen*. About 70% of *gyalpos* are *nepos*. *Gyalpos*, which are always male, were human beings or evil spirits in their past lives, and then were subdued, converted to Buddhism, and required to look after a certain location and the practice of Buddhism within it. The *gyalpo* is associated with a mountain or a house. A *gyalpo* who lives in a house extends protection to the household members (Ura, 2001c). A *tsen* is another type of protector deity that was a human in a past life. A *lu* is not a type of *nepo*, according to Mynak Tulku. Intriguingly, however, many villagers mentioned that the appearance of the *nepo* was that of a snake, which is the appearance of a *lu*. It may be that some villagers conflate some of the different deities. Others believe that *nepos* can be seen as wild goats, roosters, but by far the most frequently mentioned form was that of a snake.

Practically speaking, villagers tended to differentiate between the obeisances owed a *tsen*, the ruler of an entire valley or village area and must be propitiated regularly, and that owed to a *nepo* who generally does not have to be propitiated unless it has been wronged through disturbance of its habitat. This practical difference suggests that, though the *tsen* can be considered a type of *nepo*, most of the *nepos* discussed by the villagers were actually *gyalpos*, former human beings or evil spirits charged with looking after a discrete area, as Mynak Tulku described. *Nepos* are thought to control smaller, discrete areas, usually centered around a large rock or tree,
whereas a *tsen* can rule over an entire valley, mountain top or group of villages. A village or valley area may be home to many, many *nepos*, even “thousands” according to one respondent. While *nepos* own many rocks, trees and forest patches, they do not inhabit all such places. In daily life, however, villagers may not make much distinction between the various deities, according to one man who grew up in the Trashi Yangtse district and now works in Thimphu.

In daily life, the local deities and spirits become incorporated into the villagers’ understanding of Buddhism. Villagers often conflated canonical Buddhism and its Triple Gem – the Buddha, the Dharma or Teachings of Buddhism, and the Sangha or community of believers – and the local deities who are not an official part of the Buddhist canon. This syncretism can cause consternation among outside observers who may perceive the local beliefs as a degenerate or incorrect form of Buddhism. Certain beliefs or practices of vernacular Bhutanese Buddhism, such as veneration of trees, belief in deities, and the like are inconsistent with canonical, textual Buddhism. However, the villagers and their local religious leaders find no inconsistency between their beliefs and those of Buddhism: they have ways of incorporating their local practices – such as the reliance on *gomchen* or the veneration of particular areas – into the warp and weft of Buddhism, which itself stems from the diverse and multiform Vedic tradition.

*Life in Trashi Yangtse, Eastern Bhutan*

In Trashi Yangtse Dzongkhag, in eastern Bhutan, villagers practice subsistence agriculture, raising rice, corn, vegetables and a few cattle. Bordered by the Tibetan
Autonomous Region of China to the north, and Arunachal Pradesh to the east, Trashi Yangtse is more than 500 kilometers distant from Bhutan’s capital. Though remote from Bhutan’s capital, Trashi Yangtse saw historical trade routes crossed from Arunachal Pradesh into Bhutan and onward to Lhasa (Ardussi 2004; Ray and Sarkar 2005; Sarkar and Ray 2006). Trashi Yangtse has long enjoyed a close relationship with the Tawangs of Arunachal Pradesh, who are allowed to cross the border for the annual Chorten Kora festival, known as Dakpai Kora, on the 15th of the first lunar month. According to local legend, a princess from Tawang is entombed within the large chorten, as she gave her life for the good of her people and of all sentient beings, when the chorten was built in order to subdue a demon that was threatening the area, 300 years ago.

In the past decade, Trashi Yangtse town has grown from a small smattering of houses to a village with town restaurants, and a higher secondary school, which draws students from all over the eastern district. The villagers of Trashi Yangtse dzongkhag follow the Nyingmapa school of Tibetan Buddhism, with guidance from gomchen (married lay monks) and ordained monks and lamas residing at local monasteries including Aja Ney, Chorten Kora and Rigsum Gompa. In this region, villagers tend to equate religion with Buddhism, and Buddhism with a prohibition against killing. Buddhism teaches them that it is wrong to take a life, or to cause others to take a life. The practical result of this belief is that villagers consider it “a sin” to cut down a tree or kill an animal. They recognize that these actions are necessary for their own subsistence, but understand them to have negative karmic implications. Trees are
considered especially worthy of respect because the four major events of the historical Buddha's life - his birth, enlightenment, first teaching in the Deer Park in Saranath, and death - occurred under trees (RGOB 1998a). Cattle are kept primarily for milk, cheese and butter. The villagers will eat meat butchered by a non-Buddhist, and animals that die, for example, in accidental falls. While the daily diet is primarily vegetarian - rice, chilis, and cheese, with occasional eggs - pork fat is very important for festivals and celebrations. Some villagers keep pigs, though this is considered a sinful and low-status activity, because raising a pig ultimately results in its slaughter.

**Deity beliefs and environmental conservation**

These beliefs are reflected in the Bhutanese government's contention that religion has protected Bhutan's forests. The government of Bhutan attributes the preservation of Bhutan's forests and other natural resources into the 21st century to both the historically low population density of Bhutan, and to traditional religious beliefs. According to the government's guiding vision, *Bhutan 2020*(1999: 21):

[T]he values underlying our approach to development have meant that we, unlike many other developing countries, stand on the threshold of a new century with our natural environment still largely intact. This can in part be attributed to the nation's low population/resource ratio. It is also the consequence of our system of beliefs and values. In rural Bhutan, the fusion of Tantric Buddhism and animistic Bonism with our mainstream beliefs and values leads us to interpret nature as a living system in which we are part rather than as a resource base to be exploited for material gain. Bhutanese society is one that has evolved in terms of relationships with the environment that have given rise to a complex of institutions, rules, customs and folklore governing the use of natural resources. We have been practicing environmental conservation long before it was referred to as such.
Similarly, the Forward to *The Middle Path: National Environment Strategy for Bhutan* (1998b: 12), begins by identifying the apparently ancient relationship between people and their environment.

The relationship between the Bhutanese people and the environment has been forged over centuries within moral, cultural and ecological boundaries. Respect for these boundaries was ensured historically through a set of formal and informal rules and norms. Traditional and local beliefs promoted the conservation of the environment, and key ecological areas were recognized as the abodes of gods, goddesses, protective deities and mountain, river, forest and underworld spirits. Disturbance or pollution of these sites would result in death, disease or famine. Buddhism and animism reinforced this traditional conservation ethic and promoted values such as respect for all forms of life and giving back to the Earth what one has taken away. This traditional respect for the natural world ensured that Bhutan emerged into the 20th century with an intact natural resource base.

Recent quantitative anthropological scholarship on biodiversity conservation has questioned the influence of Buddhism on shaping values that influence practices that conserve the natural environment (Brooks 2008). According to a survey sample study conducted in 2005-08, economic standing had greater influence than religious practice over the selection of environmental conservation behaviors. However, the researcher recognized the limitations of the small sample size, and allows that traditional cultural beliefs and practices, many of which are connected with Buddhism, even if not strictly-based in textual Buddhism, may have an influence on resource use practices that the quantitative measures were unable to evaluate (Brooks 2008).

The suggestive co-incidence of biologically-rich habitat with sites believed to be owned by deities had led to speculation that these sites could serve as examples of
indigenous community-based natural resource management (Ura 2001b; Ura 2001c). Additional empirical research is needed to validate the suggestive confluence of biological diversity and deity phodrangs. The first empirical study to examine the connection of traditional beliefs and practices related to the maintenance of deity phodrang (Tib. pho brang) (citadels) and ney (Tib: ngas) (sacred sites) found that these practices protected forest groves and water sources from disturbance, allowing diverse useful plant species to flourish in greater abundance than outside of the sacred areas (Allison 2004b).

Deities and Development

Throughout the country, the belief in these spirits is strong enough to halt, or at least slow, infrastructure development at times, even when the planned construction would benefit local people, who are eager to have better access to roads, hospitals, and schools. Three key informants associated with construction and infrastructure development told of situations in which local belief in a spirit or deity abode had stalled construction progress. Intriguingly, my informants were never willing or able to be very specific about the situation. A road contractor, interviewed in 2007 about a specific situation in which local people had complained that a road would go through a deity abode, commented, “Only later, when the road building commences, people come out and complain that they road is going through a spirit’s place.” Although other informants had directed me to this person as the most knowledgeable about this construction project, he was vague about the details and location of this conflict between deity beliefs and development.
A British foreign development consultant, who had lived in Bhutan for several years, described a situation in which local deity beliefs interfered with hospital construction. After talking with him in autumn 2007, I wrote in my field notes:

I asked about situation in Mongar, when people objected to development b/c they believed there was a ghost that would be disturbed by the development. [The consultant] didn’t know about this situation exactly, thought it could have been a farm road, and encouraged me to talk to the [a specific] Construction Company. There was a similar situation in Trongsa, where a hospital was being built. Behind the hospital was a big tree that people thought had some spirit associated with it. A retaining wall was being constructed near the tree, but people thought that the spirit would be disturbed and many of the workers fell sick. They call a lama to do a ceremony, and people still go there to do pujas. Also in Paro, with the construction of the hospital, some people objected that spirits might be offended. [The consultant and his Bhutanese colleague] mentioned another case in which a waste treatment plant was to be built, and the people agreed and were pleased but later came back saying that there was a spirit there and they shouldn’t build there. [The consultant] felt that this was just a made up excuse because they didn’t want the water treatment plant nearby.

A Bhutanese town planner in the capital commented:

I heard of a problem in Mongar. People didn’t want the area to be developed because they thought there was a ghost in the area. I think we took it up anyway. There was some resistance from that side. They said ‘we are not supposed to touch this area.’ In some cases, we have to respect that viewpoint because it is the sentiment of the people. If there are alternatives, we try to check into them. It might not have been Mongar, but somewhere in the east...

Although the empirical reality of these deity citadels is difficult to determine with standard scientific methods, local people perceive their reality, and, to the extent that this perception then shapes development activities, the citadels have discursive and material reality. The above vignettes reveal conflicting environmental imaginaries
among those who have been trained in Western-style empiricism and express doubt about the validity of the deity citadels, believing people were “making excuses” (“Only later ... people come out and complain” and “I think we took it up anyway”), versus the beliefs of the local people (“they thought there was a ghost in the area”).

Even among foreign-educated Bhutanese and international professionals, who have been trained in epistemologies that disallow such phenomena, the deity citadels shape and influence conservation and development initiatives because of their importance in the eyes of villagers.

Further, the negotiation of restricted and available space for the purposes of infrastructure development demonstrates the continual construction of space, as a process of negotiation between various human groups, the landscape, and the perceived deities. As the consultant suggested above, deity beliefs may be deployed – or seen to be deployed – for political purposes, such as preventing inconvenient development (the well known NIMBY [“not in my back yard” syndrome]). At the same time, these beliefs carry sufficient power and valence as to be respected, even by those who subscribe to alternate or competing environmental imaginaries. Even the urban educated elite of Thimphu, the capital, maintains ties with their natal villages and with the practices described in this chapter. The “sacred” and “non-sacred” are not fixed terms or places, but fluidly, continually constructed, in negotiations between various human groups with the landscape and deities. In some places, spirits or deities are known to move – to flee a place that was unsuitable for a more appropriate place.
For example, the residents of Bartsam, in Trashigang Dzongkhag in eastern Bhutan, tell the story of how the local lhakhang or temple came to be built in their village. The temple was built to house a valuable holy statue – of Meme [grandfather] Chador – found at the bottom of a lake, with which many supernatural happenings are associated.

Later on, the statue of Meme Chador was taken by the boy’s parents to their home at Dungsumkhar khochi. They noticed that the statue would always face west, regardless of how it was placed. In a dream, they saw bad omens, and were not happy after keeping the statue in their home. They planned to give the statue to another family, who was luckier. They invited every khochi family from the different parts of eastern region to their home to take the statue. The other khochi families were rich, so they arranged many things to bring to receive the statue. However, the khochi family living in Yangkhar was not that rich, so they brought only a bottle of wine and 2-3 kgs of rice to offer. The head of this family was the first person to arrive because he had nothing to carry. The others were delayed because they had lots of things to bring and required many laborers to carry the things. The khochi family residing in Dungsumkhar said to the khochi family of Yangkhar, ‘you are the lucky [lungten] person, you arrived first, so you get to keep the statue.’ He brought the statue to Yangkhar on the 17th day of the sixth month of the Bhutanese calendar. Yangkharpa still celebrate that day as Yangkharpa Sa Nyang. They have a big tsechu and offerings to Meme Chadorpa on that day.

But the people in Yangkhar thought there was no clean place to keep the statue. They decided to offer the statue to a place called Goenpa Ringmo, where Chador Lhakhang presently stands.

After three years, Meme Chador statue was taken by Deb Raja of Trongsa called Jigme Namgyal, who is the father of Sir Ugyen Wangchuk, the first king of Bhutan. While reaching to Trongsa, they placed the statue on the altar of Trongsa Dzong. The next morning, they found that all the heads of other the statues were turned away from their original direction. Jigme Namgyal thought it was not good to keep the statue in Trongsa Dzong, so he ordered someone to return it to Bartsam, where it remains within Chador Lhakhang today. Because of
the Meme Chador statue, the lhakhang is called Chador Lhakhang (interview with old man in Bartsam village, Oct. 2008).

This story shows the contestation and negotiation of sacred space, until the statue was able to alight in the most appropriate and clean place. The spirit of the statue will not provide its blessings unless it is kept in an appropriate place. In a surprising twist, and reversal of fortune, the least wealthy family receives the valuable statue, because they have the least to carry. However, that family was not able to keep the statue at home because they lacked a clean and suitable place for it. The statue is then given to the goenpa, monastery, where it could be cared for in sacred surroundings. Even when the statue is captured and taken to Trongsa in central Bhutan (representing the unification of Bhutan, under the hereditary monarchy), the statue had to be returned to its rightful place in eastern Bhutan (suggesting the eastern resistance to centralizing power in the western part of Bhutan).

This story also points to the cultural resilience that inheres in a belief system that is locally-developed and self-referential, focused around local conditions and experiences, rather than on external structures and mores. In the story, the statue, and with it, its blessings, will not rest until it is in the appropriate place. Similarly, the Bhutanese villagers inhabit an environmental imaginary grounded in their place that provides particular material and discursive strategies for living in a mountainous, monsoonal environment.
Conclusion

This awareness of the constant negotiation and reconstruction of the boundary between ‘sacred’ and ‘non-sacred’ will be important in the next chapter, when we examine the role of religious and spiritual beliefs in waste management. As we shall see, the idea of pollution – determining what is clean/inside/sacred and what is dirty/outside/profane – has everything to do with negotiating and drawing boundaries. In both cases, we will see that ideas about appropriate actions, with respect to particular places, have their roots in religion and traditional spirituality in Bhutan.

The self-described beliefs of the villagers of Bhutan follow the pervasive Himalayan pattern of revering particular places on the landscape, grounding the sacred in the phenomenological world. Locating the sacred and the supra-human (which, as we have seen, are not synonymous) in definite places, villagers place themselves in explicit and tangible relation to the forces beyond themselves on which their lives depend. They establish and acknowledge a cycle of interdependence and reciprocity that includes humans, plants and animals, and the larger forces beyond their control. While unable to control these forces, the villagers recognize that they do influence these forces by their behavior and attitudes.

In subsequent chapters, I will describe traditional Bhutanese village waste management, and show how traditional beliefs about cleanliness connect with spiritual beliefs about the maintenance of prosperity. I will suggest that it is through these beliefs and practice related to the maintenance of prosperity that Bhutanese villagers express their sense of place and their relationship with the land, and I will show how...
this is changing through rural to urban migration and increasing urbanization. More broadly, I will show how relationships with particular places are maintained through particular practices, and suggest that these practices are important for connecting humans and their surrounding environments.
INTERLUDE 1 Of Holy Sites And Garbage Dumps

As we left the rural villages to head back to the material comforts of Trashigang, the largest well-established town in eastern Bhutan, home to a couple thousand people, and the only bakery, cobbler, barber and internet cafe for hundreds of miles, my assistant Prem suggested that we stop to visit a holy tree. The tree was planted by a reincarnation of the Shabdrung Ngawang Namgyal, the unifier of Bhutan in the seventeenth century. The reincarnation of the Shabdrung planted the tree as a promise that he would try to return to Bhutan, in his next life, as long as the tree lives.

A singular, but unassuming, oak stood in the midst of a pine savannah on a dry, southwest facing hillside covered with lemongrass. The tree was clearly special, as it was adorned with dozen of katas, silk offering scarves, waving in the afternoon breeze. Amidst much picture-taking, each of us in turn tied a kata securely around a tree branch while making a wish. In the golden late afternoon sunlight, our katas added to the holy glow of the tree.

A stone and concrete wall demarcated the holy site of the Shabdrung’s tree, which was further defined by a ring of rocks at its base, separating it from the surrounding grasslands. Prem pointed out charred trunks of the surrounding pine trees in the grassland as evidence of the holy tree’s power: it remained unmarred by a forest fire that singed the surrounding trees. The Shabdrung tree appeared to hold more moisture, as well, from the gifts of water it received from its many visitors.
As we headed back to the truck after communing with the holy tree, Prem casually dropped the piece of newspaper in which the *katas* had been wrapped. I was struck by the incongruity of the previous eight hours of asking questions about where people put their garbage (with the implicit agenda that there is a ‘right’ place to put garbage), and the casual, apparently unthinking disposal of garbage near a holy site. The paper was dropped outside the boundary around the tree, in the unimportant lemongrass that surrounded the site. I didn’t say anything to her as I didn’t want to make her self-conscious, and was so busy marveling at the incongruity of the moment that I was speechless.

After visiting the Shabdrung tree, we visited the Trashigang garbage dump: an open ravine with a stone and concrete wall at one end. The wall was built recently – several months back, so the amount of garbage in the dump is not huge. I was surprised to see burnable materials – cardboard boxes, wood, bamboo baskets. In the villages, people said that they burned cardboard and plastic. Here in town, people have no convenient place to burn plastic, but I was surprised that they weren’t using the wood and cardboard for heating fires or other purposes.

Prem and Tshering, our driver, went walking across the sidewalk-like top of the wall, while I marveled at the lack of public safety paranoia in this country: although the dump is fenced with barbed wire, the gate was open, and the 30-foot-tall wall was an inviting place to climb and play.
On the side of the dump, Tshering found a pamphlet from a UN program that had pictures of the king and queens – a holy item that should not be desecrated in such a way – incongruous in the dump, in a country where the monarchy so revered. Even more surprising was the Ganesh figure – the elephant-headed Remover of Obstacles in the Hindu pantheon – placed in the cliffside next to the dump. It appeared the Ganesh figure had been discarded in the garbage, and someone had rescued it, placing it in a watchful position over the dump.

Here the sacred and profane met, at the boundary of the garbage dump. The Ganesh figure sacralized a small area of the garbage dump. The area around the Ganesh figure was free of garbage, and Ganesh seemed to look down on the dump from a holy elevated place. However, Ganesh could sacralize only a small area – perhaps a couple square feet around him. The rest was squalid with uncovered, uncompacted mixed household waste.
Chapter 4  Enspirited Places, Material Traces

Introduction

As we saw in the previous chapter on sacred natural sites around the world and in Bhutan, spiritual perceptions of the natural environment, which can be analyzed as a subset of the political ecology's “environmental imaginaries” (Watts and Peet 1996b), have material effects that are not yet fully understood or analyzed. As I have noted, both social science-oriented ecologists and biophysical ecologists have tended to shy away from delving into spiritual perceptions and their ecological effects. However, the rubric of “environmental imaginaries” provides an inroad for social scientists, as I demonstrated in the previous chapter.

In this chapter, I review some of the empirical evidence of the material effects of religious and spiritual beliefs about the natural environment, as related to sacred natural sites. I then raise the question: if religious and spiritual beliefs have a salubrious effect on ‘green’ environmental issues, in particular cases, what role might such beliefs play in shaping attitudes and practices surrounding ‘brown’ environmental issues, such as waste, pollution, and urban land use? Although this issue has been little studied, we can draw on theoretical perspectives on pollution and waste, and Tibetan cultural perceptions of space, purity and pollution, to begin to construct an answer. Furthermore, I show how institutions of power, such as the State and the Church maintain ambivalent positions in relation to spirituality, because it loosens people’s connections to the worldly realm, turning their focus to a
transcendent realm, and causing them to become potentially less governable. Religion structures, organizes, and even coerces, maintaining people within the circulations of power that Foucault (1997) has shown to be inescapable. Within the Church (the organized body of religion), power circulates, exchanged and managed through donations, hierarchies, and privileges (Bourdieu 1994/1998). In this way, religion serves to reinforce the dominant order. Although governments have supported and encouraged religion for political ends, governments tend to maintain a suspicion of spirituality. The prophetic tendency of religion – in which an individual’s spiritual experience conveys new insight or understanding about the nature of the world – calls the existing order into question. To the extent that people become unbound from normative power structures, they become less governable and less controllable. This is perhaps one of the reasons that religious orders stress rules, order, and discipline: they need to maintain the believers within some sort of human-dictated structure, tethered to worldly concerns. By affiliating with the divine, the spiritual practitioner may become unmoored from these human circulations of power, and unconnected to the social rules necessary for the maintenance of society. Paradoxically, religious believers are encouraged to loosen their ties to the earthly world, but not so much that they wander outside the boundaries of society. As social institutions that serve the dominant social structure, religions have an interest in maintaining people within that structure.
Communing with unseen spirits, as in animism, may appear as a challenge to the State because it removes believers beyond the reaches of state control. Boons people get or believe they get from reciprocity with the spirit world may lessen the degree of control that human social institutions, including the state, have over people. State-supported religious traditions and outside observers often denigrate animism.

For example, in his discussion of offerings made in Buddhist contexts versus offerings made to local spirits, S. J. Tambiah claims that spirits are bribed or coerced through offerings, while the Triple Gem of Buddhism is praised, not propitiated in the same way as ambivalent deities (Tambiah 1970: 342). Therefore, while the “Buddhist idiom of selfless giving of gifts” is an “an idealization and extension of the social norm of reciprocity,” “the coercive relationship of bargaining with spirits, their placation or subduing, is again a statement of power relations,” which Tambiah ranks lower ethically than the pure giving of Buddhism (Tambiah, 1970: 342). However, according to Tambiah’s description, the spirits and the humans have roughly equal power, and thus offerings to them should also be seen as an “extension of the social norm of reciprocity,” and therefore are not ethically inferior to the free gifts of Buddhism. In this context, Tambiah’s ethical ranking of these two types of belief appears to be example of denigration and marginalization of forces beyond state and social control.

We can see this dynamic at work in the Bhutanese government’s stance toward the deity beliefs. On the one hand, they are mentioned in government documents as
evidence of the way that religion and culture have played a role in creating an ethic that protects Bhutan’s natural environment. On the other, the deity beliefs tend to be dismissed as superstition by educated people in the capital, and even some people in the rural areas, who say they are becoming more “Buddha-minded” and following the Dharma more closely. While these beliefs are disowned to an extent, they go underground, but do not disappear. I argue that, in part, these spiritual beliefs, while connecting believers to an immanent realm of relational spirits, also serve as a means of resisting the simplifying and territorializing activities of state power.

I will demonstrate how Bhutan’s recent waste crisis is not only a material crisis, related to increasing uncontrolled and unmanaged refuse, but is also a political crisis, brought on by the devolution of power to the people for the implementation of democracy, and the government’s reassertion of control through legislating people’s activities with regard to household waste. I return also to the discussion of overcoming dichotomous thinking, introduced in Chapter 2, and show how urban and rural areas cannot be considered separately with regard to waste management, and how dichotomous thinking about ‘green’ and ‘brown’ environmental issues has hampered efforts to analyze and address both rural to urban migration and solid waste management. At the national level, green and brown issues are connected through government strategies of territorialization for the purpose of legibility and governance (Vandergeest and Peluso 1995b). Increasing simplification for the purposes of governance led state territorialization of forest lands, through the creation of national
parks, wildlife corridors, and forest management units (FMUs, for commercial timber harvesting), and more recently, to interventions for the purposes of managing and controlling household and municipal solid waste. I want to be clear that I am not making a normative judgment about the processes of enclosure and territorialization here. As Vandergeest and Peluso show (1995b: 387), these processes are part and parcel of state control of people and land-based resources.

I conclude by examining one of the most persistent difficulties in rural areas: agricultural crop predation, an issue raised repeatedly in my survey interviews, although the interviews were not directed at agricultural issues. I suggest that this issue shows the error of segregating conservation and development issues into categories of green and brown, rural and urban. Crop predation, and the subsequent rural to urban migration that it provokes, show the unavoidably interdisciplinary nature of conservation and development. Although the government has asserted its control through functional territorialization of forest lands, via the Department of Forests and the Nature Conservation Division (which oversees national parks); and now, via the Ministry of Works and Human Settlements (which aiming to control people’s practices with regard to waste), it has been unable to address this most pressing issue.

Ecologically-Protective Spiritual Beliefs in South Asia

Although empirical data is preliminary at this point, such evidence as there is suggests that some spiritual beliefs and practices contribute to ecological protection or
restoration in the case of degradation occurring. Correlations between spiritual beliefs and the maintenance of forest cover or biological diversity have been identified in a number of case studies. For example, a literature review that analyzed the relationship of 70 species-specific taboos, embedded in the beliefs of people inhabiting India, Bangladesh, Papua New Guinea, Ghana, Nigeria, Mexico, Brazil, Peru, Ecuador, and North America, to species designated as “threatened” by the World Conservation Union (IUCN) and listed in the IUCN Red Data Book, found that 21 (about 30%) of the identified taboos prevented any use of species listed as threatened by IUCN (Colding and Folke 1997). Sixty percent of the species-specific taboos focused on reptiles and mammals, and in these two classes, approximately 50% of the taboo species are listed as threatened (Colding and Folke 1997). In northeastern India, Ramakrishnan (1996b) found that species with important ecological functions were the same species that were socially valued for cultural or religious reasons.

Similarly, researchers in the Central Himalayan region of India noted that sacred groves served to protect tree species, broad leaf evergreen oak (*Quercus leucotrichophora*), the dominant canopy tree in undisturbed forest areas, that were currently under severe biotic pressure outside the groves (Sharma et al. 1999). The oak is a primary provider of fodder, fuelwood, and timber, forming the basis of the subsistence economy in Himalayan villages. In addition to providing natural resources for human use, the oaks’ deep root systems help maintain soil fertility and moisture, contributing to the biodiversity of the local environment (Ramakrishnan 1999).
The multipurpose oak was the species most frequently found in the sacred groves, occurring in half the groves studied (Sharma et al. 1999). Other multipurpose trees were found within the sacred groves, suggesting that the groves were established to sustain village life, preserving a “maximum number of species of varied utility” – 62% of the trees in the groves had two or more uses, while only 38% had a single use (Sharma et al. 1999: 607 - 608).

**Bhutan**

My earlier research in Bhutan pointed to similar conclusions: 60% of the sacred natural sites, or deity citadels, that I visited were dominated by one of four species of useful trees: *Quercus griffithii* (oak), *Schima wallichii* (needlewood), *Alnus nepaliensis* (alder), and *Juglans regia* (English walnut) (Allison 2004b). These trees have a number of current and potential uses. Cumulatively, they may be used for: firewood, timber, construction, roofing shingles, food, medicine, green leaf manure, animal bedding, fodder, leaf litter, dye, herbicide/ insecticide (Allison 2004b). While these timber and non-timber forest products are economically useful, the villagers do not harvest them from the deity citadels, as they fear the retaliation of the deities, as discussed in Chapter 4. Rather, the deity citadels may serve as “in situ germplasm preservation/ collection centers to conserve natural resources, sustain the daily requirements of the villagers, and provide the ‘elite’ stock material for multiplication” (Sharma et al. 1999: 599). In addition, there was a statistically-significant relationship (0.05) between the presence of water and a *neypo* deity in the areas surveyed,
suggesting that deity beliefs that reserved some areas from human use also protected water sources, and potentially water quality (Allison 2004b). Further research comparing water quantity and quality within deity citadels, and comparable in non-protected areas, could clarify the degree to which deity beliefs serve to protect water sources.

**Nepal**

The correlation between spiritual perceptions of the environment, particularly deity beliefs, is suggestive, but untested in the Khumbu region of Nepal. As noted in Chapter 4, villagers protect certain forest areas because of the proclamations of great lamas (Stevens 1996; Allison 2004a). Villagers also perceive lu spirits residing in some old trees and water springs, and avoid disturbing such areas to avoid the wrath of the deities (Stevens 1996; Allison 2004a). While the Khumbu region's population and socio-economic status have increased significantly in the past 40 years, since the arrival of mountaineering and trekking tourists, drawn by Everest (Fisher and Hillary 1997), repeat photography has shown that the forest has not demonstrably declined, and “the extent of subalpine forest remains essentially unchanged from the 1950s,” “in spite of copious literature stating otherwise “ (Byers 2005: 131). Mountain geographer Alton Byers did find significant disturbance above 4000 meters, where he believes that adventure tourism has contributed to overharvesting of alpine shrubs for heating and cooking (Byers 2005: 135 - 136). While Byers does not speculate about
the factors contributing to the maintenance of Khumbu’s scrub, grasslands and forests, the cultural factors that Stevens and I have documented seem worth exploring.

**From Agrarian Landscapes to Urban Environments**

Given the suggestive link between spiritual beliefs and practices and local natural resource management among traditional peoples in rural areas, the question arises whether these beliefs and practices might also have an effect on the ‘brown’ environmental issues, such as waste, pollution, litter, sanitation, and broader issues of the urban environment. As discussed in Chapter 2, political ecology’s roots in agrarian studies, natural hazards studies, and cultural ecology have meant that political ecologists have tended to direct their attention to the ‘green’ countryside, rural landscapes, parks and protected areas. Since the late 1990s, political ecologists have responded to Bryant’s (1998) call for more attention on urban areas, pointing out the existence of “a series of urban and environmental processes that negatively affect some social groups while benefiting others” (Swyngedouw and Heynen 2003). Political ecologists have examined urban spaces by analyzing the grassy lawn (Robbins and Sharp 2003a; Robbins and Sharp 2003b); air pollution (Veron 2006), urban parks (Rademacher 2008a), water pollution (Loftus 2009), housing (Rademacher 2009), and garbage (Njeru 2006; Moore 2008), among other issues.

If the literature on religion, spirituality and natural resource management is limited for ‘green’ issues, it is essentially nonexistent for ‘brown’ issues. Sanitation planners have examined the role of religious beliefs in the acceptance of various styles
of sanitation facilities in developing countries (Nawab et al. 2006; Avvannavar and Mani 2008). Others have described the role of religion water pollution and prevention, particularly with relation to India's holy Ganges River (Ahmed 1990; Alley 1994; Amery 2001; Faruqui et al. 2001; Ramakrishnan 2003; Haberman 2006; Benvenisti 2008). But few, if any, have raised the question of how religious and spiritual beliefs affect attitudes and practices with regard to urban and household solid waste management. However, anthropologists, scholars of religion, and social theorists have documented the ways that religious and cultural beliefs shape beliefs about pollution and purity, (Douglas 1966; Turner 1969; Kristeva 1982), which underlie concepts about waste. As anthropologist Victor Turner (1969: 6) has observed,

[R]eligious beliefs and practices are something more than “grotesque” reflections or expressions of economic, political, and social relationships; rather they are coming to be seen as decisive keys to the understanding of how people think and feel about those relationships, and about the natural and social environments in which they operate.

Turner’s discussion of the liminal joins with Mary Douglas’s and Julia Kristeva’s insights about pollution and danger to show how and why certain conditions may become spiritually polluting. In conversation with Tibetan and South Asian cultural notions of sacred space and ritual pollution, we can see how ritual and material pollution become linked or even conflated, and identify the subtle notions that
govern which spaces must be maintained as clean, sacred, and unpolluted, and what spaces may become ritually and materially defiled, littered and polluted.

While most theories of waste and pollution hinge on binary concepts of inside/outside and purity/cleanliness (Douglas 1966; Kristeva 1982), I will show how Bhutanese concepts more closely reflect a mandala, in which proximity to a sacred or spiritual object is a mutually-constituted function of the degree of cleanliness or purity. Because of beliefs about spiritual and physical injury that can befall one who does not have the proper degree of ritual purification upon approaching a sacred site or person, such proximity taboos are self-regulating, in that they carry the seeds of their own enforcement. This claim, then, provides another example of the inextricability of Bhutanese religion and culture, and demonstrates another context in which religion and spirituality have shaped Bhutanese interactions with the surrounding environment, re-presenting the government’s claim (RGOB 1998b; RGOB 1999).

**Theoretical and cross-cultural perspectives on waste and pollution**

Ideas about waste, garbage and pollution work on multiple levels: they address both the materiality of what is unneeded or out of place and the conceptual boundaries necessary to maintain social order, by separating clean from dirty, pure from impure, inside from outside (Douglas 1966; Kaviraj 1997a; Haberman 2006; Gille 2007; Nagle 2008). In her foundational work, Douglas (1966) examined the symbolic content of notions of pollution in “primitive” societies, and argued that “modern” societies attach the same types of symbolic content to their efforts to dispel dirt, which is “essentially
disorder" (p. 2). Though couched in different terms – worries about micro-organisms, disease and public health – rather than fears of offending deities and bringing misfortune – the same concerns about maintaining boundaries through symbolic structures animate the desire for cleanliness. Pollution ideas work at two levels: the political, through which people try to influence others’ behavior, and draw in the laws of nature to support their claims; and the symbolic, through which the social order is upheld, through taboos (Douglas 1966: 3).

On the material level, waste is that which is unwanted, left over, remaindered, out-of-place, disturbing the dominant order. As indicated by Douglas’s famous articulation of waste as “matter out of place” (1966: 41) – later adopted by environmentalists to designate “weeds” as “plants out of place” – the spatial location of waste is important. “If uncleanness is matter out of place, we must approach it through order. Uncleanliness or dirt is that which must not be included if the pattern is to be maintained” (Douglas 1966: 41). While stored in a working refrigerator, milk is food. Left on the counter on a warm afternoon, it becomes waste. Rotten vegetables – waste – rot further to become compost, something valuable again. Similarly, furniture inside the house – or even on the front porch – is understood to be possessed by someone, but left on the curb, it is understood as waste, free for the taking. This practice, of course, has cultural specificity (Gille 2007: 22). In another place, the act of putting furniture on the curb might be a way of extending one’s household territory, or preparing for guests. This second example highlights the temporal aspect of
material waste: an item may move in and out of waste status, through time. A t-shirt that is discarded because of rips or stains may be re-purposed as a rag, and is no longer waste. Ritual pollution, however, remains, leaving a spiritual stain, as Mills (2003: 219) argues, following Lambek (1992), and therefore an understanding of ritual pollution requires a temporal aspect that acknowledges that the “processes of action,” and not just the “objects of knowledge,” have been disarrayed. Because both structural and temporal aspects of society have been upset, ritual pollution requires temporal and structural rectification.

Building on Douglas, Gille (2007) emphasizes the materiality of waste, along with its spatial and temporal aspects. She argues that key characteristics of waste include its liminal and hybrid nature, and that through its circulation and metamorphoses, it imparts specific features to, and therefore is constitutive of, society (Gille 2007: 19 - 20). This ability to cross and transgress boundaries gives waste its liminal character. Waste is difficult to define strictly, as it is always in the process of transmuting, crossing categorical boundaries. Is the t-shirt that is now used as a rag still a t-shirt? Or has it moved out of the category of t-shirt into a new category?

The hybrid nature of waste means that it is always constrained by, and puts constraints upon, both the social and the material (Gille 2007: 27). That is, neither the material qualities, nor the social symbolism of waste can be ignored – its materiality gives waste its own material agency that affects the practices around it. For example, hazardous and toxic wastes require particular methodologies for handling and
disposal; because of their material qualities, they cannot be melted down for recycling like aluminum or steel (Gille 2007: 28). This caveat is an important caution to cultural studies of environmental issues that sometimes focus exclusively on ideas, losing track of the physicality of the actual resources. At the same time, waste is not only a material issue: it is also a cultural and symbolic one. “Culture, morality, ideologies, economic interests, social inequalities, and power struggles permeate the very concept of waste and thus its very materiality. As a result, solving waste problems can never become the exclusive domain of engineers” (Gille 2007: 212). By thinking about waste on both its symbolic and material levels, we can gain insight into the values of the society in which it circulates, and the relationships in which waste occurs.

The rituals and practices of religion and spirituality place boundaries that separate the pure from the contaminated, as will be explained below, in relation to Bhutanese *drib*. In societies in which religion permeates social life, such as that of Bhutan, rituals shape a “symbolically consistent universe,” which is personal and responsive to signs, gifts, gestures and social relationships (Douglas 1966: 70, 87). However, as I will suggest in Chapter 5, the Bhutanese government has had a difficult time involving the populace in modern waste management because it has attended to only half of Gille’s dichotomy. That is, the Ministry of Works and Human Settlement, a department of engineers, has been tasked with introducing waste management systems, but has had mixed success in getting people to adopt these systems. Part of the difficulty lies in the inattention of this bureau of engineers to the cultural and
symbolic aspects of waste. The introduction of this new and exogenous system for classifying and handling waste creates a fragmented universe, which creates greater separation between people and their surroundings (Douglas 1966: 70, 89). Like resources, waste occurs in the context of relationships among people, institutions and their environments. Waste is not a fixed category, but one that varies within that context. However, the social and symbolic aspects of waste have not been part of the Ministry's efforts to encourage "civic responsibility" for solid waste management.

*Pollution and Purity in Cultural Context*

Pollution is notoriously difficult to define. This is in part because pollution is contextual: to be polluted depends upon the introduction of a new substance into an environment (Nagle 2008). Although many U.S. environmental regulations deal with air and water pollutions, the legislation holds few precise or exhaustive definitions (Nagle 2008). To some extent, the slipperiness of pollution leads it to the same definitional fate as pornography: "I know it when I see it." Thus, "pollution" can more accurately be thought of as an action, as a transitive verb, rather than a noun. Pollution always happens in a relationship, an environment, a context. Pollution cannot exist without interrelationships. This is even more true for the pollution of a social environment (e.g., through sexual harassment) (Nagle 2008), and of the ritual pollution that occurs when particular cultural taboos or boundaries are transgressed. Ritual pollution cannot happen outside of a social context that designates and separates pure from impure.
Garbage and waste, then, tend to be those substances that cause pollution, because they cross boundaries, entering into the liminal space between categories, and causing categories to become muddied. This metaphor itself shows how pollution works: a new substance (soil) is introduced into another (water), crossing the boundary that maintains the separations between the two substances. A new substance is created that has the qualities of neither and both of the original substances: it is liminal. The liminal space between categories, where boundaries are blurred or threatened, most often gives rise to disgust and danger (Douglas 1966). The ability to transgress or move between categories often creates unease, in destabilizing the classifications we rely upon to give life meaning and order. Although categorization and classification are universal acts, they are hardly universal in content (Foucault 1971). What may be acceptable in one culture (for example, expectorating onto the sidewalk) is disgusting in another. The passage of time may turn an acceptable practice (public urination) into an unacceptable one, or one that is acceptable only at certain times and places. Similarly, what is waste in one context (eg., rotten vegetable matter) may be desirable in another (as organic compost, for example). Perhaps the observations of matter becoming waste, decaying, and becoming useful again, as food for worms, hint too much at the same path societies will all eventually follow.

**Ritual pollution in Bhutan**

Douglas’s (1966) insight that liminal space between categories, where boundaries are blurred or threatened, gives rise to disgust helps to explain the
Bhutanese conception of ritual pollution, or *drib* (also rendered in English as *thip* (Ortner 1999: 103) and *dip* (Mills 2003: 206 ff); Tib.: *grib*/*sgrib*). As described in Chapter 4, *drib* results from a variety of corporeal activities, which cause ritual pollution that offends the deities. Among the Sherpas, Tibetan Buddhists of Nepal, emotional upheaval, as the result of encountering death, being in or witnessing a fight, or even being in a large crowd that creates stirred up feelings can lead to *thip*, a feeling depicted as dark and muddy (Ortner 1999: 103). Bhutanese informants generally gave more weight to bodily activities in leading to *drib*. A well-traveled man from Zhemgang explained it this way: “When someone dies in the village, when someone is born in the village: these are the only causes. Throwing things [like wrappers and such] into the lake is just pollution, not *drib*.” In this explanation, the liminal phases of life – birth and death – when the human is entering or leaving this life, are occasions that cause *drib*, not only for the individual, who is relatively non-agentic at these points, but for the family of caregivers. As anthropologist Victor Turner (1969: 95) explains:

The attributes of liminality or of liminal *persona* ("threshold people") are necessarily ambiguous, since this condition and these persons elude or slip through the network of classifications that normally locate states and positions in cultural space. Liminal entities are neither here nor there; they are betwixt and between the positions assigned and arrayed by law, custom, convention and ceremonial. As such, their ambiguous and indeterminate attributes are expressed by a rich variety of symbols in the many societies that ritualize social and cultural transitions. Thus, liminality is frequently likened to death, to being in the womb, to invisibility, to darkness, to bisexuality, to the wilderness, and to an eclipse of the sun or moon.
While Turner is writing particularly about neophytes preparing to undergo initiation rituals, the characteristics attributed to liminal personae are applicable in the Bhutanese context. Turner (1969: 94) describes the three phases of the rite of passage: separation, margin or limen, and aggregation or reincorporation, at which point the ritual subject must assume the social expected roles again. In the Bhutanese context, which posits a samsaric cycle into which we are continually born, the separation occurs when the consciousness of a being separates from the vast consciousness to take birth. At the end of life, the consciousness re-aggregates with the vast consciousness or Buddha mind (Sogyal Rinpoche et al. 1992). Mills (2003) describes drib in Ladakh, a Tibetan Buddhist part of the northern Indian state of Jammu and Kashmir, as being caused by disruptions in the social hierarchy, which can be particularly harmful to those lower in rank, as they “benefit from existing in subordinate relations to certain sources of ritual and personal power.” This description of the importance of roles at both ends of the hierarchy – not just the higher role, as might be assumed in a highly competitive Western culture – reflects the hierarchical nature of the Buddhist path, which proceeds in a linear, stepwise fashion, in which the student is subordinate to, and dependent upon, the (spiritual) teacher for guidance (Sponberg 1997). It also reflect the jindak, or benefactor-recipient, relationship that mirrors the teacher-student relationship in a secular context, which is quite common throughout the Himalayas (Ortner 1999). Both partners in the jindak relationship are expected to help one another: the benefactor, who is of higher status, by providing access to connection, economic resources, and education, as appropriate; and the
recipient, by providing personal assistance, gratitude and loyalty. Hierarchy and status are maintained within these well-defined roles, which are also found in the relationships with the protector and local deities, as described in Chapter 3. Situations and activities that upset or interfere with these well-defined roles are at least, perplexing, and at worst, causes of ritual pollution. For example, Himalayan villagers are often resistant to arrival of strangers in their midst.\textsuperscript{12} They note that storms and atmospheric disruptions often announce the presence of an outsider. The reason for this belief may be the potential of outsiders to disrupt the social hierarchy of village life, and to introduce potential polluting activities or substance that can lead to *drib*.

Liminality, then, is the condition that links these high and low positions in a social hierarchy. As Turner explains: “Liminality implies that the high could not be high unless the low existed, and he who is high must experience what it is like to be low” (1969: 97). Thus, after birth, the new baby, who can be conflated with the processes of fertility and prosperity, overseen by the *lu*, as discussed in Chapter 4, must be socialized into the human world, temporarily upsetting the relationship between the *lu* and the household, leading to *drib* (Mills 2003: 215). At the end of life, productive and reproductive links are severed, as the consciousness symbolically moves upward, away from the human realm (Mills 2003: 216). In both cases, the normal order of relationships is disrupted, causing ritual pollution for all involved. An

\textsuperscript{12} This has changed with the introduction of trekking tourism, but the points that follow still hold.
old woman in Zhemgang explained the timeframe for re-establishing ordinary relations:

We also should not go near the lake if we have *drib*, for example, if someone has died in the village, we shouldn’t go near the lake before the 49 days of *puja* is complete. If a baby is born, we shouldn’t go near the lake before the three weeks of *pujas* are finished. Otherwise, we will have *drib* and will disturb the lake.

We can make a fire near the lake, because we need to burn incense, but we don’t do cooking at the lake - we prepare foods at home and carry them with us. If we throw dirty things into the lake, it will get disturbed and the rains will begin.

The Zhemgang village of these two informants is known to be a special place, because of the long-ago visit of the treasure revealer Terton Pema Lingpa, and a nearby lake with special properties. Although I was sent to the village in part because of the lake, my assistant did not want to go near it – presumably because of its powerful nature – so I did not get to view it. However, the well-traveled man explained what happens when people do not act properly near the lake.

We believe that when we serve Ap Tsen [the local protector deity] and Am Manma [the deity of the lake], everything will be peaceful and prosperous here in Buli.

[Was there a story about a time when people didn’t serve them properly? What happened?]

This is a very old story. A long time before, a man came from another village to this place. He wanted to visit the lake, so he took a man from here to go with him. He had some sort of dirty thing - a thing with *drib* - with him, and he threw it into the lake. A big black thing came out of
the lake, and the lake started moving around. The men got scared and ran back to the village. Here in Buli, the sky got dark, heavy rain came, thunder and lightning, fire spread on the ground. The man entered Ap Dorji’s house. Just after he entered the house, a sharp metallic stone fell out of the sky [like a thunderbolt, or something; they frequently talk about the sharp metallic stones that accompany lightning]. The stone fell onto a tree, cut the tree and killed the pigs underneath the tree. The crops were washed away in the heavy rain and the whole village was devastated. This happened when I was very small - I saw it with my own eyes, so it’s a true story.

In this story, we see both the consequences of disturbing the deity – heavy rain, lightning, fire – all of which could destroy the crops on which the villagers depend, and a sort of moral judgment resulting from this disturbance: the killing of the pig. As will be discussed in the next chapter, pigs hold an ambivalent position in the Bhutanese environmental imaginary. Their flesh is prized as celebratory food, but raising them is ethically problematic, because the only reason to raise pigs is to slaughter them, anathema to good Buddhists. Thus, in responding to the disturbance of her abode, the lake deity also casts judgment on the problematic practice of keeping pigs. This is not to say that pigs or keeping pigs causes drib, but pigs are associated with material pollution – dirt and filth – as will be discussed in the next chapter.

Managing waste as re-inscribing boundaries

Like pollution, garbage and waste are contextual, always occurring in relationship. The decision to discard something is as much as act of definition as is the choice to possess something (Gille 2007). Through disposal and removal, order is maintained and reinforced. Boundaries, of the self and the community, are
reinscribed. In Bhutan, a ruggedly mountainous country at the mercy of its verticality, the scientific control of waste can be seen as rebellion against non-human nature. Between the monsoon, the unrelentingly steep terrain, the dense forests, and the raging rivers, people in Bhutan have little room to define themselves as separate from their surroundings. Further, the Tibetan Buddhism practiced in Bhutan posits all beings within an interdependent web of co-origination, in which there is little separation between subject and context. In this condition, the introduction of scientific waste management creates the opportunity to exert control and dominance over powerful agentic non-human nature. In an environment where nature seems to hold the upper hand, in terms of agency and control, people can express agency and exert over the human settlements through the control of waste.

Removing waste from the household sharpens boundaries and defines space, protecting the interior through the restoration of order. By cleaning, we create boundaries, defining what “home” means, beyond the physical structure of a house (Douglas 1966: 69). That which is dirty, unseemly, rotten or impure is removed to outside the living space. This removal, however, carries different valences in varying cultural contexts. Notions about cleanliness/hygiene, in the Western biomedical sense, do not inhabit the same cosmological universe as ideas about cleanliness/purity in the Indian sense. When people in developing countries hear that a particular method will make the environment “cleaner,” ritual or religious definitions of cleanliness and purity are often assumed (Warner 1998: 2). And, indeed, they were
conflated by some of my interview respondents. One woman said, "Cleanliness depends upon their character – some like to stay dirty, some like to stay clean."

Another middle-aged woman in Zhemgang said, "When I clean the house and burn the garbage there, my mind feels clean. I feel happy when I burn the garbage."

Cultural aspects of public space in Bhutan and India

While Bhutan is geographically part of the Indian subcontinent, it inhabits different religio-cultural realm from much of India. Therefore, the scholarship on waste in South Asia that refers to the Indian context, in which purity and cleanliness are bound up with hierarchy and caste, is less useful for understanding the Bhutanese context. In India, those of the lower castes may be found using public space for all manner of private rituals, including washing, sleeping and defecating (Chakrabarty 1992). The teeming masses of the public space on the Indian subcontinent are then contrasted with the orderly public sphere of efficient, orderly streets frequented by public spirited citizens who pose no threat to public hygiene as in Europe and North America (Chakrabarty 1992; Kaviraj 1997b). The outside, or bazaar area, is frequented by everyone in India, but owned by no one, creating a frisson of excitement because of the potential for both malevolence and positive exchange. It is the place where one comes into contact with strangers, who are always suspect, and potentially dangerous. It is here that garbage collects, in a space not subject to a defined set of communal rules (Chakrabarty 1992: 543 - 544).
Similarly, in describing public and private space in Calcutta, as Sudipta Kaviraj (1997a: 98) describes a dichotomy between "what was one's own and what was not." She notes:

When the garbage is dumped, it is not placed at a point where it cannot casually affect the realm of the household and its hygienic well-being. It is thrown over a conceptual boundary. The street was the outside, the space for which one did not have responsibility, or which was not one's own, and it therefore lacked any association with obligation, because it did not symbolise any significant principle, did not express any values. It was merely a conceptually insignificant negative of the inside, which was prized and invested with affectionate decoration.

The cultural specificity of public space is important for understanding waste and pollution in Bhutan. Though the Tibetan Buddhist culture of Bhutan has different conceptions of purity and hygiene than Hindu India, it is influenced through proximity and the close political relationship it maintains with its neighbor to the south. In the last twenty years, Bollywood movies and Indian television serials have become powerful transmitters of Indian popular culture. However, in not following Brahminical codes of hierarchy, caste and purity, Bhutan has different conceptions of inside and outside, public space and private.

In contrast to the crowded urban spaces of India, Tibetan cultures perceive outer spaces as more welcoming. Tibetan cultures, including that of Bhutan, have a fondness for picnicking in pleasant weather, particularly in flat places near rivers. Picnicking has been described as a "national sport" of Tibetans (Tournadre and Rdo 2003: 283). In Bhutan, families around the country like to visit temples on weekends.
and holidays, often bringing a picnic or packed lunch along. Tibetans see Tibet as a vast place with plentiful resources, in which Tibetans don’t need to struggle or compete (Yeh 2007: 604). Today, Tibetan refugees in Bhutan are often described as “dirty” and “lazy.” Coming from a high, dry environment in which washing and bathing is difficult, and hardly necessary, since the aridity tends to kill microbes, Tibetans are not used to cleaning. As they move to lower elevations, mountain people learn that they cannot depend on climatic harshness for all their disinfection needs, and learn the customs of washing and bathing.

Similarly, the Brokpas, nomadic culturally-Tibetan mountain people in Ladakh, northwestern India, associate purity with the savage high elevation alpine realms, while the home is impure, because of its association with women, bovines and the dead (Bhasin 2008: 97). Shepherd and their flocks are intermediaries, moving between the impure domestic zone, and the pure alpine zone. The influence of both Indian and Tibetan perspectives on pollution, waste and cleanliness can be seen in Bhutanese attitudes, as the subsequent sections will show.

Understanding Bhutanese and South Asian conceptions of space is further complicated by the fact that theories about South Asian public space in India deal with large-scale urban public space. While Bhutan’s capital has recently grown to more than 80,000, no other Bhutanese towns hold more than 50,000 people, making it difficult to apply theories of urban space to these areas. Because Bhutan is primarily a
rural nation, with a small population, the definition of an urban area is scaled to the population. According to the Bhutan National Urbanization Strategy:

[F]or an area to be declared as ‘urban’ (Thromde) the following criteria (up to 75% implying 4 out of the 5 outlined) should be met:

a) A minimum population of 1,500 people;
b) A population density of 1,000 persons or more per square kilometer;
c) More than fifty percent of the population should depend on non primary activities;
d) The area of the urban center should not be less than 1.5 kilometers; and
e) Potential for future growth of the urban center particularly in terms of its revenue base (IPE and Gyaltsen Consultancy 2007: 18).

In addition, the dominant land use pattern in Bhutan has been that of scattered, loosely arrayed settlements, in which a family’s two or three-story home is surrounded by its own agricultural fields. In this condition the boundaries of ‘outside’ extend beyond the house to encompass the family’s fields, and even to its non-contiguous high altitude summer grazing pastures. In some areas, the villages are clustered, with footpaths winding between the houses. These village cores are enclosed by agricultural fields, again complicating the inside/ outside dichotomy of India’s public spaces.

*Protected space as proximate to the sacred center*

To understand how and why some places become littered, it is useful to consider their opposite: those places that custom requires to be kept clean. When waste is dumped over compound walls in Thimphu, or tossed in the forest in rural
Bhutan, it is placed there away from the family’s altar, or sacred space. As we have seen in Chapter 3, sacred space in the Himalayas is marked with a variety of installations and practices that connect Buddhists with the sacred aspects of the landscape. The sacred in the landscape is continually affirmed and reproduced through the construction of chortens, the discovery of terma, and pilgrimage to sacred sites. Pilgrimage brings the believer into interaction with a site of soteriological salvation that, through sheer proximity, offers the potential for liberation from earthly samsara (Diemberger 1998). Travel to, and circumambulation around, Buddhist holy sites puts the practitioner into “into sustained and close contact with a sacred center,” thereby allowing the practitioner to absorb some of the holy power and be cleansed of negative karma (Makley 2003: 601). As Tibetologist Toni Huber (1999a) has argued, these interactions strongly shape the practitioners’ understanding of space and their place in it.

Anthropologist Charlene Makley (2003: 601) explains the spatial consequences of the deity beliefs:

Deities' abodes are called gnas in Tibetan, meaning "place" or "abode" or, as an involuntary verb, "to be" or "to abide." These layers of connotations point to a pervasive "everyday ontology," operative among Tibetans across regions and social statuses, that emphasizes the substantial or embodied nature of their relationships with powerful, transcendent agencies and foregrounds contiguity as the principal means by which individuals or collectives interact with those agencies.

Further, the holiest gnas (pronounced “ney”), such as pilgrimage mountains like Kailas; monasteries like the Potala in Lhasa, Tibet; and “seats” of residence of
high lamas have cleansing or purifying effect, which is enhanced by proximity (Makley 2003: 601). Thus, Makley (2003: 601) concludes, “the social construction of space among Tibetans is generally characterized by the priority given to (purified) centrality over (impure) periphery.

This prioritization was evident in the Interlude before this chapter: Prem dropped her garbage outside the perimeter delineating the holy tree. The care lavished on holy sites sharpens the contrast between the purified core, which must be maintained in cleanliness and sanctity, and the ordinary periphery, which pales in the shadow of the holy sites and may be used with many fewer social constraints. All the effort of care and concern is placed on the holy sites, small places in comparison to the surrounding landscape, where people drop wrappers wherever they open a package. The protection of the few places that people avoid dropping garbage is the aberrant behavior that shows how religious fear trumps convenience.

At the same time, religious places must be carefully maintained in a clean and pure state. As we have seen in Chapter 3, deity phodrangs must not become contaminated with human waste or litter to avoid retribution of the deities. In addition, Khenpo Pema Norbu (2007), the head of Chador Lhakang in Bartsam, Trashigang, explained that several Buddhist texts admonish practitioners to maintain cleanliness: for the purpose of maintaining health, and also to create an inviting, pleasing and suitable space into which to welcome the presence of the gods. Thus,
monasteries and altar rooms must be maintained with shiny floors\(^{13}\) and clean walls to invite the gods. Further, he added that the Abhidharma-kosa (Skt), an important Buddhist text, instructs that people should not spit on ground – they should make a separate place to spit (Norbu 2007). People should not throw garbage anywhere – they should make a separate place for garbage. Outer cleanliness requires maintaining a clean environment, while inner cleanliness requires developing a good mind, not harming others, and working to benefit others (Norbu 2007).

**Cleaning up for the centenary and coronation**

The importance of proximity to, and cleanliness around, the sacred center, which is nearly synonymous with the monarchy in Bhutan,\(^{14}\) is evident in the example of the preparation for the Triple Crown of momentous events in Bhutanese history in 2008. Political and religious governing functions are carried out at the Dzongs, the largest and most important of which is Tashichhodzong in Thimphu. The Je Khenpo is the head of the Central Monk Body, while administrative matters were overseen by a position formerly known as the Druk Desi. From the time the Zhabdrung Ngawang Namgyal founded this dual system of government in the 17\(^{th}\) century, until the hereditary monarchy was founded in 1907, the Je Khenpo and Druk Desi were supposed to have essentially equal power, with one overseeing spiritual matters and

\(^{13}\) A condition achieved by having the young monks (who enter the monastery as early as six or seven years of age) skate around the polished wooden floors with rags bundled on their feet to raise the polish to a high shine.

\(^{14}\) Until the establishment of the monarchy, “lay officials had to assume a semi-monastic character before reaching high positions... [I]f a layman happened to become the sde-srid [pronounced: desi; the civil administrative ruler, as opposed to the spiritual ruler, or Je Khenpo] he was usually required to take the vows of the minor order and receive a new name” (Aris 1979: 262).
the other overseeing political matters. Although the Je Khenpo is still ostensibly of equal status to the king, and the only other person in the country who can wear the ceremonial yellow scarf, denoting highest rank, in practice, the Je Khenpo’s role has declined as Bhutan has engaged in economic development. In any case, the capital is therefore the seat of both sacred power and political power. Therefore the efforts to clean in up in 2008, in preparation for the centenary of the Wangchuk dynasty, the formal transition from monarchy to parliamentary democracy, and the coronation of the fifth king (who remains the head of state, but can be impeached by a two-thirds vote in Parliament), can be seen as efforts to shine the floors of the altar room, writ large.

In light of these momentous events, government officials wanted the country to be looking its best. Environmental leaders initiated cleanup programs in preparation for the celebrations of the Coronation and Centenary. Localities organized town and village cleanups as a gift to the Fifth King (Palden 2008). As anthropologist Anne Rademacher has noted, about the confluence of equally important political events in neighboring Nepal, “[u]rban environmental changes … functioned as highly symbolic assertions of national territorial control in a capital city at the center of an increasingly contingent state” (2008b: 105).

*Producing a clean and green capital city*

Although Bhutan was not facing exactly the types of contingencies that Nepal was in 2001, when the Maoist People’s War demanded an ended to the monarchy, as
Kathmandu prepared to host the eleventh meeting of the South Asia Association for Regional Cooperation (SAARC), the situation was parallel, with authority of the state was in an increasingly contingent position, as the Fourth King had declared that the country would transition to democracy in 2008. This abdication from the throne was very much against the will of the people who wanted their beloved king to continue serving as their benevolent monarch. Nonetheless, the king decreed that democracy was the way of the future, and one day, the people might find themselves with a king who did not hold their best interest at heart, so they best take the reins of democracy while the country was stable, peaceful, and increasingly prosperous. Along with the inauguration of democracy, the country expected an influx of foreign officials, dignitaries, and journalists, to observe and mark the Centenary of the monarchy, and the Coronation of the Fifth King. As with Kathmandu, “[u]rban environmental changes were officially framed as integral to an appropriate welcome for regional leaders” (Rademacher 2008b: 105). Thus, efforts to “clean and green” Thimphu, while presented as fitting preparation for the multiple celebrations, served to reassert the State’s power and territorial control. Rademacher further points out that “[t]he work of producing urban environments is therefore also the work of making states” (Rademacher 2008b: 107), which shows how fundamentally interconnected efforts to analyze and characterize the waste stream, increase public awareness and institute volunteer cleanups are with the particular moment in Bhutan’s history when it celebrated the conclusion of one hundred years of monarchy and ushered in democracy.
Perceptions of Thimphu, as the most populated and accessible city, as well as the seat of government, were therefore paramount to statemaking. With a national population of 634,982 in 2005-2006, one in eight persons lived in the capital city – and the rest of the citizens were widely dispersed around the country. Thimphu would be the place where international dignitaries were received, as well as the home of the largest number of citizens who could be mobilized to make the new (clean, green and democratic) state. If statemaking is “the ideological and organizational power of the central government to penetrate society, extract compliance, and invoke commitment” (Sivaramakrishnan 1999: 5), then the new emphasis on solid waste management, and in particular, personal responsibility for household waste management, represented a new method of articulating the state and its role in citizens lives. While the state was ostensibly devolving authority to the populace through the institution of democracy, it was also reasserting its power to “extract compliance and invoke commitment,” albeit through volunteer public mobilization. Indeed, motivation and mobilization of community members was identified as key to addressing waste management in these plans (RSPN 2006). To this end, the National Environment Commission presented a winter Youth and Environment program that included presentations on waste management that defined waste and offered ways to reduce waste, and a visit to Thimphu’s landfill. In spring 2008, RSPN launched its Clean Bhutan campaign, amidst much fanfare, at the Clock Tower, located in the central plaza at the heart of Thimphu. Residents gathered on the risers surrounding the Clock Tower to watch
entertaining presentations of music and dance with didactic messages about personal waste management.

Figure 4-1: Clock Tower Square, central Thimphu.

_Imaginaries of democracy and degradation_

Perhaps Bhutan was intent on avoiding the association of democracy with urban environmental degradation, as had happened in Nepal in the 1990s (Rademacher 2008b: 116 - 117). When democracy was re-instated in Nepal in 1991, after a hiatus of 32 years, expansion in the media and non-governmental sectors followed (Rademacher 2008b: 116). Economic expansion brought a significant increase in the material living standards in Kathmandu, and, by 1991, the population quadrupled – to
414,000 – from it 1951 size (Liechty 2003: 53). However, along with material exuberance came pollution and urban environmental decline, causing democracy to be conflated with environmental degradation (Rademacher 2008b: 116 - 117).

Democracy, and associated rapid urban growth, were seen as contributing to cultural erosion and ecological destruction, especially along the increasingly polluted urban sections of the Bagmati and Bishnumati rivers (Rademacher 2008b: 116 - 117). The public became frustrated with the mismatch between political promises and material reality, as environmental conditions worsened (Rademacher 2008b: 117). Following the ineptitude of the democratic era, the state of emergency (in response to the Maoist insurgency) was welcomed at first, because it implied responsibility and control, and a shoring up of the state (Rademacher 2008b: 118 - 119). Bhutanese officials often point to Nepal as an example of the path to development that they are trying to avoid – primarily in terms of tourism, population, and environmental degradation. Perhaps the officials also recognized that re-assertion of a strong state role, through “articulating the ‘state of the state’ to global and local audiences” (Rademacher 2008b: 121) in the urban environmental territory while transitioning to democracy, would indicate a national level vitality and capability that would not be lost to democracy, as it had been in Nepal.

_Waste management as a new phase of territorialization in service of the state_

Further, the control of the urban territory through the regulation of personal practices around solid waste management, and the compliance and commitment in the
personal management of household solid waste that the state was seeking to extract or invoke represent a new phase of territorialization in Bhutan. Territorialization allows the state to enumerate, settle, and control its people, and to protect the income it gains from taxes and natural resources (Vandergeest and Peluso 1995b: 390). Because tourism, which depends on the image of a pristine and picturesque Shangri La, is so important to Bhutan's economy and global interconnections, the state must protect this resource by maintaining the conditions that allow tourism to flourish.

Modern states reorganize land and people in nested territories delineated by spatial boundaries and hierarchies of administration — strategies that allow the state to control people's activities, including their use of natural resources (Vandergeest and Peluso 1995b: 401). Bhutan's history of government centralization and territorialization has accelerated dramatically in the past fifty years, following the abolition of serfdom and slavery by the third king in 1959. Following manumission, people were no longer classified according to their subservience to a common master, but as citizens of Bhutan, a bounded and identifiably territory (Wangchuk 2000). Although tensions between the three main ethnic groups have persisted, with the still unresolved tensions around the Southern Bhutanese reaching a crescendo in the late 1980s and early 1990s (Hutt 2003), my survey interview respondents and key informants all concurred that life has been significantly better since the changes begun

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15 Tashi Wangchuk (2000) argues that less than 10% of the Bhutanese population was composed of serfs or slaves in 1959. He asserts that the Western reading of Bhutan as a formerly feudal society is a mistake attributable to the training in Tibetan studies of most Western scholars of Bhutan.
by the Third King and continued under the Fourth King. Class distinctions have persisted, largely based on historic wealth, which allowed access to nutrition, healthcare, and education, creating the conditions for accessing government and business jobs. However, relative to Bhutan’s neighbors, India and Nepal, class distinctions are trivial, in that nearly all Bhutanese have subsistence food and shelter. Anyone lacking land sufficient for farming has the right to petition the king for a *kidu*, or grant of land (see, e.g., Wangdi 2009). Gender roles, while somewhat segregated, are similarly egalitarian, especially relative to Bhutan’s neighbors. Women inherit property, and new husbands often move into the matrilineal home, where they take on a large share of the household and agricultural chores. Women control household budgets, run shops and small businesses, and serve in government agencies and Parliament.

Subsequent to the liberalization of daily life following manumission, the government has increased its discipline of the daily lives of its citizens through the institution of income taxes, forest restrictions, and now solid waste management assessment and control. The government’s attempt to control people’s activities on the land – through control of the locations where waste can be disposed and the types of waste than can be disposed of – is what Vandergeest and Peluso (1995b: 412) term “functional territorialization:” “controlling what people do according to detailed land classification criteria.” Similar to the way that the Forestry Department became an important agent for managing government lands in Thailand (Vandergeest and Peluso
1995a), the Ministry of Agriculture (which includes the Department of Forestry, and the Nature Conservation Division that oversees national parks); and the Ministry of Works and Human Settlement (which oversees waste management and urban development) have become key agents of state territorialization in Bhutan.

**Territorialization for parks and protected areas**

Through territorialization for parks and protected areas, the Ministry of Agriculture oversees almost half of the country’s land. Nearly two-thirds (64%) of Bhutan is under forest cover; and the constitution adopted in 2008 requires that 60% of the country remain under forest cover in perpetuity. With the establishment of the 10th national park – Wangchuk Centennial Park, to celebrate the centenary of the Wangchuk monarchy – in 2008, Bhutan had 36% of the country under direct conservation through parks and protected areas. When the biological corridors (another 9.5% of Bhutan’s land area) running between the protected areas are included in the total, Bhutan has almost half of its land area under protected area status, the highest proportion in the world, according to Karma Dukpa, Director of Forests in Bhutan’s Ministry of Agriculture (Gurung 2009). Many of these parks are “paper parks.” Unlike national parks in many countries, these parks and protected areas have resident human populations with whom park officials work to manage the forests and wildlife. National parks staff often provide material improvements – such as tin roofs and electricity – to decrease residents’ dependence on the surrounding forests and increase their willingness to cooperate with park staff.
Territorialization for waste management

As described above, the Ministry of Works and Human Settlement has been the key state agency in regulating citizen actions into legibility with regard to waste. The state is increasing its territorialization of the urban capital through the implementation of the Thimphu Municipal Solid Waste Management Rules and Regulations in December 2007, which established environment inspectors as agents of the state, imposing fines of nu 100 to nu 500 for littering and illegal solid waste dumping in and around the capital (Pelden 2007). Fines up to nu 20,000 could be imposed for open burning of solid waste, public urination and defecation, and inappropriate dumping of soil and hazardous waste (Pelden 2007). With the adoption of the Waste Prevention and Management Bill, under discussion by both houses of Parliament as of June 2009 (Pem 2009), the state will have extended its reach more broadly into new areas of control of citizens’ practices.

Crop predation by wildlife as a driver of rural to urban migration

Despite its increasing intervention into the lives of its citizens through territorialization of rural and urban areas, the central government has been unable to address effectively the issue that rural farmers reported in my interviews as their most pressing: crop predation by wild animals (See also: Blench 2005a; Wang et al. 2006a; Wang et al. 2006b; Wang and Macdonald 2006; Palmeira et al. 2008; Sangay and Vernes 2008). Although my interviews were not oriented around human-wildlife conflict or crop predation, farmers linked wildlife predation to the rural-urban
migration, which is itself connected with urban waste management. The issue of livestock and crop predation also came up when I asked the interview subjects if they had anything else they wished to discuss. The Ministry of Agriculture has designated human-wildlife conflict at a key focus in its 10th Five Year Plan. However, the Director of Forests has emphasized the interdisciplinary collaboration needed for resolving human-wildlife conflict, together with the management of biological corridors, ecotourism management, anti-poaching and intelligence networking, and implementation of Integrated Conservation-Development Programs (ICDPs), all of which involve numerous local and national stakeholders, as well as international donor support (Gurung 2009).

Figure 4-2: Paddy field destroyed by wild boars in Tongzhang, Trashiyangtse.
A woman running a small shop near Radi, Trashigang, described the problems that result when villagers depart for urban areas:

When people leave, their fields revert to forest, such that the remaining fields become surrounded by forest. Then more wild animals come to eat the crops, and they eat more from each farm. If those people would stay, there would be no forest in the middle of fields, and the villagers could work together to scare away wild animals.

A young woman farmer, who is also a village health worker, in Tongzhang, Trashi Yangtse concurred with this connection between rural to urban migration and crop predation:

Many people leave from here to go to the urban areas. Yearly, 1-3 people go, and then finally the whole family goes. [In this particular village, there were previously 60+ households, now there are only 27.] The main problem is the wild boar and monkey that destroy the maize and paddy crops. People leave to earn money in developed areas like Thimphu. Here, they earn less.

To keep the wild boars away, wire mesh fencing would be better. If we chase the wild boar, it will often come back and attack.

Every facility is coming here, so we’re not thinking to leave the area, but we are looking for ways to prevent the wild boar from eating all the crops. I was born from here. My great grandparents are also from here. I like this village and have no desire to leave.

A male farmer in Radi, Trashigang, explained the intricate connections between rural to urban migration, decline of top predators, crop predation by wildlife, and human population increase and use of non-timber forest products. He suggests
that an increase in human population has resulted in an increase in use of NTFPs, which causes a decrease in food in the forest for other animals, which leads to an increase in crop predation, which causes an increase in frustration among villagers, who depart for urban areas [where ultimately they contribute to urban littering].

Furthermore:

Usually people from remote areas move because the areas are less productive, and the production is destroyed by wild animals.

These days, the leopard and tiger are not in the forest. If they were there, they would kill the wild boars, reducing crop damage. If we are guarding the field at night, the animal will enter from the opposite side. The animals might even sneak over to where we are sleeping, if we happen to fall into a deep sleep. Animals come nearby, eat right by our heads, and then go. In the past two years, some people didn’t get any yield from the maize.

If tigers or leopards come to the village, we can take care of our domestic animals. Before, in my teenage years, there was a thick forest – but no monkeys or wild boars came into the fields. I want to know what has changed? Why are all these naughty animals coming into the fields?

There are advantages and disadvantages. If there are tigers and leopards, at least the crops won’t be eaten. Before, there were tigers and leopards everywhere, and we didn’t find them killing domestic animals. I would rather take care of the domestic animals, and protect them from the tigers and leopards than have the crops eaten every year.

Due to the increase in population, the remaining trees in the forest are not useful. Before, there was a thick forest and low population. People didn’t make much use of forest products. They didn’t know what was edible in the forest. Now people became more intelligent and began
collecting forest products to sell, so there’s nothing left for the forest animals, so they eat the crops.

Thus, as I understand the chain of causality he is proposing: hunting and poaching of top predators leads to the decline in top predators, which leads to the increase in wild boar and monkey, which leads to an increase in crop predation, which causes frustration among villagers who have to stay up all night during the growing season guarding their crops, and still have very little to show for their efforts, which causes them to migrate to urban areas, which leads to an increase in littering. Therefore, to reduce urban littering, we need to restore top predators, perhaps providing incentives for keeping them alive, and compensation when they kill cattle, so that villagers can grow their crops in peace and stay in rural villages. Further, human populations need more reliable food sources (that are not devastated by crop predation) so that they will not harvest NTFPs, leaving those forest products as food for wildlife.

The man’s friend added that a lama could perform a religious ceremony to protect the crops from predation. However, it is a very great sin, because it withholds necessary nourishment from sentient beings:

Teshi Rimpoche, a Nyingmapa lama who was born in Tawang, in Arunchal Pradesh, can do a ritual that will protect a field for 3 or 4 years from monkeys. After the ritual, the monkeys will come right up to the boundary of the field, but will not enter. They will not touch the maize. They don’t think that it’s edible [as Prem said, they feel the
way you feel when you see *pak sha pak* (dried pork) – it doesn’t look edible]. To get him to do this, they have to go to the government and request permission for him to come, because he is Indian.

However, it is a great sin to perform this ritual, but for the sake of the human beings, he will perform it. There is also another Rimpoche, Namgay Ningpu Rimpoche from Bumthang who can also do it. But they don’t do it often, because it is a very great sin since it interferes with the way of life of others and prevents them from eating. Since it’s a great sin, they don’t want to do it often.

In emphasizing the magnitude of the sin caused by performing the ceremony to protect the crops, the farmer is expressing both his level of the frustration with the crop predation problem (the only way to protect our crops results in “great sin”), and his status as a good Buddhist, who hesitates to harm other beings, even if they are stealing his livelihood. This description also places the lamas who are capable of performing the ceremony in a paradoxical position: on the one hand, their role is to teach people the tenets of Buddhism, including, most especially, to avoid harming other beings. On the other hand, the lama may wish to help the villagers for whom they feel compassion because of the loss of their livelihoods. Buddhism does not accept a utilitarian accounting of deeds: the greatest good for the great number does not ensure the morality of actions. Rather, Buddhism posits a virtue ethic, in which acts are measured by their adherence to the teachings of the Buddha. The Buddha taught that it is wrong to harm or cause harm to come to any sentient being, and thus, in wanting to protect their crops, the villagers are caught in a paradox.
Territorialization as a driver of rural to urban migration

Although government territorialization restricts farmers’ practices with regard to protecting their agricultural fields, by prohibiting the killing of wildlife, and by increasing the amount of land under forest cover, according to village perception, two environmental ‘goods,’ these same territorializing practices have the consequence of encouraging people to leave their farms for the capital and other urban areas, where they will consume more manufactured goods and produce more garbage, two environmental ‘bads,’ which is exactly what the government does not want. Indeed, the National Urbanization Strategy calls for the development of outlying ‘satellite towns,’ which will provide amenities to villagers in the more remote parts of the country with the hope that they will not leave those localities for urban areas (IPE and Gyaltshen Consultancy 2007). This dilemma shows the inseparability of ‘green’ issues of forest production and biodiversity conservation, from ‘brown’ issues of urbanization and waste management. The simplification of territorialization of systematization and legibility obscures the intricate complexity and interconnection of the rural and the urban, the green and the brown. While the Ministry of Agriculture oversees issues of forests and wildlife, it is not in conversations with the Ministry of Works and Human Settlement, which is trying to manage rural to urban migration.

Further, the simplification resulting from territorialization does violence to the

16 Although farmers are generally opposed to killing wildlife because of the Buddhist prohibition against killing, as well as government restrictions, some suggested that they would kill wild boars, if it were allowed. While guns are very rare, the Bhutanese are great archers. NCD rules allow a farmer to kill a pest on his/her property in the act of destroying crops. Farmers say these limitations make it extremely difficult legally to kill pests in practice.
Buddhist organization of space in the concentric rings of a mandala, radiating from a central religious point (Vandergeest and Peluso 1995b: 395).

Rather than simplify through increasing control of practices and space, and through segregation of policy issues into distinct and non-communicating government silos, the government might the interconnections represented by the traditional Buddhist conception of mandala-like space, and work to integrate solutions across disciplinary divisions. As described above, waste management is intimately connected with rural to urban migration and crop predation. However, the Ministries handling these two issues are not in conversation with each other. Recognizing the interdisciplinary interconnections – in a more traditionally Buddhist way of thinking – might allow the government to find solutions to crop predation that would also keep people in the rural areas and decrease urban littering. Such Buddhism-based policy development is not unfamiliar in Bhutan. Indeed, the Fourth King, Jigme Singye Wangchuk, promulgated the notion of development based on a policy of Gross National Happiness, and has often stated “Gross National Happiness is more important than Gross National Product.” The king recognized that most socio-economic indicators measure means, rather than ends, and sought to highlight happiness as a policy objective. GNH begins with the idea that “happiness is the ultimate desire of all human beings and that all else is a means for achieving happiness” (RGOB 1999: 45). This formulation “places the individual at the centre of all development efforts and it recognizes that the individual has material, spiritual, and emotional needs”
(RGOB 1999: 45). This belief in personal well-being that is built on social, cultural, and spiritual needs in addition to material ones is based in the country’s Buddhist ethics that have guided the cautious economic development initiatives as the country has entered the modern age. However, with regard to the pressing issues of waste management and rural to urban migration, it seems that the government has adopted a less holistic and more atomistic approach. As the Bhutanese government struggles with managing waste and teaching its people to become ‘responsible’ environmental citizens, issues of religious, traditional and culture conceptions of space versus the modernist state-simplifications may gain valence for comprehending the mismatch between government objectives and on-the-ground outcomes.

Conclusion

This chapter has examined the myriad ways in which religion and spirituality have material ecological effects in Bhutan and the Himalaya, concluding with a suggestion that greater attention to indigenous beliefs may help the Bhutanese government address the related problems of rural to urban migration and crop predation by wildlife. The chapter began with a presentation of some empirical evidence of the material effects of religious and spiritual beliefs about the natural environment, as related to sacred natural sites. This evidence suggested the question: if religious and spiritual beliefs have a salubrious effect on ‘green’ environmental issues, in particular cases, what role might such beliefs play in shaping attitudes and practices surrounding ‘brown’ environmental issues, such as waste, pollution, and
urban land use? I showed the religious and spiritual beliefs play a role in shaping perceptions of environmental issues at both the local and state levels. Drawing on theoretical perspectives on pollution and waste, and Tibetan cultural perceptions of space, purity and pollution, I showed how ritual and material pollution are related in traditional Tibetan concepts of space at the local level. At the state level, I demonstrated how Bhutan’s recent waste crisis is not only a material crisis, related to increasing uncontrolled and unmanaged refuse, but also a spiritual and political crisis. This crisis of meaning arose with the devolution of power to the people through the implementation of democracy, and the government’s simultaneous reassertion of control through legislating people’s activities with regard to household waste. I argued that spiritual beliefs, in part, serve as a means of resisting the simplifying and territorializing activities of state power. I concluded by showing that state territorialization is incomplete, in that the government has been unable to resolve one of the most persistent difficulties in rural areas: agricultural crop predation, which, itself, has spiritual aspects, as indicated in farmers’ discussions of the issue. Throughout the chapter, I have argued that ‘green’ and ‘brown’ environmental issues, and rural and urban issues, are inseparable in Bhutan. Therefore, a holistic examination of urban waste management, rural to urban migration, and agricultural crop predation together, within the context of Bhutanese religious and spiritual perceptions, is essential to addressing the issues of concern to the Bhutanese villagers and government.
INTERLUDE 2 Returning to an Increasingly Trashed Bhutan

After a hiatus of four years, I returned to Bhutan in September 2007 to find it much changed. The plane waiting on the steamy tarmac at Bangkok hinted at the transformations ahead. The Airbus A319 jet accommodated one and a half times as many passengers as the earlier BAe 146-100, in which backpacks had to be checked planeside, and passengers were arranged by size to balance the plane. In the past, boarding the 70-seat BAe planes along with red-robed monks, sleekly fashionable royals, and development workers in beige trekking pants, I always felt as though I was slipping through the Looking Glass into a much more vibrantly colored version of reality.

This time, I joined throngs of American and European tourists bound for the famous fall festivals. As luck would have it, I was arriving in Thimphu, the capitol, the day before the famous Thimphu tschechu, a religious festival of music, dancing, and artistry that is the chief draw for cultural tourism. Attending the Thimphu tschechu is one of those once-in-a-lifetime trips that people plan for years – I was delighted at my good fortune when I discovered that the festival began two days after my arrival.

Though the landing at Paro was as precipitous as ever – the plane snakes between mountain ridges to descend steeply into a narrow, tree-lined valley – the hubbub at Paro Airport was much increased from the past. Tourists queued up, waiting to purchase their visas. Each individual or small group identified its smiling guide by the hotel sign announcing the tourist’s name. A handful of world-class
luxury hotels had sprung up in Paro in the past few years. With their unscuffed backpacks and shiny well-groomed good looks, the tourists’ appearances suggested the extra hotel costs, on top of the $200 daily fee, would be no problem. The guides, in their impeccable knee-length gho, ushered their charges into hand-polished SUVs and off to their fortress-like hotels.

Bewildered by lack of sleep after two days in transit, I looked around for someone holding a placard with my name. The Ministry of Works and Human Settlement, with which I would be working, had agreed to send a vehicle, as taxis don’t ply the airport. My contact, however, had returned to Bhutan, from one of his frequent study tours out of the country, only hours before my flight, and I wondered if he had been able to arrange transport for me. It would be a long 65-kilometer walk through a river gorge from Paro to the capital.
A ruddy-cheeked man in casual trousers and a sweatshirt approached, and said my name. He was a taxi driver, whom my contact at the Ministry had sent to fetch me.

We set off over winding roads that Indian laborers\(^\text{17}\) were painstakingly widening, in preparation for 2008’s Triple Crown of national celebrations: the monarchy’s Centenary, the Coronation of the Fifth King, and the introduction of democracy. Infrastructure improvements were proceeding at a frenzied clip to be ready for the commotion – and deluge of foreign dignitaries, journalists, and tourists –

\(^{17}\) The Indian laborers are temporary workers arranged through a partnership between the Bhutanese and Indian governments, often employed doing jobs for which there is no ready Bhutanese labor. Most follow Indian Hinduism. Because they are temporary residents, not citizens of Bhutan, and follow a different religious and cultural system, they were not included in my interviews.
expected to surround these events. In contrast to the formality and grandeur that would accompany the celebrations the following year, the Indian laborers worked by hand, bashing boulders into smaller stones, smashing stones into pebbles to fill in the road bed, stirring cauldrons of steaming tar, made out of 55-gallon drums, with long sticks and 2x4s. Entire families camped by the roadside in makeshift shacks, cobbled together from flattened oil drums, tin cans, blue tarps and wire. India’s Project Dantak, which has constructed most of the roads in Bhutan, serving its strategic defense interests, supplies and oversees the workers.

After a two-hour drive on winding mountains roads, we reached Thimphu and my hotel, an eight room guesthouse, frequented mainly by Indian tourists, who, because of the close relationship between India and Bhutan, are exempt from the daily tourist fee. Unlike the secluded new international hotels in Paro, my guesthouse was a series of simple concrete rooms above the noisy main street of town. When the bars closed, I heard the revelers joking and shouting at each other as they stumbled home. They awakened the packs of stray dogs, who would parry and challenge, defending their territory with barks and howls.

The town itself was a huge construction site. New hotels, multi-story apartment buildings, and concrete office buildings were going up everywhere. Changlimithang Stadium, the frequent site of archery matches and soccer games, was unrecognizable, buried in dirt and piles of bricks for its renovation into a suitable spot for the Coronation. Thimphu had swelled by more than 50% to nearly 80,000 people since my last visit. Families used to two-story single family homes, surrounded by
agricultural fields and forests, in the villages were now crammed into three and four room apartments whose technologies for living were strange and uncomfortable.

The congestion, construction and dust had rendered the formerly verdant town into a more stereotypical developing country capital. The influx of manufactured materials was evident in their discarded packaging and broken parts littering the open drains and footpaths. Tourists – expecting an environmental Shangri La – were beginning to complain. In letters to the newspaper editor, foreigners asked how a nation with a reputation for a pristine environment could have become so littered with trash and refuse. The convergence of these factors and others had brought the garbage issue to a head, and the government had requested that I study people’s attitudes and values around waste.

The issue soon became personal to me, when I returned from the Ministry’s office to my hotel one evening. As I walked down the narrow alley off the main street to the hotel’s entrance, I heard a noise and looked up. Household garbage rained down on my head as an unseen apartment dweller emptied a wastebasket out the window. School papers and wrappers floated down, mixed with food scraps and dried rice grains that pinged off a metal awning on their way down. A clod of dirt lodged in my eye, momentarily blinding me. I rushed up the stairs to foyer of the hotel where there was a sink for hand-washing, and dunked my head under running water. The proprietor saw me with my face under the faucet and asked what happened. She sighed with exasperation when I told her. The neighbors in the alley had been throwing their household garbage out the window of their flat for weeks, but no one
had been able to track down the culprit. Everyone denied throwing their garbage out the window. Months later, when I returned to Thimphu, and the hotel in August 2008, the practice was continuing, despite the hotel proprietor’s request to all her neighbors that they carry their garbage down the stairs for proper disposal. Finally, after her daughter was pelted with garbage, the proprietor and her daughter sent letters to all their neighbors on the alley, asking that they desist from throwing their garbage out the windows, or the police would be called. Later, the daughter told me, via email, that the neighbors had finally stopped throwing their garbage out the window, without the intervention of the police.
Chapter 5  Of Purity And Pollution

Introduction

The preceding extended vignette depicts some of the changes related to urbanization, infrastructure development, tourism, internal migration, and economic development that contribute to the Bhutanese government’s increasing concern for effective management of municipal solid waste and litter. Rural-urban migration and solid waste management are two of the five key environmental issues facing Bhutan, according to the UNEP and the National Environment Commission (UNEP-RRCAP 2001). Like most environmental issues, waste and migration are interdependent and mutually reinforcing. The influx of migrants places increasing stress on the urban infrastructure, at time overwhelming capacities for collection and disposal of waste. Domestic waste constitutes approximately 70-80% of solid waste in both urban and rural areas (RGOB 2002a).

In this chapter, I begin with social science framings that may help in understanding the persistence of behaviors that are effective in rural areas but not in urban areas. I return to the concepts of environmental imaginaries (Watts and Peet 1996b) and *habitus* (Bourdieu 1994/1998), discussed in Chapter 2, and consider how these concepts can shed light on waste management attitudes and practices among villagers and rural to urban migrants.
I then turn to a discussion of Bhutan’s garbage crisis, and how waste management came to be viewed as an issue of crisis proportions. Having established the context for the government’s concern about garbage and waste management in Chapter 4, I discuss the current state of knowledge about the production and disposal of garbage in Bhutan. Until 2008, there was very little data about the composition of the waste stream, attitudes about solid waste management, or waste disposal practices. The few previous studies were highly localized, and relatively small in scale (See UNEP-RRCAP 2001, discussed later in this chapter; RSPN 2006; Penjor 2007).

Figure 5-1: Thimphu Valley. Note the creep of urban development, in pinkish tones, up the sides of the valley on the right side of the photo.
During the 2007-08 fiscal year, the Ministry of Works and Human Settlement oversaw two larger scale studies of solid waste management: one led by Sherub Phuntsho (Phuntsho et al. 2008), an engineer in the Ministry, which examined the urban waste stream in ten towns across Bhutan; and my study, reported here (see also Allison 2008a; Allison 2008b), which examined rural waste management attitudes and practices in rural areas of three districts. As early as 1998, the National Environment Commission pointed out that rural to urban migrants carry their rural practices with them, when they settle in urban areas (NEC 1998, as cited in UNEP-RRCAP 2001). However, none of the previous studies examined these practices in detail or described how they might relate to urban household waste management, and consequently, few inroads have been made in terms of addressing or responding to this issue. Therefore, I describe local-level attitudes and practices related to waste in rural areas, describing which materials are identified as waste, and how they are handled.

Mental models and habitual actions

As Chapter 4 demonstrated, waste management is not simply a technocratic and engineering problem, it also reflects the notions people have about their surrounding environments, and appropriate modes of action therein. Mental models of ways that people perceive, discuss, and work in nature can be understood as ‘environmental imaginaries’ (Watts and Peet 1996b), as discussed in Chapter 2. Shaped by physical surroundings, material practices, and discursive representations, environmental imaginaries are expressed in shared stories, narratives and habits of
thought. These mental models, which come to be naturalized within a community’s thinking – “that’s just how it is” – are often expressed in spiritual or religious terms, and sanction practices that are regarded morally proper with respect to nature (Watts and Peet 1996b). Thus, social interaction – through perception, discussion and work – contributes the creation of perspectives on the natural environment. At the same time, the possibilities and limitations of the natural environment shape social and cultural perceptions and habits. Contained within environmental imaginaries are the community’s beliefs about actions that are appropriate and permissible in response to the surrounding environment, that is, values in relation to the natural environment.

Though they influence the actions of those of a particular community, environmental imaginaries often remain unarticulated. Because they are unarticulated, environmental imaginaries are often contested, with various segments of society possessing differing or competing environmental imaginaries. Differing social, cultural, and environmental backgrounds give rise to differing environmental imaginaries. Changing environmental conditions, for example, increasing urbanization, new social and political structures, changing educational patterns, may alter the ways in which the natural and social mutually condition each other. Conflicting environmental imaginaries – that is, conflicting opinions about what is moral and proper in relation to the surrounding environment – may underlie complex and intractable environmental dilemmas, which Bryant has described as “politicized moral geographies” (Bryant 2000).
Environmental imaginaries in conflict

An example of conflicting environmental imaginaries can be seen in the contested management of household waste. Over centuries of practice and experience, rural people have methods of managing kitchen scraps, based on a connection with their landscape and livestock. By working as equal partners with the land, rather than omniscient managers or governors, people develop relationships with places. As Marx suggested, a connection to the land is forged through working with and on it. The separation between humans and nature is a “metabolic rift” that disrupts the flow of energy and nutrients. Marx noted,

Man (sic) lives from nature, i.e. nature is his body, and he must maintain a continuing dialogue with it if he is not to die. To say that man’s physical and mental life is linked with nature simply means that nature is linked to itself, for man is part of nature (Marx, cited in Foster 2000: 158).

As a part of nature, humans contribute its well-being by, for example, maintaining the fertility of soil on small-scale farms. Through this and other forms of labor, humans are linked with non-human nature. In this context, feeding kitchen waste to livestock, and using livestock manure to nourish the fields feels right, because it maintains the metabolic connections between people and their surroundings. This practice is an example of habitus, durable, transposable dispositions that respond to the conditions of possibility of a particular environment, as described in Chapter 2 (Bourdieu 1994/1998). Habitual practices, developed in response to the physical
demands and opportunities of particular spaces, naturalized through repeated practice over time, drive options and possibilities of environmental action.

Environmental management practices occur not only in space, but also create certain kinds of space. According to French sociologist Pierre Bourdieu,

*Habitus* are generative principles of distinct and distinctive practices – what the worker eats, and especially the way he eats it, the sport he practices and the way he practices it, his political opinions and the way he expresses them are systematically different from the industrial owner’s corresponding activities. But *habitus* are also classificatory schemes, principles of classification, principles of vision and division, different tastes. They make distinctions between what is good and what is bad, between what is right and what is wrong, between what is distinguished and what is vulgar, and so forth, but the distinctions are not identical. Thus, for instance, the same behavior or even the same good can appear distinguished to one person, pretentious to someone else, and cheap and showy to yet another person [1994/1998: 8].

Through persistent practice, the *habitus* of living with a specific landscape develops with specifically adapted micro-practices. Because *habitus* responds to the social and material conditions of possibility, personal *habitus* will develop differently in a rural village, than in a congested urban area. The sets of practices that served villagers well in isolated mountain villages are less suitable within the confines of a concrete apartment building in an urban setting. As *habitus* are durable dispositions, villagers continue to practice these habits and desires in their new settings. However, developed in a materially different condition, *habitus* does not respond to these new surroundings.
As Marx noted, wage labor and capitalism, resulting in alienation from both the land and the means of production, disrupt the human-nature metabolism (Foster 2000). In the city, citizens are compelled, by the geographic and social space of the city to adopt a different sort of environmental imaginary. Urban residents are no longer closely surrounded by a large, dense and seemingly inexhaustible forest that with the capacity to bury all their wastes. They are told it is no longer appropriate to dispose of their wastes in the rivers that will wash everything clean.

Marx’s proposal for restoring metabolic relations between humans and the earth – dispersed settlements, blurring the line between town and country, that integrated both industry and agriculture (Foster 2000: 174-175), sounds remarkably akin to the dispersed settlements of the Bhutanese countryside – the very settlements that are disrupted by rural to urban migration, as described in Chapter 4, and that the Bhutanese government wishes to maintain.

Helping rural residents find ways to remain in their villages, with additional material amenities, would both restore metabolic relations between humans and the earth, and address the competing environmental imaginaries that create difficulties for the rural migrants in their new urban surroundings. Bourdieu defines habitus as “a feel for the game, that is, the art of anticipating the future of the game, which is inscribed in the present state of play” [4: 25, italics in the original]. This definition provides insight into part of the reason that waste management efforts in Bhutan have been incompletely successful: personal waste management is a new “game” with
which many of the players – citizens – are not yet familiar. Further, this “game” has
developed in a different context – that of policy halls, campuses and classrooms of
North America and Europe – where the conditions of possibility in the surrounding
environment, both physical and social, are quite different. Though foreign-educated
Bhutanese policymakers have learned the 3R concept of ‘reduce, reuse, recycle’ at
international universities, they have not adapted it to resonate with Bhutanese cultural,
social and geographical norms. Rather than being overlaid onto Bhutanese culture,
these concepts must be adapted to the local environmental imaginaries and cultural
norms and practices. In the sections that follow, it will become evident how
unfamiliar and incongruous Western waste management techniques are in the
Bhutanese context. Based on the description of the symbolic and ritual aspects of
waste and pollution, provided in the previous chapter, the Bhutanese government
might find more success in developing waste management strategies that draw on
indigenous concepts of purity and pollution, rather than grafting exogenous 3R
concepts onto the Bhutanese experience.

Knowledge of the Waste Stream, before 2007- 2008

A State of the Environment report for Bhutan, prepared by the National
Environment Commission, with assistance from the United Nations Environmental
Programme – Regional Resource Center for Asia and the Pacific (UNEP-RRCAP)
estimated that domestic waste constituted 70%-80% of the solid waste stream, in
urban and rural areas, with waste generation assumed to be 0.3 kg/day/ per capita,
across the country (UNEP-RRCAP 2001: 92). In Thimphu, eight garbage trucks collected approximately 8-10 metric tons of waste for delivery to the landfill, from strategically placed concrete bins and from door-to-door, each day (UNEP-RRCAP 2001: 92-93). Although Memelakha is a dumpsite, rather than a sanitary landfill, lacking the technology to prevent waste and detritus from escaping into the air, water and surrounding environment, in corraling most of the municipal solid waste in to one location, the Memelakha landfill was an improvement over the rest of Bhutan: “in other urban areas [garbage] is disposed off either in rivers/streams, valleys or in low lying areas” (UNEP-RRCAP 2001: 95). The report noted the lack of specific solid waste management policies, as solid waste had been subsumed under the Water and Sanitation Rules, and called for focused legislation, as well as more detailed and comprehensive data on the components of the waste stream, so that opportunities for source reduction, source separation, and recycling could be identified (UNEP-RRCAP 2001: 96).

As many of the figures in the 2001 State of the Environment report were estimates, a 2006 report by the Royal Society for the Protection of Nature, one of the few domestic non-governmental organizations in Bhutan, brought some needed specificity to undergird policymaking. RSPN conducted the first detailed study of municipal solid waste in Thimphu and Phuentsoling, during two weeks in August 2005, by conducting week-long surveys of the waste brought to each landfill site, and by surveying the household waste of 35 randomly selected homes in the two cities
This survey found that Thimphu produced 36 metric tons of garbage a day, or more than 220 metric tons of garbage per six day collection week, an increase over the previously estimated amount of 14 tons per day in 1998 (RSPN 2006: 19). Phuntsholing, the second largest town in Bhutan, located at the southern border with India, generated more than 148 tons per week (or 24.76 tons per day), as compared with 12-13 tons per day in 2002 (RSPN 2006: 19). Extending its focus out from the urban areas, the report also noted “with more of the rural areas becoming accessible to market and external products, garbage is a cause for concern in the rural areas as well.”

Conducting research for his master’s thesis, over three months, March to May, 2007, Penjor (2007: ii, 16) found that approximately 32 metric tons of commingled wastes were delivered to the Memelakha landfill site in Thimphu each day, out of an estimated waste stream of around 65 metric tons/ day. Penjor’s estimate of the total waste stream included collection and weighing of waste at the landfill and a 24-hour waste sample collection from 351 sample waste generating sources, including 148 households, 135 shops of various types, and 138 other institutions, including schools and government offices. Penjor suggested that vendors and informal scrap pickers were collecting the un-landfilled portion of the waste stream for sale in India (Penjor 2007: ii).

He noted that the systems set up in 1993 for waste collection and disposal had not changed, while the population of Thimphu had nearly doubled to 80,000 within the
26 square mile urban area (Penjor 2007: ii). A lack of legal and policy guidance, as well as a lack of financial, technological and human resources were hampering the institution of scientific waste management (Penjor 2007: 48). Penjor recommended the establishment of tipping fees to pay for garbage services; formalization of regional waste management agreements; encouragement of the private sector to become involved in waste management; increased public education about waste management, especially with regard to the “three R’s” (reduce, reuse, recycle); and establishment of source separation of the waste stream (Penjor 2007: ii). He called for a longer and more intensive study of solid waste generation and disposal in Thimphu, as well as a study of the institutional capacity at the national level, to identify the human resource training and development necessary to develop and implement scientific solid waste management practices (Penjor 2007: 48-49).

### Table 5-1: Municipal Solid Waste Estimates (in metric tons/day).

<table>
<thead>
<tr>
<th></th>
<th>2001/2002&lt;sup&gt;18&lt;/sup&gt;</th>
<th>2005&lt;sup&gt;19&lt;/sup&gt;</th>
<th>2007&lt;sup&gt;20&lt;/sup&gt;</th>
<th>2008&lt;sup&gt;21&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thimphu</td>
<td>8-10</td>
<td>36</td>
<td>32-65</td>
<td>unknown</td>
</tr>
<tr>
<td>Phuntsholing</td>
<td>12-13</td>
<td>25</td>
<td>NA</td>
<td>unknown</td>
</tr>
</tbody>
</table>

Table 6 reveals several important characteristics of Bhutan’s municipal solid waste situation: first, its rapidly-increasing quantity; second, the difficulty in

<sup>18</sup> UNEP-RRCAP 2001, RSPN 2006  
<sup>19</sup> RSPN 2006  
<sup>20</sup> Penjor 2007  
<sup>21</sup> Although Phuntsho, Herat and Yangden (2008) were able to generate per capita rates of solid waste production for Thimphu and Phuntsholing, they could not generate citywide estimates in the absence of reliable data on the number of commercial establishments, offices and schools. (Phuntsho, pers. comm. 7/17/09).
estimating it with any precision; and third, and perhaps more interestingly, the wide variability in data purporting to measure the quantity of the waste stream. The difficulty in measuring the waste stream relates to a number of factors specific to Bhutan, and to the material nature of municipal solid waste. With regard to the specific material conditions of Bhutan, residents have historically lived on small, widely-dispersed family farms, where they were responsible for meeting all their own subsistence needs through agriculture, animal husbandry, and trading. Most rural localities in Bhutan are not villages in the usual sense of a large number of tightly gathered family homes surrounded by fields. Rather, rural Bhutanese homes tend to sit in the middle of associated agricultural fields, surrounded by open space. A few to a few dozen households may be grouped together, but most rural localities do not have major village centers. Forests, ravines and cliffs surround the fields and farms, providing ample opportunities for discarding unneeded items. Thus, those who have settled in the urban areas many not have fully embraced the urban norms of placing unneeded items in garbage containers for delivery to the landfill. As Penjor estimates (2007), as much as 50% of the municipal solid waste stream is not being delivered to the landfill, both because of open littering and because of small scale traders and scrap collectors.

Second, the material nature of waste is changeable and fugitive, that is, waste is always in the process of becoming something else. Waste crosses categorical boundaries, moving from usefulness, to waste, and sometimes back. In the case of
organic material, which is estimated to compose 50-70% of Bhutan’s waste stream (RSPN 2006; Penjor 2007; Phuntsho et al. 2008), the waste may decompose, be scavenged by stray dogs, or be fed to livestock, depending on particular conditions. It is hard to quantify the waste stream if some portion of that waste intermittently enters the stream. Small traders may also rescue other materials, such as metals, glass bottles and some plastic bottles, for reuse or recycling through resale. Again, this process is indeterminate and changeable, depending on market conditions that affect the traders.

RSPN’s study, and Yeshey Penjor’s master’s thesis (2007), provided the only data on waste generation and disposal for Bhutan. As Phuntsho, et al. note in their new study of solid waste management in ten towns of Bhutan:

In the absence of reliable solid waste data in any form in Bhutan, an arbitrary data reported in few of the available literatures have been used by both the local municipal authorities in the planning and design of municipal waste management infrastructures and also by the national planners in the preparation of national waste management plans and policies. The issue of solid waste especially in the bigger urban centres of Bhutan has been increasingly expressed by the residents and acknowledged by the urban authorities. Interestingly, little efforts are made [sic] to develop and maintain any form of data both at the local and national levels (Phuntsho et al. 2008: 2).

In addition to the lack of solid data about the quality and quantity of waste that Phuntsho et al. diplomatically point out, the lack of attention to waste management was somewhat surprising in light of the government’s propounded abiding concern for the natural environment, built on the ancient and traditional Bhutanese beliefs (RGOB
1998b; RGOB 1999; RGOB 2008a). Article 5 of the newly adopted Constitution of 2008 describes the duty of every citizen to protect the environment.

It is the fundamental duty of every citizen to contribute to the protection of the natural environment, conservation of the rich biodiversity of Bhutan and prevention of all forms of ecological degradation including noise, visual and physical pollution through the adoption and support of environment friendly practices and policies (RGOB 2008a: 11).

In contradistinction to the much-lauded Bhutanese affinity for the natural environment, the garbage littering the streets and trails (Dema 2005; editorial 2008) presented a jarring image to foreign visitors, who arrived expecting to find a pristine Shangri La (Dendup 2008). The variance between rhetoric and practice suggests the existence of multiple or competing environmental imaginaries, influenced as much by the international training of engineers and policymakers, as by traditional religious beliefs.

**History of Waste Management in Bhutan**

As recently as the early 1990s (and to some extent, continuing today), municipal waste disposal in Thimphu was on an “ad hoc” (or uncontrolled) basis (see Figure 2). The “landfill” or dump at Memelakha was established in 1994, designed for capacity of eight to ten metric tons per day for a period of 7 years. Fifteen years later, the dump is still in use, with daily waste deliveries exceeding the original plan by *three* times, at 36 metric tons per day. Thimphu’s Memelakha landfill site was
created by building a retaining wall across a ravine about 12 kilometers from Thimphu, and lacked a leachate collection lining, methane gas ventilation system, or other technological improvements of modern landfills. Indeed, during my visit in 2007-2008, the escaping gases combusted and burned uncontrollably for weeks (see also Phuntsho et al. 2008; Wangmo 2008a). As early as 2001, city authorities were aware of the need to locate and prepare a new landfill site (UNEP-RRCAP 2001: 93), however in 2009, they were still looking for an acceptable site, and planned to use Memelakha for another five to six years (Wangmo 2008a).

Figure 5-2: Household waste behind a home in one of the nicer areas of Thimphu. Feb. 2008.

The National Environment Commission, the Ministry of Works and Human Settlement, and the Royal Society for the Protection of Nature are responsible for improving urban waste management. These agencies and others are employing a multi-pronged strategy of law and policy development, public awareness campaigns,

**Urban areas and waste management**

While NEC was charged with developing policy, the Ministry of Works and Human Settlement (MOWHS), tasked with infrastructure development throughout the country, is responsible for its implementation. Previously, this branch of government was known as the Ministry of Construction, with the Departments of Roads & Bridges, and of Urban Development & Housing, within it. The Ministry was later renamed to capture its broader mission, and the Department of Urban Development & Housing became the Department of Urban Development and Engineering Services (DUDES), where I was placed. In addition to overseeing national level infrastructure development, MOWHS coordinates with the autonomous city corporations that govern
the two largest urban areas: Thimphu (where the population in 2005 was just over 79,000) and Phuentsoling (with a 2005 population of 20,000 – see Table 2). According to the Thimphu City Development Strategy (RGOB N.d.), Thimphu is expected to grow to 120,000 people – twice as large as the second biggest city, Gelephu – by 2020. In light of the rapidly growing urban population, the government focused on solid waste management in the first decade of the 21st century. Note that, other than Thimphu, the capital, in the northwest part of the country, most of the fastest growing towns, at 5% - 10% annually, are at or near the southern border with India. This situation creates an interesting symbolic problem for the Bhutanese government, which identifies “Bhutaneseness” with the culture and habits of the northern groups of Ngalops (those from western Bhutan, who hold much of the political power), and Sharchops (those from eastern Bhutan, who are more populous, but less represented in government, in part because the seat of government is located in western Bhutan). By contrast, the Lhotsampa, or Southern Bhutanese of Nepali ethnicity, who migrated to Bhutan in the 19th and early 20th century, dominate along the southern border (see Hurt 2003 for details of this extremely contentious situation.)

<table>
<thead>
<tr>
<th>Table 5-2: Largest towns in Bhutan, with urban growth rate and calculated projections.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Town</strong></td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>Thimphu</td>
</tr>
<tr>
<td>Phuentsoling</td>
</tr>
<tr>
<td>Gelephu</td>
</tr>
<tr>
<td>Town</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Wangdue Phodrang</td>
</tr>
<tr>
<td>Monggar</td>
</tr>
<tr>
<td>Chukha</td>
</tr>
<tr>
<td>Samdrup Jongkhar</td>
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<tr>
<td>Samtse</td>
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<tr>
<td>Gedu</td>
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<tr>
<td>Gomtu</td>
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<tr>
<td>Bumthang</td>
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<tr>
<td>Paro</td>
</tr>
<tr>
<td>Trashiyangtse</td>
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<tr>
<td>Trongsa</td>
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<tr>
<td>Dewathang</td>
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<tr>
<td>Trashigang</td>
</tr>
<tr>
<td>Zhemgang</td>
</tr>
<tr>
<td>Paro</td>
</tr>
<tr>
<td>Punakha</td>
</tr>
<tr>
<td>Pemagatshel</td>
</tr>
<tr>
<td><strong>TOTAL URBAN POP</strong></td>
</tr>
</tbody>
</table>

Calculated from figures from BNUS (IPE and Gyaltshen Consultancy 2007). Bold names and figures distinguish towns near the southern border with India.

In 2004, the National Environment Commission submitted a State of the Environment Report to the National Assembly for the first time. After beginning with the caveat that the report was not intended to criticize any government agency or...
official, it assessed the effects of Bhutan’s development activities on the conditions of air, water and land and concluded:

Growth in urban areas, population, and increasing infrastructure is fast becoming one of the major emerging issues for the environment and natural resources management in Bhutan. Pressures in urban areas manifest in the form of converting prime agricultural land for infrastructural development, increasing pressures on surrounding forests and watersheds, and inadequate waste management. It is important to consider these increasing pressures in planning and development [sic] of urban centers. Urban planning should include measures for managing issues such as air pollution, solid waste management, protection of water bodies, and protection of critical watersheds (RGOB 2004: 17).

This concern was picked up again the next year, when at a 2005 World Environment Day presentation to government and NGO leaders, Lyonpo Kinzang Dorji, the Minister of MOWHS, warned that litter and uncontrolled solid waste threatened Bhutan’s reputation as a ‘green’ destination (Dema 2005).

An NGO works to create a public private partnership

The Royal Society for the Protection of Nature (RSPN), one of the few non-governmental organizations in Bhutan, established a public-private partnership for the urban environment (PPPUE), with support from the United Nations Development Programme. The purpose of the PPPUE was to create a Policy Framework for Solid Waste Management (RSPN 2006), through which stakeholders addressing solid waste issues could meet together in a neutral forum and develop an action plan, building on existing policy. The Policy Framework document offers a thorough review of the policies related to waste management, beginning with the Action Plan for Thimphu
1992, and extending through the Ninth Plan Main Document (2002-2007) (RSPN 2006: 12-18). It should be noted that these policies are primarily related to the urban environment, as suggested by the name of the partnership. RSPN did not undertake a survey of rural waste issues. Further, the study found that biodegradable material made up 57.28% of the daily garbage dumped at the landfill in Thimphu, and 90.21% of the waste dumped at Phuntsoling, and suggested that these figures represented an opportunity to develop composting programs to handle the biodegradable wastes (RSPN 2006).

**Efforts toward municipal composting**

The Ministry of Trade and Industry constructed a municipal composting plant in Thimphu, but plagued by difficulties, including lack of connection to power lines, the plant has been under construction for years, but has yet to begin divert waste from the landfill (Dema 2007). With 8.1 million ngultrum of assistance\(^{22}\) from Danida, the Danish aid agency, construction began in 2005. Funds traveled through Environment and Urban Sector Programme Support (EUSPS) to the Ministry of Trade and Industry (MTI), which constructed the plant, and then turned it over to the Thimphu City Corporation to operate (Dema 2007).

The initiation of the project was delayed by the search for a suitable site. The original plan called for co-locating the compost plant with the facility of Bhutan Agro Industries Limited (BAIL), where waste produce could be composted. However,

\(^{22}\) Approx. $163,806 with 49 ngultrum = $1
officials raised concerns about possible food contamination resulting from siting the waste management facility in close proximity to BAIL's food production, and the compost plant was shifted to a new location. However, the new location lacked necessary infrastructure for the operation of the compost plant: fencing, a power substation and a blacktopped road. The plant was built, but project documents indicate that an additional 8,776,724 ngultrums were needed to complete 1.2 kilometers of blacktopped road, along with the power substation and fencing. City officials expected the plant to become operational in March 2008, but by August 2008, it had not come on line. During summer 2008, a city official visited the plant, along with two truckloads of biodegradable waste, to ensure that all was in working order. When he pressed the button to turn on the shredder, he found that, even though the power supply had reached the facility, the shredder was not working. Though disappointing, this did not seem to be much of a surprise to my informants, who were used to the slow pace a "one step forward, one step back" trajectory of development. At the time of my August 2008 visit, City officials were investigating the reason for the shredder's non-operational condition and seeking additional funding to complete the road and fencing. In March 2009, the Thimphu City Corporation requested bids for a contractor to construct fencing around existing compost plant at Serbithang, so it may eventually become operational. However, as it was planned to use the by-products from the agricultural processing of Bhutan Agro-Industries, it will probably not divert household waste from the landfill. While home composting for enriching agricultural fields is practiced in rural areas, city dwellers have not continued the
practice, even though many have gardens and even small orchards. Composting is not unfamiliar in the South Asian context. Composting as an engineered process began in India in 1925, when Sir Albert Howard systematized and publicized the long-used processes of farmers (Hickman Jr. 2001). The process of alternating layers of garbage, animal manure, human waste, sewage sludge and straw to produce humus for gardens became known as the “Indore Process,” after the country where Sir Albert’s work took place (Hickman Jr. 2001). Some Thimphu residents are actively composting kitchen scraps (see Figure 3), though most of the urban residents I spoke with said that composting was not practical. Only one urban resident reported using kitchen scraps to fertilize her kitchen garden.
Figure 5-3: A rare compost bin at Thimphu home.

*Toward a national characterization of the solid waste stream*

The Ministry of Works and Human Settlement, Department of Urban Development and Engineering Services organized the first-ever national study to characterize the waste stream, in ten urban areas of Bhutan, in fiscal year 2007-2008 (Phuntsho et al. 2008). The study sought to determine daily waste generation rates in the various towns, and among various sectors (households, commercial establishments [including retail shops, restaurants, bars, general shops, grocery shops, and the like], offices, and schools. The study used sampling at source to examine the components of the waste stream, and discussed current municipal solid waste management practices in the towns surveyed.
The most important finding of the study was the average household per capita waste generation rate of 0.253 kg/day, with a range from 0.18 kg/day in Damphu to 0.36/day in Paro, which will also government officials and planners to design systems appropriate to the amount of waste being generated (Phuntsho et al. 2008). The study found that each commercial source (a sample that does not include industry or manufacturing) generated an average of 2.4 kg/day, while office workers generated an average of 0.207 kg/day (Phuntsho et al. 2008). However, the results of the study were hampered by an inability to determine the exact number of commercial establishments or office workers in the towns surveyed, which meant that the researchers could not determine the total daily waste generation in the towns (Phuntsho July 15, 2009).

The researchers also characterized the waste stream, determining that it was composed of 50-66% organic material (with variations in different towns); 11-25% paper and paperboard; 9-16% plastic; 3-11% textiles and leather; 2-9% glass; 0-3% metals; 0-2% electrical materials and electronics; and 0-5% other items, including ash, dust, construction waste, batteries and household chemicals (Phuntsho et al. 2008: 7-9). These figures, particularly the proportions of organic material and paper/paperboard suggest that waste diversion from the landfill for municipal composting could do a great deal to reduce the waste going into the landfills and dumps (Phuntsho et al. 2008: 28). The researchers found that current municipal solid waste management practices in the ten towns surveyed were “quite poor and primitive,” as
the towns relied on indiscriminate dumping, open burning, concrete rubbish collection containers, and dumps that lack linings, leachate collection, compaction and sanitary soil covering, technologies that would enhance public health and safety (Phuntsho et al. 2008: 29, 13 - 16).

It is interesting to compare the towns surveyed (Table 3), with the table of the most populous towns of Bhutan (Table 2). Rather than focusing on the ten most populous towns (Thimphu, Phuntsoling, Gelephu, Wangdue Phodrang, Monggar, Chukha, Samdrup Jongkhar, Samtse, Gedu, Gomtu), or the towns with the highest growth rates (Gomtu, Trashiyangtse, Thimphu, Phuntsoling, Samtse, Gedu, Samdrup Jonkhar, Gelephu, Monggar, Zhemgang), the survey took a more politic sample, that included the town of the national airport (Paro), and the town of the spiritual heart of Bhutan (Bumthang). The sample also provided an even split between northern and southern towns, while a sample based on size or growth rate would have tilted more heavily toward the south.

Table 5-3: Population of MSW Study Survey Towns.

<table>
<thead>
<tr>
<th>Towns</th>
<th>Total population (2005)</th>
<th>Average Population growth rate (%)</th>
<th>Population 2007 (projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thimphu</td>
<td>79,185</td>
<td>11.1%</td>
<td>97,740</td>
</tr>
<tr>
<td>Phuntsholing</td>
<td>20,537</td>
<td>11.1%</td>
<td>25,349</td>
</tr>
<tr>
<td>Samtse</td>
<td>4,981</td>
<td>11.1%</td>
<td>6,148</td>
</tr>
<tr>
<td>Paro</td>
<td>2,362</td>
<td>11.1%</td>
<td>2,915</td>
</tr>
<tr>
<td>Gelephu</td>
<td>9,199</td>
<td>5.0%</td>
<td>10,142</td>
</tr>
<tr>
<td>Damphu</td>
<td>1,666</td>
<td>5.0%</td>
<td>1,837</td>
</tr>
<tr>
<td>Samdrup Jongkhar</td>
<td>5,952</td>
<td>1.4%</td>
<td>6,120</td>
</tr>
<tr>
<td>Bumthang</td>
<td>3,246</td>
<td>5.0%</td>
<td>3,579</td>
</tr>
<tr>
<td>Trashigang</td>
<td>2,383</td>
<td>1.4%</td>
<td>2,450</td>
</tr>
<tr>
<td>Monggar</td>
<td>3,502</td>
<td>1.4%</td>
<td>3,601</td>
</tr>
<tr>
<td>Total for 10 towns</td>
<td>133,013</td>
<td></td>
<td>159,881</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>Total for all urban centres in Bhutan</td>
<td>196,111</td>
<td>7.3%</td>
<td>224,527</td>
</tr>
</tbody>
</table>

(From Phuntsho et al. 2008: 3).

The strongly-worded report, together with presentations on e-waste, health wastes, public involvement and other issues at the National Conference on Solid Waste Management in August 2008, set the agenda for a new era of waste consciousness in Bhutan.

**Waste in Rural Areas**

Historically, Bhutan’s rural areas – which is to say, most of the country – had very little non-biodegradable waste. As a long-term expatriate recalled in 2007:

When I was first in Zhemgang [ten years ago], you could get soap only in big bars. Incense was wrapped in paper; tea for *sudja* [salt butter tea] was in a big leaf. There were no plastics [bags]. People kept plastic ware and used it for a long time. Didn’t use tins, couldn’t find a decent can opener. Kids ate Wai Wai noodles, and the landscape was littered with orange wrappers. Goats and animals would eat these wrappers and end up with intestinal occlusion, and die.... In Thimphu at that time, people were fusing plastic wrap with flames to make plastic bags. Biscuits came in carton boxes; only the wealthy people bought biscuits.

No plastic bottles at that time. Paper was burned in the bukhari, glass bottles and tins were collected by the person who sold them.

Even today, much of the household garbage in the villages is organic matter that easily decomposes over time. Leaves are used for wrappings, and few manufactured non-biodegradable products are available. Bottles and cans are often...
reused for household purposes. Many items are repaired rather than discarded. People feed kitchen waste to livestock, or compost scraps in agricultural fields. Even today, relatively few manufactured products are available in rural areas, so villagers use bottles and cans for storing milk, oil and alcohol. Local government health workers advise villagers to burn their garbage in household garbage pits. As rural villagers move to urban areas, they generate new types of waste, and require new strategies for handling waste. With more densely-settled urban areas, litter becomes an eyesore, and burning and open dumping are no longer viable waste management strategies.

Figure 5-4: Open Garbage Burning in Thimphu, August 2008.

To gain an understanding of the attitudes and practices around waste that migrants bring with them to urban areas, and the waste management challenges faced
by new migrants, MOWHS asked me to study attitudes and practices of waste management in rural areas (see also Allison 2008a; Allison 2008b). As noted above, no studies had been done of waste in rural areas. Simultaneously, MOWHS conducted a nationwide survey of household and office waste in ten town areas around the country (Phuntsho et al. 2008). The results of both studies were presented at a national solid waste conference in Thimphu in August 2008. In the sections that follow, I present the main findings from interviews in rural areas. The methodology for these interviews is described in Chapter 1. Though I used an interview guide to direct conversations, not every villager responded to every question. I have provided absolute numbers (n = 73 survey interview respondents) and percentages of respondents who raised particularly salient issues. In the discussion and bar graphs that follow, note that not every interview respondent addressed every issue, as the interviews were semi-structured. Interview respondents were free to discuss those issues of greatest concern.

**Waste disposal: into the garbage pit or over the cliff?**

Visits to rural areas in Trashigang, TrashiYangtse and Zhemgang revealed that most villagers have learned their waste management methods from Health Workers in their geogs. Teachers are another importance source of information about sanitation and hygiene, and several villagers said that households with students of any age, or educated people were cleaner than those without. The 163 Basic Health Units (in 2002), 445 Outreach Clinics (in 2002) (WHO and Bhutan 2006) and 528 government
schools (at all levels, 2008) (RGOB 2008b) are the most prominent examples of the State’s involvement in daily life for most villagers in dispersed rural areas.

Basic Health Unit (BHU) staff and other health workers, cited by 25 (34%) of the interview subjects as their main source of knowledge about waste management, advise people to dig garbage pits and burn their garbage. Health workers also advise people to wash their plates, cups, and clothing, to sweep their houses and to bathe regularly. The BHU workers and Health Assistants are the main providers of information regarding sanitation and hygiene. They have been instrumental in promoting toilet use and housecleaning. However, their knowledge is incomplete. For example, when I went to wash my hands before eating one night, the BHU worker told me that I need not wash my hands, as he would give me a spoon to eat with.

Many adult villagers and urban residents can remember a time when they did not practice any particular form of waste management, both because there was little need to control the waste – food trimming and scraps went to the livestock, and other materials were re-used – and because they had little formal or informal education in sanitation and hygiene. Older villagers said that there was no one to advise them about cleanliness and hygiene when they were growing up. According to one villager in Zhemgang, “I didn’t have any such concept [of cleanliness or hygiene]. We used to
eat, pass stool, throw garbage in the same place, like the pigs. It was almost as if we were living like pigs.\textsuperscript{23}

Access to manufactured products developed very quickly, during the late 1980s and early 1990s, when India liberalized its economy. Thus, the current generation of adults has had relatively little time to develop sustainable, effective and culturally-appropriate methods of waste management. While urban residents and those educated outside Bhutan have had greater exposure to various methods of waste management, implementing these systems at home remains a challenge.

The predominant method of dealing with household waste in rural areas is through burning in a garbage pit located on the residents' property. Some of those without specific garbage pits said that they burn their garbage in their fields, in different spots each time, to enrich the soil. Others said that they just throw their garbage anywhere, or dispose of it in the forest. The duration of garbage pit usage varies, with most rural residents having used garbage pits for fewer than ten years. Only four (5\%) interview subjects said that they had filled up a previous garbage pit and dug a new one.

Villagers said that health staff instructs them to dig garbage pits that are approximately one cubic meter – one meter on each side, and one meter deep. But some subjects said that it was a lot of work to dig a pit this deep, and in practice,

\textsuperscript{23} See also “The Liminal Nature of Pigs” later in this chapter, in which I discuss the multivalent association of pigs with filth, sin, and celebration.
garbage pit I observed varied in size from one or two feet across and a foot deep (Figure 5-5), to the full cubic meter prescribed by the health workers (Figure 5-6). Figure 5-6 depicts a model garbage pit built by Health Workers at Tradijung, Zhemgang Basic Health Unit. It is fenced to prevent the intrusion, to some extent, of dogs, and divided in two so that recyclable bottles and cans can be collected on one side, while burnable materials are collected on the other. In practice, however, most home garbage pits are more like the one depicted in Figure 5-5.
Figure 5-5: Garbage Pit in Tongzhang Geog, Trashiyangtse.

Figure 5-6: Two-section, fenced garbage pit at BHU in Tradijung, Zhemgang.
Most interview subjects indicated that they were satisfied with this method of garbage disposal. According to one, “I’m satisfied with this method of waste management. No one has suggested any other ideas, so it’s ok. Plastic doesn’t decay, so we’re fed up with plastic. But we need it, so even though it creates a mess, we bear with it.”

However, respondents did cite a few problems with their garbage pits. The most common problem, mentioned by 11 interview subjects (15%), was that burning the garbage, especially the burning of old shoes and chappals, creates foul-smelling smoke that hurts the eyes. According to a Zhemgang villager,

I collect old shoes and chappals in a small pit [much laughter at the incongruity of the bulky shoes and chappals in the small pit] and take them to a hole in between the stones. Chappals and shoes will fill up the garbage pit too quickly. I think it is impossible to burn old shoes and chappals. They melt and become very bad. I tried to burn chappals once, and they gave off a very bad smell.

The irony of the government’s advice to burn garbage is that it contradicts traditional beliefs about deities. Villagers burn tsang, or juniper branches, each morning as a type of incense offering to deities, that creates a clean, fresh and pleasant smell. Deities are known to be susceptible to the ritual pollution or drib that results from, for example, burning meat, especially in the high mountains. Villagers who commented on problems with burning their garbage mentioned that the bad smell of
burning shoes and chappals could cause tsadem, or cough and cold. Others thought this bad smell could offend local deities, creating illness or crop problems.

An additional problem with the garbage pits, cited by eight interview subjects (11%), is that domestic animals, such as dogs and hens, get into the garbage pits and scatter the garbage. Three innovative villagers (4%) mentioned that they had avoided this problem by putting a fence around the pit. In particularly steep areas, the garbage pits are filled with water or mud during the rainy season, which decreases the capacity of the pit, and makes burning garbage more difficult.

Waste materials

In the rural areas, much of the household waste is biodegradable materials, such as “dirt, sand, sticks, leaves,” as reported by 11 people (15%), along with spoiled food and kitchen scraps. Other waste materials include plastic wrappers, papers, string and thread from weaving, bottles, tube lights, batteries, broken appliances, worn-out clothing, and broken shoes and chappals.

Kitchen Waste

In rural areas, most residents give their kitchen scraps to domestic animals. In urban areas, residents reported that kitchen scraps go to the dustbin.
Plastic and Paper

Plastic wrappers are sometimes reused for packed lunches, or storing weaving thread or other small materials, but are more frequently thrown in the garbage pit and burned. Villagers recognized that plastic wrappers and packets do not burn completely, but saw no other disposal option. Villagers do not find plastic wrappers to be particularly “dirty” or disturbing because of their shiny, manufactured appearance. Unlike human waste or old shoes, plastic wrappers are not seen as having contaminating ability. Perhaps for this reason, one woman in Trashiyangtse said that she put plastic wrappers directly into the cooking fire. In light of typical Tibetan Buddhist cultural beliefs around the sanctity of the cooking fire, this statement was surprising to me.24

24 Travel guidebooks for the Himalaya admonish visitors to respect the sanctity of the family’s cooking fire by never adding materials to the fire, and not sitting next to it – in the seat of honor – unless invited
One person believed that the national ban on plastic bags extended to all plastic packaging.\textsuperscript{25} He said, "In the past, the law said that plastics were banned, so we burned plastic packets, even if they were usable [if they could be reused]."

Paper is a small portion of rural household waste, which is easily burned or reused, so it did not generate many comments. English or Hindi language newspapers are used for wrapping food or packages, while paper from school assignments is used to wrap packets of doma [the popular areca nut and betel leaf combination chewed for its mildly intoxicating effects, (see Pommaret 2003 for a history and cultural exploration of doma use)]. Papers with Dzongkha writing on them cannot be re-used, but must be ritually burned, because Dzongkha is the language in which religious texts are written, and therefore are always be treated with respect.

Some people worried that the burning of garbage in the pit could cause suffering for the organisms living in the soil. One said,

When burning the garbage in the pit, I feel pity for the worms and insects that are getting killed, but otherwise, there are no problems with this system. Except that when plowing the fields, the pit disturbs the

\textsuperscript{25} The Ministry of Trade and Industry banned the use of plastic shopping bags by merchants in a notification issued in 1999, which provided for a fine of Nu. 500 [about $12.50] for the first offense and Nu. 1,000 [about $25] for the second offense. However, the ban was never successfully implemented. Merchants continued to offer plastic bags "under the table" (particularly to foreigners, who, it was thought, required them). In 2005, the Ministry called for a "reinforcement" of the ban, and requested assistance from the National Environment Commission, Ministry of Health, and the Department of Revenue and Customs in strengthening the ban and imposing higher penalties. By 2008, paper bags were more in evidence at Thimphu shops, but sidewalk produce merchants still offered their wares in plastic bags. (See Wangmo 2005; MOWHS 2008).
plowing, because it gets in the way [pit is right in the middle of agricultural fields].

A few people worried about the consumption of plastic or other waste materials by cattle. As one Zhemgang villager remarked,

We noticed that if cattle eat the carton boxes, they will end up with pins [metal staples] in their stomach and fall sick. There was one cow that died near the shops – we cut it open and found lots of pins inside its stomach and knew that that was the cause of death.

The Livestock Head at the Renewable Natural Resources (RNR) Center in Bumthang confirmed that consumption of non-food products could lead to cattle death. However, this problem is relatively rare. He said, “Of 100 cases of illness and death, obstruction from plastic is the cause of only a few of them. Because the cattle roam free, it’s hard to control what they eat.
**Figure 5-8: Disposal of Plastic (n=73)**

- **Plastic is burned**: 15
- **Plastic goes in dustbin/Plastic is reused for packing**: 12
- **Plastic goes in toilet to garbage pit**: 8
- **Plastic goes in toilet to household uses**: 1

---

**Glass Bottles**

Intact bottles are either reused or taken by a scrap collector, who pays one or two ngultrum per bottle. Villagers expressed much concern over the potentially dangerous consequences of broken bottles. Unlike the danger from, for example, fecal-oral contamination, this hazard is visible to the human eye, as broken glass can cut the feet of humans or livestock. The villagers did not distinguish between hazards to humans and to their livestock. Twelve people (16%) mentioned their concern that humans or animals could be injured by broken bottles or tube lights. Some related stories of villagers who had cut their feet on broken glass and had subsequently been unable to attend to their fieldwork. As one farmer in Trashigang explained,

Last year, one fellow didn’t work for the whole summer because he stepped on a piece of broken glass while looking for a stray arrow during an archery match. His leg got infected. We didn’t take him to the hospital, but after a month, the glass came out.
Villagers had a variety of ways of dealing with broken bottles, including throwing them into ravines, stuffing them between rocks, and trying to melt them in the garbage pit fires, but didn’t seem to find any of their methods completely satisfactory. Broken glass was seen as the largest practical risk from garbage.
Figure 5-9: Disposal of Broken Bottles (n=73).

Disposal of Broken Bottles

<table>
<thead>
<tr>
<th>Action</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thrown in rocky areas</td>
<td>13</td>
</tr>
<tr>
<td>Burned in garbage pit/placed in dustbin</td>
<td>8</td>
</tr>
<tr>
<td>Thrown from cliff</td>
<td>2</td>
</tr>
<tr>
<td>Don't know what to do with broken bottles</td>
<td>2</td>
</tr>
<tr>
<td>Buried in forest</td>
<td>1</td>
</tr>
<tr>
<td>Stuffed in gaps in the wall of house</td>
<td>1</td>
</tr>
<tr>
<td>Thrown in stream</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 5-10: Bottles awaiting collection in Zhemgang.
*Old Clothing*

Though old clothing might be re-used as rags, no one mentioned this method of re-use. However, old clothing is used to make scarecrows in the fields to prevent wildlife from disturbing the crops. They are also used to make pillows or children’s clothes. Some people burn old clothes in the garbage pit.

**Figure 5-11: Disposal of Old Clothes (n=73)**

![Disposal of old clothing graph]

**Old Shoes, Boots, and Chappals**

Old shoes, boots and *chappals* seem to present special problems for disposal. People said that they fill up the garbage pit or dust bin too quickly when placed there. They are also difficult to burn, failing to break down and creating a bad smell when they are burned. More than any other waste material, villagers felt that the improper disposal of old shoes, boots and *chappals* could offend the deities, who in turn would create adverse environmental conditions for the villagers and their agriculture.
Many interview subjects noted the bad smell that shoes and boots produce when they are burned. Possible consequences of the bad smell could include tsadem, or cough-and-cold, and causing offense to deities, who might then produce illness or crop problems. As the wife of the tshokpa (village leader) in Trashiyangtse explained:

If we burn old shoes and boots, Sadalunyen [a lu] may become angry because of the smell and will create rain. This lu is only for this household and stays near the house. We’ve built a small chorten for the lu. The surroundings are kept clean, and we offer milk and tsangsurs [fragrant smoke from burning cedar branches]. We burn tsang to keep the lu happy. When we fall sick, we offer tsangsurs - not daily, but occasionally, as the situation demands.

Two farmers interviewed together in Trashiyangtse concurred:

If we put it [old shoes] in the paddy fields, it will interfere with plowing, and if we burn it, it will create a bad smell that will offend the
neighboring gods and drive them away. If you burn boots and shoes and other dirty things, it will offend the lhakhang, and will also drive away ghosts. We throw bottles, rubber products and old clothes, and other such unclean things, from the cliff because they create a bad smell when burned... Shoes are considered not appropriate to burn. It's very difficult to burn shoes, so it creates a bad smell.

An elderly woman in Zhemgang explained further:

When these things [old boots and shoes] are burned, it smells a lot, so I don't want to burn them. Dralhaguchung [the local protector deity] won't smell these things, because he is very far away, but the smell will affect the lhakhang and I get sick when burning boots and shoes. Burning anything dirty created drib. Even Dralhaguchung some gets angry when we burn - he'll send dem [Tib.: dem]. People will get cough and cold, runny nose, shooting diarrhea - then everyone in the village will get ok at the same time. Dem is caused only by burning shoes.

To avoid such problems, villagers often throw their old shoes, boots and chappals off a cliff, or into a gully in the forest. The wife of the tshokpa (village leader) in Trashiyangtse explained where all the waste materials that cannot be burned in the garbage pit go:

Broken bottles are thrown over a cliff at Tashangpokpa - a 5-minute walk from here. I go over there once in two months, after I have accumulated a load. I chose this place because even animals can't go there - only monkeys can go there. We throw dead horses, shoes, boots, and old clothes over there.

This quote reflects a village-level categorization – what could be called an ethno-categorization – of “hazardous” and “non-hazardous” wastes. Hazardous wastes can cause illness and infirmity either directly – through cuts from broken glass – or indirectly – by offending deities, who visit punishment upon the villagers. In
both cases, hazardous wastes can affect livelihoods, by limiting farmers’ ability to work (in the case of a cut foot or a deity-caused illness), by decreasing fitness of livestock, or by influencing untimely rains. As noted in their comments about the hazards of broken glass and old shoes, villagers are motivated to address the kinds of waste that directly affect their livelihoods. Though a couple people worried about the mortality related to the cattle’s consumption of garbage, few were motivated to address this issue, as it wasn’t seen as a problem of significant frequency.

*Spent Batteries*

Household batteries are used in flashlights and radios, particularly in areas without electricity. Most villages burn their dead batteries in their garbage pits, or scatter them in rocky areas, while some re-use them to make paint or measuring devices. Some wondered about the best way to dispose of batteries, because they are clearly non-burnable, unlike much of the other household waste, and turned the question about disposal of batteries around to me. (These respondents are represented as “don’t know what to do with batteries” in Figure 16 below.)

Though the re-use of batteries for important village tasks provides villagers with resources that might not otherwise be available, the neurotoxins and carcinogens contained in batteries may be a cause for concern. Some villagers re-use batteries to make blackened string “scales,” or chalk lines, for measuring and cutting wood. Batteries are also used to make black paint for painting houses and prayer flags. A Zhemgang villager described the process of making a scale with a dead battery.
“When batteries are finished, we take off the cover and grind up the black stuff and mix it with water and make a scale [chalk line].”

One Trashiyangtse villager explained the process of paint making as follows:

I’m preserving the torch batteries for making ink for printing prayer flags. When a torch battery is finished, you burn it in the fire. When heating the battery, you need to peel off the cover – if you heat only the inner layer, it doesn’t smell bad. It gets soft after heating, and then it can be crushed and mixed with water. You add the water from cooking rice, and it makes a sticky liquid. This is the best quality ink. It lasts a long time, and even during the rain, it doesn’t smudge. One prayer flag requires 2-3 batteries. I was taught this method of making ink by my great-grandparents. Before, when there was no torch, they used to make ink from coals.

These re-use and disposal processes may pose health hazards to people handling batteries with their bare hands. The Energizer Product Safety Data Sheet for the Eveready battery notes, “The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful” (Energizer 2009).

The Data Sheet identifies various health hazards including possible “serious chemical burns of mouth, esophagus, and gastrointestinal tract,” if the contents of the battery are ingested, and possible chemical burns of the skin (Energizer 2009). Further, the acetylene black (or carbon black) within the battery, one of the black substances inside the battery, is listed as a possible carcinogen by International Agency for Research on Cancer (IARC). Chronic exposure to manganese oxide, another black substance found inside the battery, can cause impairment of the nervous
system, including weakness in the legs, of great concern to farmers, as well as lung damage (Energizer 2009). Ingestion and inhalation of these substances during paint-making is likely among villagers who lack convenient facilities for washing their hands.

**Figure 5-13: Disposal of Batteries (n=73)**

![Disposal of Batteries](image)

<table>
<thead>
<tr>
<th>Disposal Method</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put in garbage pit/rocky area or anywhere</td>
<td>9</td>
</tr>
<tr>
<td>Thrown in rocky area or anywhere</td>
<td>7</td>
</tr>
<tr>
<td>Used to make “scale” paint</td>
<td>6</td>
</tr>
<tr>
<td>Used to make paint</td>
<td>5</td>
</tr>
<tr>
<td>Don’t know what to do with batteries</td>
<td>2</td>
</tr>
<tr>
<td>Burned</td>
<td>1</td>
</tr>
</tbody>
</table>

**Spent Light Bulbs and Tube Lights**

Between 2004 and 2006, the number of electrified towns increased by 70% to 68 towns, and the number of electrified villages increased by 24% to 1318. By 2007, just over half (56%) of rural households used electricity for lighting. Approximately one-quarter (27%) of rural households used electricity for cooking, while nearly two-thirds (57%) still relied on wood (RGOB 2007b). Rural electrification brings numerous improvements in well-being by providing smoke-free, consistent light; freeing people of indoor air pollution caused by cooking smoke; and facilitating
schoolchildren’s studies. Freed of kerosene lamps and wood smoke, people can keep their homes and themselves cleaner (see Figure 16). Rural electrification also brings the challenge of disposing of several new types of non-biodegradable waste: light bulbs, tube lights, and small appliances. Disposal of tube lights in areas that had recently received electricity was an area of special concern. Several villagers asked me how to dispose of their tube lights.

Figure 5-14: Traditional, non-electrified kitchen in Zhemgang, with wooden plank floor.

Along with appliances, batteries, and shoes and chappals (the ubiquitous South Asian flip-flop sandals), tube lights are not burnable, and further, are potentially toxic when disposed of through open dumping. Because electricity has only recently come to rural villages, suitable disposal methods for spent tube lights and other electrical equipment have not yet been identified. Concerned that broken glass tube lights
could injure the foot of a human or livestock, villagers typically throw the spent light bulbs and tube lights into the rivers or into ravines. Some use incandescent light bulbs for decoration. Disposing of light bulbs and tube lights far from villages alleviates the risk of injury, but it creates another potential hazard by releasing mercury into the ground water and soil. Because they contain the neurotoxin mercury, fluorescent lights, including tube lights, require special caution. Broken light bulbs emit vaporous methyl-mercury, which easily enters the bloodstream, damaging the nervous system, liver and kidneys, and causing developmental delays in children. Mercury can be especially hazardous to pregnant women and small children (Basel Convention 2007; Cal-EPA 2007; CIWMB 2008). In Bhutan, where one-third of the population is under age 15, the safe disposal of mercury-containing lights should be a priority concern (RGOB 2006). Mercury persists in soil and groundwater, and, because it bio-accumulates, could threaten Bhutan’s wild species.

These hazards have prompted several US states to issue regulations requiring fluorescent lights to be disposed of as hazardous waste, and handled by authorized hazardous waste handlers. Under State of California, USA, regulations, tube lights and fluorescent light bulbs, as well as other materials containing mercury, and batteries, may not be disposed of in solid waste landfills (Cal-EPA 2007; CIWMB 2008). Instead, they must be taken to appropriate hazardous waste handling or recycling facilities. Business may store fluorescent lights for up to one year, before transporting them carefully – in their original packaging, or in cardboard boxes – to an
appropriate waste management facility. Businesses must also maintain records to account for the safe disposal of all their mercury-containing products. In addition, businesses must provide training to workers in the safe clean up of broken mercury-containing light bulbs.

**Figure 5-15: Disposal of Tube Lights and Light Bulbs (n=73)**

![Disposal of Tube Lights and Light Bulbs](image)

**Broken Household Appliances**

Like tube lights and light bulbs, electrical appliances such as rice cookers, curry cookers and water boilers have only recently become available in the villages, as some of the villages I visited have received electricity only in the past few years, and others do not yet have electricity. Therefore, most villagers with electricity have not developed a strategy for dealing with broken household appliances. Some doubted that they would be able to repair an appliance if it broke, but others thought they would repair the appliance, take it to one of the larger cities in the south, such as

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Phuentsoling or Samdrup Jonkhar to be repaired, or perhaps sell it to a scrap dealer.

Electrical appliances have been available in Thimphu for many years. The people interviewed in Thimphu were more likely to throw their broken household appliances in the dustbin, while villagers were more likely to attempt a repair or keep the appliance in the house in hopes of future possibilities for repair.

**Figure 5-16: Disposal of Broken Household Appliances (n=73)**

<table>
<thead>
<tr>
<th>Disposal of Household Appliances</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>No convenient way to repair/throw in dustbin</td>
</tr>
<tr>
<td>Appliance will become child's toy</td>
</tr>
</tbody>
</table>

**Human Waste and Toilets**

Most villagers use self-constructed pit outhouses, which are known as toilets. The sturdiest ones have rock walls and tin roofs. Others have wood, bamboo mat, cloth or plastic walls, with wood or woven roofs. In Zhemgang, some villages received assistance from Save the Children, which built improved toilets. Those who had not received the improved toilets were disgruntled to know that their nearby neighbors had better toilets. While some villagers were pleased with the improved
toilets, in other places the toilets had stopped working after the basin became clogged by mud during the rainy season, reducing the villagers to using the fields once again. This experience suggests that the siting of these toilets is important. The ones that filled with mud were on very steep slopes, with nothing to prevent mud flow into the toilet. A barrier wall above the toilet might also protect it from mudflows.

Figure 5-17: Types of toilets in use in rural areas (n=73).

![Types of Toilets](image)

Those who have pit toilets are not always satisfied with them. People reported objection to the smell of the toilet, the amount of land needed to construct a toilet, and the distance they had to travel to use the toilet at night. Many villagers asked for assistance with materials and/or labor for building improved toilets with a concrete floor and a ceramic basin. Those who had improved toilets were satisfied with them.
Health workers reported that it is still difficult to convince everyone to use the toilets. Though most people (80-90%, according to the Health Worker in Bidung, Trashigang) have constructed toilets, some still avoid using them because of the smell, or because of the convenience or habit of using the fields. Health workers regularly check on toilet availability and usage. When the health workers come to check on the usage of pit toilets, some people will place animal feces in the toilet to make it look as though they have used it, fighting government intrusion in their lives with “weapons of the weak” (Scott 1987).
Figure 5-19: Difficulties with Pit Toilets (n=73).

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toilet smells bad</td>
<td>4</td>
</tr>
<tr>
<td>Insufficient land for toilet</td>
<td>3</td>
</tr>
<tr>
<td>Lots of work to dig toilet</td>
<td>2</td>
</tr>
<tr>
<td>Have to walk long distance at night</td>
<td>1</td>
</tr>
<tr>
<td>Mud washes into toilet</td>
<td>1</td>
</tr>
</tbody>
</table>

Village Cleanups

To improve the conditions of the surroundings, some towns and villages hold regular cleanups. Dzongdags, Gups, and School Principals are instrumental in establishing and maintaining town cleanups. Typically, one Saturday or Sunday morning each month, government servants and schoolchildren will fan out around the village or town to pick up litter and take it to a designated location. In some areas, one person from each household is required to participate, while in other areas, civil servants and students are the main participants. In Haa, where students and civil servants participated in the town cleanup, while farmers went about fertilizing their fields, students complained that farmers and uneducated people lacked interest in the cleanup. The Dzongdag said that he encouraged farmers to participate in the cleanups, but it was difficult to engage them. The presence of town and village cleanups is largely dependent on the leadership of the Dzongdag, as well as those local leaders to
implement and supervise the cleanups. Students and villagers who participate in village cleanups said that they were happy to do the cleanups, and felt happy when they improved their villages. Students said that they found the cleanups interesting.

After participating in the Haa town cleanup, I wrote in my field notes:

At 8:00 on Saturday morning, the Dzongkhag staff and students at the higher secondary school gathered to clean up Haa town....The Dzongdag welcomed us to the cleanup, and invited us to join any of the 23 groups scattered around town, mostly up and down the main road. Some traveled 10-12 km away in the back of a truck, and one group even went up to Chelela [a 10,000 foot pass above Haa town]. Each group had a leader – a teacher or dzongkhag staff – and the collected garbage was picked up by jeeps.

One group was cleaning up the stream that ran through town, enclosed by retaining walls, and another group had begun to pick up litter around the perimeter of the school, bounded by a high concrete wall. Through [my companion] wanted to join a large truck-full of boys bound for the outskirts of town, I was reluctant ... Instead, we joined the group that had started around the perimeter of the school, organized by a class 10 teacher of health. The main topics she covers are HIV/AIDS awareness, hygiene, sanitation, and diseases. Most of the girls are in class 9 or 10; some school staff accompany us also. The girls tell me that there are 245 girls in the girls’ hostel, sleeping 15 or 16 to a room on bunkbeds.

We come across a large cache of old shoes, and dirty boys’ underwear, and lots and lots of chips wrappers. The girls say that we are behind the boys’ hostel, and that the boys through all their garbage back here when the garbage can gets full. How often is the garbage can emptied? Once a day, but apparently it often overflows. I thought that the girls were just being sexist, blaming the boys for excessive amounts of garbage, but indeed, when we got past the boys hostel, the amount of garbage was reduced. Shoes seem to be a particular problem: in the rural areas, people don’t want to burn them for fear of the bad smell and the possibility of offending the deities. In the town areas, people
find them too large (?) or something to put into the dustbin, so they just throw them in the creeks or behind walls.

While we pulled garbage out of the dirt, farmers walked past us with loads of composted pine needles in baskets carried on their backs.

In addition to the shoes and underwear, we found a large number of trousers, a few ghos, rags, wrappers, unidentifiable scraps, and a large amount of human feces. It appeared that people from the houses and farms abutting the school preferred to use the bushes in the alleyway rather than whatever outhouse they might have. As the girls pulled up the plastic and garbage that surrounded the human waste, I was concerned about the pathogens to which they were being exposed—without protective gear of any kind: no gloves, no masks, not even any tools to pick up the garbage. Most students improved shovels and grabbers out of sticks or planks that they found in the alleyway. A few had shovels made from half a plastic milk jug, or dust pans that were used for picking up the collected waste and loading it into bamboo baskets, or onto an old tarp or burlap bags. The girls cleaned in their kiras and managed to stay remarkably clean....

After cleaning most of the perimeter of the school wall—where we found wrappers, bottles, and countless old shoes—I talked with the school principal. It had been his idea to fill in the depression between the river’s stone retaining wall and the road with the garbage collected at the cleanups. The garbage was dumped into the depression and then covered with dirt that had been excavated from road building and construction projects.

Boys who had been cleaning at the BHU [basic health unit] walked by around 11:30, saying that they were finished cleaning. They said that the BHU was very dirty and they had found wrappers, papers, doma covers, shoes, shirts and trousers. The strangest thing they found was a dead calf. They put the calf on a truck that carried it away. I asked the boys what they would say if they saw someone eating a sweet and then dropping the paper on the ground. They said they would tell that person not to throw the wrapper on the ground, but to put it in their pocket and throw it in the dustbin.
Some villagers said their village was clean, while others wanted to see improvement in cleanliness. As explained by a Zhemgang villager in Pantang,

Every Sunday, we have social work. Every civil servant and farmer collects dust, papers, plastics, and throws them in a pit [where they are burned]. We clean all of Pantang. One person from each household has to come. If they’re absent, they’ll get fined nu. 50. Workers will use the fine for juice or drinks. People still throw garbage, especially kids and students and drunkards. We’ve been practicing these clean ups for two years.

Figure 5-20: Perceptions of Village Cleanups (n=73).

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- Satisfied with cleanliness of surroundings
- Monthly cleanups here
- Village needs improvement in cleanliness
- No village cleanups here
- Weekly village cleanups here

Waste culprits

The cause of the garbage littering the towns and villages is highly contested, with shopkeepers blaming students, students blaming uneducated farmers, locals blaming outsiders, urban people blaming villagers, and villagers blaming educated people. When informants expressed concern or disappointment about the cleanliness
of their villages, they were asked to identify the source of the problem. This waste culprit was always someone or something on the edge of society: children, foreign laborers, truck drivers, dogs, hens, and in one case, a houseful of old blind women, cared for by one of the village women.

Figure 5-21: Who Litters? (n=73).

![Graph showing who litters among different groups]

School Children as Waste Culprits

Here we see, as Kristeva (1982) describes, waste being associated with the boundaries and liminal areas of society. Adults expressed an ambivalent relationship with schoolchildren: on the one hand, they expressed pride in the education the children were gaining. However, this knowledge carried the bittersweet recognition that these same children would not work in the fields, as previous generations had, as this would be seen to be squandering their education. Rather, the educated children would leave the village, for the district headquarters or even the capital, seeking a
government job, but perhaps settling for a 'small' job as a driver or babysitter. While informants mentioned with pride the school grade that their children had completed, and told of the knowledge that the children brought home, their assessment of children's behaviors was often ambivalent: they saw school-going children as carefree, since they didn't work in the fields. These carefree and "careless" children were seen as the source of the candy and noodle soup packets, often found littering footpaths near shops. Informants complained that the children "didn't listen" to their request to confine the plastic wrappers to the dustbin or garbage pit, and were "careless," throwing wrappers about. The informants did not seem to consider the children's behavior as the responsibility of the adult parents to monitor. Even very young children may travel great distances and/or board overnight to attend school, so children are seen as relatively more independent and personally responsible than they are in the United States. However, as members of society who do not contribute their labor toward meeting their subsistence needs, and represent a transition away from subsistence and toward a market-based economy, school-going children occupy a position on the edge of (traditional) society.

Foreign Laborers as Waste Culprits

Foreign laborers come from India to work on government defined and sponsored projects. Like truck drivers, they tend to be mobile, rarely staying long in any one community. In a society where families have occupied the same parcels of land for generations, this constant and unstructured mobility is disturbing. Some
Bhutanese villagers travel, but in defined paths, taking their livestock to higher pastures in the summer and lower ones in the winter. By contrast, the peregrinations of a foreign laborer or a truck driver are not so conscribed, leading anywhere in the country. Combined with a habitual distrust of strangers, this mobility puts truck drivers and foreign workers at the boundaries of society.

The Incapacitated Elderly as Waste Culprits

Three elderly blind women occupied a village house together along with an elderly man, reputed to have gone mad when he offended the local deity. Other villagers commented that the house of the three blind women was the dirtiest of the village. Without their sight, and with the infirmities of old age, it was difficult for the women to keep the house and its surroundings clean and orderly. Additionally, two of the women needed assistance leaving the dwelling to visit the outhouse. Though the old women had a younger woman to assist them, she was perhaps unable to keep up with all that caring for four elderly people entailed. My interview with these women was constrained by the presence of their helper, the late hour in the day when we arrived, and the large crowd that gathered to watch the spectacle of a foreigner talking to these old, crazy people. Therefore, I was not able to delve into questions of their position in the village, the source of their injuries or other social or economic supports they might have. Indeed, my assistant took me to this particular house almost as if on a lark, as if to say, “what will you make of this?” Though the house of the three old women was near the geographical center of its village, the infirmities of the old
women and the man placed them at the edge of society. One informant even
compared them to non-human animals, suggesting that they lived like pigs. As we
shall see below, the pig is a particularly fraught metaphor in rural Bhutan.

*Domestic Animals as Waste Culprits*

As domestic animals that depend upon human food scraps, dogs and hens
occupy a liminal place between humans and other animals. Unlike cattle that graze in
the forest, dogs and hens are found closest to human habitation, even wandering into
cooking sheds, but are considered to be a bit of a nuisance, and are not kept as pets.
Though hens provide eggs, and less frequently meat, because of the prohibitions
against killing, feral dogs are simply a nuisance, who cannot be killed because of
Buddhist precepts. They often dig in garbage pits for food scraps, and are blamed for
scattering garbage around.

*Figure 5-22: Dog huddled in garbage in Thimphu.*
This analysis of the social construction of the liminal spaces occupied by the waste culprits is not meant to suggest that these groups of individuals and animals do not materially contribute to the spread of litter. However, the assignment of blame to particular groups of humans and animals shows the power dynamics at work in assessing “who is responsible” for garbage and litter. Policy and program decisions are made on the basis of such assessments, so determining the culprits has a material affect on subsequent program implementation. Because of the belief that children are responsible for litter, numerous environmental education programs target children and involve them in school and town cleanups. These efforts will contribute to developing a future generation of responsible environmental citizens. However, they may not reach all those who need to learn about modern waste management. Foreign laborers, though often blamed for littering, have not been, as far as I know, the targets of any governmental waste management intervention. As Indian citizens, they are not seen as the responsibility of the Bhutanese government, and remain under the authority of India. Further, their temporary status in Bhutan limits the public will to invest in them. I raised the issue of interviewing foreign laborers with my contacts at the Ministry, and was discouraged from spending my time in that way.

Dogs as Waste Culprits, and as Deserving of Compassion

Dogs are perhaps the most intransigent waste culprits. Stray dogs run rampant in rural and urban areas (especially in Thimphu), but the Bhutanese have been uncomfortable with the idea of culling them, as this goes against the Buddhist
prohibition against taking life (Rabten 2008). Further, one can generate Buddhist merit by making offerings of food, so stray dogs are often fed with scraps (Wangmo 2008b) – just before they are kicked away from the house or pelted with rocks. As I wrote in my field notes in Oct. 2007:

As we finished our picnic at Yongphula, a dog approached cautiously. I said, “Oh we have a friend.” Prem said something to Tshering, and proceeded to give the dog our leftover rice and curry. Tshering said that Prem is a great friend of dogs, and is always giving them leftover food. He said it is considered very good to feed to dogs, because they are second only to humans in the hierarchy of being. Being born as a dog is almost as good as being born human, and we may not mind being born as dogs in our next life.

Sterilization efforts in Thimphu and throughout the country have been incomplete, and did little to stop the dogs’ population growth (Wangmo 2008b). Estimates of the number of stray dogs in the country range from “12 dogs for every person in the nation” to “about 50,000 dogs in the country,” according to Dr Karma Rinzin, from the National Care for Animal Health at Serbithang (Wangmo 2008b). In an effort to reduce the population of strays in the 1980s, dogs were poisoned, shot, relocated to the outskirts of Thimphu (Wangmo 2008b). In 2007-2008, Hemraj Chhetri, Head of Solid Waste and Sanitation (which is tasked with dealing with the stray dogs) at Thimphu City Corporation (TCC), estimated there were around 5,000 stray dogs in the capital (Wangmo 2008b). In 2008, Thimphu City Corporation established a 1.15-acre dog pound near the landfill in Memelakha, to house 800 stray dogs (Wangmo 2008b). Despite Thimphu residents’ dislike of the nighttime howling dogs, and their fear of rabies, this effort resulted in public uproar, as residents felt
compassion for the dogs, who were housed in large concrete pens, likened to "Auschwitz for dogs," leading to numerous dogfights (Rabten 2008). The Lama who established Jangsa Animal Saving Trust (http://www.animalsavingtrust.org) cited the concept of 'tendrel,' or creation of 'auspicious coincidences,' through the development of good karma and positive merit, as a reason for extending compassion to the dogs (Rabten 2008). According to the Lama, the reason for Bhutan's auspicious national journey, in contrast, for example to that of Nepal, which suffered civil war and the massacre of the monarchy in recent years, is that Nepal has practiced animal sacrifice in the name of religion (Deep 2001; BBC 2007; AFP 2008), while Bhutan has respected the lives of sentient beings (Rabten 2008). This argument, however, is a bit disingenuous, as some in rural Bhutan practiced animal sacrifice in the past. One man in Zhemgang recalled:

In the past, we worshipped this one [Dzonglatsan, the local protector deity] by killing a cock. Now, we're using eggs. The lamas advised us not to kill cocks. In the Bhutanese calendar, in the 5th month, on the 15th and 30th day, this one is worshipped by seven households. The others don't worship this one, because their grandparents didn't, so they're not.

The Lama further argued that incarcerating the dogs was not in keeping the guiding development philosophy of GNH, and that a "Catch/Neuter/Vaccinate & Release program," based on the experiences of other countries, and developed by the

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26 Some Hindu celebrations, particularly Dashain (Dussehra), celebrated in the Nepali month of Kartik (September/ October) each year, which honors the goddess Durga, call for offerings to the goddess involving the ritual sacrifice of goats, sheep, chickens and even water buffalo. At Dakshinkali, just south of Kathmandu, ritual sacrifices occur throughout the year.
government, with the support of civil society and NGOs, would be more effective (Rabten 2008). In this example, we can see the highly ambivalent role that dogs play in Bhutanese life – as both annoying scourges, who pose a seemingly intractable problem to a nation unwilling to kill excess animals, and as sentient beings, deserving of compassion and integral to the development of the national karmic merit. Like the other liminal groups discussed above, dogs are at the edge of society, familiar as domestic animals and sometime pets, but outside of the inner home sphere, and representative of disorder and licentiousness.

*The liminal nature of pigs*

In interviews, both domestic pigs and wild boars were associated with concepts of sin and filth, which, as we can see from Mary Douglas’ (1966) work, are closely related. In the past, villagers kept livestock on the first floor of their homes. These days, most first floors have been converted to storage areas, and livestock are kept in separate sheds. In addition to cattle, some people kept pigs for meat. Pigs are still kept in the poorest and most remote villages of Trashiyangtse and Zhemgang, two of the districts at greatest distance from the capital and its modernizing influence. However, in most places, the narrative about pigs follows an ascending arc of increasing “civilization,” represented by increasing awareness and practice of the teachings of the Buddha; improved housing and other material conditions; more

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27 Keeping dogs as pets is practiced among the upwardly mobile in Thimphu. Pet dogs are often tiny, white, well-groomed Lhasa Apsos, while strays are mangy mixed-breeds. Some rural families keep large guard dogs, like Tibetan Mastiffs or similar breeds, chained outside their compounds. Although these dogs are not strays, neither are they house pets. They are guardians of the liminal border between home and outside.
plentiful and nutritious food; ability to work for wages and not as serfs; and increasing access to Western education and healthcare, nearly all of which is attributed to changes made by the Third King, Jigme Dorji Wangchuk, who reigned 1952–1972.

One woman in Zhemgang described the difficulty of the servitude of the past:

Nowadays, due to the 4th king, the country is very peaceful. Before, we had to weave clothes for others, we had to give these clothes for free. Nowadays, we get everything: we get clothes, we don’t have to go and work for the garpa [high caste person]. Now, we have peace because we don’t have to do all these things, so we have a peaceful life.

Another woman in Zhemgang described, step-by-step, the difficulties of the work in the past:

In the past, we would cut trees, burn trees when they were dried, then take the cut logs for firewood. We’d make the area ready to sow maize, and then sow maize. Again, we’d have to dig, do weeding. When we were about to harvest the maize, we’d have to be in the field to protect the maize from wild animals. We’d have to shout. At last, we’d harvest the maize. Then we’d go to dig wild potatoes from the forest.

We had to feed the insects – we had to give food to the insect so that it would give silk for bura. At first, the insect will be like a butterfly. It gives birth, and the offspring will make a house. We boil that house to make threads and weave clothes. We make colorful threads and weave clothes. Now we have stopped because of development, and also because we want to prevent sin. One big lopon told us to stop weaving silk. I even went to another place to hear about religion, and afterwards we stopped weaving. We didn’t face any difficulties. Before, we didn’t have chappals, before we didn’t have clothes. Now, we’re getting chappals and clothes from shops for our own use.

Illustrating just how onerous these burdens were, some villagers fled to ridges and hillsides in the most remote and isolated parts of Zhemgang to escape the tributes
they had to pay, such as growing and harvesting cotton, to weave into clothing to be
given to the Dzong. Having established homesteads and villages difficult for Dzong
officials to reach, these areas are now among the poorest and least developed because
of their difficult access. It is in such places that some people still keep pigs.

Figure 5-23: One family I stayed with in Zhemgang kept pigs.

Most people, however, describe keeping pigs in the past, before the
intervention of a “big lama” or other influential person, who told them that they were
accumulating sin by slaughtering the pigs for food (see also Blench 2005b). Now,
people say, they have become more “Buddha-minded”, more aware of the ethical
problems with keeping pigs, which can only be slaughtered for food, unlike cattle,
which provide milk, and subsequently cheese, or sheep, which can provide both fiber
and milk. As a wealthy and well-traveled man, who had traveled to Taiwan,
Singapore, Malaysia, and Bangkok with important lamas, and then returned home to settle in Buli, Zhemgang explained:

Before, people weren’t aware that it was sinful to keep pigs, because they are killed for our consumption. Because of the lhakhang [the monastery up on the hill, of which a lama (rimpoche?) who stays in Taiwan is the patron – this lama is the brother of the Gup’s wife, keeper of the house where we’re staying] so many big lamas and other big people came here and taught us that keeping pigs was sinful, and killing meat was sinful. Also, now we have more income and can buy meat from Gelephu when we need it. Now, consumption of meat has decreased and we’re eating more vegetables now.

When people were keeping pigs, the area was more dirty. Before, most households kept 4-5 pigs. They were mostly out in the field or on the way [path]. Even though they were kept in sheds, they got out and wandered everywhere and there was shit everywhere. Though it is good for the fields, pig manure smells a lot [and is therefore undesirable]. Cow manure is better. Also, pigs destroy the crops while walking around.

Having been advised by authority figures in living memory to stop keeping pigs, and engage in more proper Buddhist behavior, villagers in Zhemgang say that they have become more “civilized.” They describe their past days of keeping pigs as a time of darkness, when they were both materially and spiritually poorer. It is interesting to note how the material and spiritual development of Bhutan go hand in hand. The extension of roads that allows the dispersal of manufactured goods, along with access to education and healthcare, also allows religious leaders to travel, spreading the formal teachings of Buddhism. As villagers hear these teachings, they come to realize the moral hazard of their traditional practices, and vow to give them
The principal said that until a lama came to Tashibi four years ago, the people there had little idea about Buddhism, and primarily practiced “Bonism,” one main marker of which is the reliance on Pawo/ Pawomo to conduct ceremonies for sick people. (A pawo [Tib. dpa’bo] ceremony, with its drumming and shouting, was going on in a nearby house when we stayed in Gomphu. As with much else, it scared [a companion] and she refused to walk up the hill near the house, even though that was the only place with good mobile reception.) In the past, these ceremonies might have required the slaughter of a pig or cow, and even today, a cock may be sacrificed. From the Buddhist point of view, this is not acceptable because it’s substituting the suffering and death of one (the animal) for that of another (the sick person). Also, the principal said that Bonism keeps people trapped in the cycle of samsara. There’s no heaven, and no enlightenment in Bonism, so its followers are condemned to continue to cycle through samsaric existence. For these two reasons, he is trying to get people to stop following Bonism and to start following Buddhism. However, he said that people are very attached to the beliefs and practices of their ancestors and are unwilling to change what their family has been doing for generations.

Apparently, no big lamas – with the possible exception of Terton Pema Lingpa – came to Zhemgang during the great eras of dzong building. As Bhutan was considered by Tibet to be a land slumbering in darkness and ignorance, so is Zhemgang considered in Bhutan. Even today, Pawo/ Pawomo interventions for illnesses are favored over trips to the BHU and people often wait to go to the BHU until their illness has progressed and their chances of survival are slim. Because of negative experiences with the BHU, they then say that it is ineffective and they’re better off sticking with their pawo/ pawomo ceremonies, creating a vicious feedback loop.

The principal offered a story to highlight the importance of understanding Buddhism properly and therefore avoiding killing:
A friend (lama?) went to Trashiyangtse and was shocked to find gomchens (ostensibly Buddhist practitioners) following a tradition of killing cocks for their ceremonies. The person asked how they could do this if they were followers of Buddhism, and the gomchen described the story of Lama Drukpa Kinley, the Divine Madman, who asked for a whole rooster when he stopped to eat lunch at an old lady’s house. He told her not to reserve any of the bird for herself, but she secretly took a leg of the bird for her children. After eating his meal, the lama reassembled the bones, snapped his fingers, and the bird came back to life — minus a leg! The woman was then ashamed at her greed. The gomchen explained that they were followers of the Divine Madman. The visiting lama asked if they could snap their fingers and bring the chickens back to life, ensuring the souls of the chicken’s positive journeys into the future, and the gomchen admitted that he couldn’t. So the visiting lama told him that he should not be practicing such sacrifice — Lama Drukpa Kinley was fully enlightened, but they were not.

I wondered how the avoidance of pig slaughtering was affecting their diets, but the villagers did not indicate that they had encountered any problems with having enough food since they had stopped keeping pigs. The most common sources of protein throughout the country are soft fresh cow cheese, served as a chili-spiced sauce over rice, and chicken eggs. Most in Zhemgang described their current access to food as being much better than it had been in the past. Even today, though, some of the village diets provide little in the way of nutrition. Of the course of two days, while traveling with a district official, to whom villagers offer their very best provisions, I was served watery radish soup and white rice for four meals. Ironically, pork was available as well, but as a vegetarian, I was unable to eat it.

28 The latter, however, were extremely dear at 10 nu/25 cents a piece during my 2007-2008 stay in Bhutan because avian flu scares had cut off the supply of eggs from India, drastically increasing the value of already-expensive local eggs. It was a great honor when my village hosts served eggs to me, as I knew how expensive and difficult to come by they were.
Although the villagers are raising fewer pigs, their desire for pork has not declined. In fact, pork fat is a particular delicacy, valued at celebrations and festivals. These days, cattle and pigs are slaughtered by non-Buddhist butchers: Hindus or Christians in the capital or southern border areas. In addition, slaughtered meat comes up the road network from India.

In addition to associating their former pig rearing with sin, villagers also identified domestic pigs as sources of dirt and filth. In discussions of the cleanliness of their villages, informants said that the villages had grown much cleaner ever since they had stopped keeping pigs. Unlike cattle manure, they identified the pig manure with offensive smells, and said that the pigs contributed to strewing garbage around. Some pigs were allowed to roam free, contributing to the spread of rotting food and feces around the village.

Although they are associated with both filth and the accumulation of sin, pigs may also stand in for humans in rituals. Dorji (2004: 605) describes a ritual in which a piglet is used to stand in for a sick person whose soul has been lost or weakened. The piglet’s tail is cut, indicating a symbolic killing of the piglet, and then tossed away, symbolically traveling to the place of the malevolent spirits in order to reclaim the person’s soul. After the ritual, the family of the sick person can no longer retain the pig, which has symbolically been exchanged for the soul, so it is either given to the spirit medium, donated to the local temple or allowed to roam free.
Conclusion

In this chapter, I have shown how competing environmental imaginaries, and habitual actions developed in rural areas, have contributed to difficulties with household waste management in urbanizing Thimphu. The social science concepts of environmental imaginaries and *habitus* provide insights into the challenges of inculcating urban waste management practices in a populace that has largely migrated – and continues to migrate – from the rural areas. I have described how government officials in the capital came to view urban waste management as an urgent problem, and I have described traditional attitudes and practices related to household waste management in rural areas of three districts of Bhutan.

For the purposes of waste management, rural areas and urban areas cannot be considered as disconnected entities. Especially in such a mountainous, thinly settled country Bhutan, where nearly all manufactured goods pass through the urban towns out to rural villages, and nearly all inhabitants of urban towns have roots and relatives in rural villages, urban and rural must be thought of as part of the same interconnected *mandala*. Government workers, school leavers, and students pass freely and frequently from rural areas to urban ones, and back. Thus, the attitudes and habits of rural residents travel with them when the take up residence in urban areas.

In the rural areas, one aspect of the environmental imaginary holds that waste non-biodegradable waste may be disposed of in many places on the land surrounding the house, with a few exceptions – notably religious and spiritual places, such as
lhakhangs, chortens, gnas, and deity phodrangs. Environmental imaginaries that suggest illness, misfortune and crop failure will befall those who pollute such areas describe the limits of appropriate practice in gnas and deity phodrangs. The stories and oral histories of gnas and deity phodrangs inform and educate listeners, delivering a moral message about appropriate behavior in such places. As discussed in Chapter 4, villagers know that they must keep their home altars and shrine rooms clean to invite the god. The “natural” respect – generated through education and example – owed to a lhakhang dictates that it will not be fouled.

By contrast, urban living demands an environmental imaginary that says that most areas are off-limits for garbage disposal, and that garbage must be placed in the few places, such as local dustbins, designated for its disposal. This is in exact contrast with the rural environmental imaginary. Waste management in urban areas then present something of a challenges to people who have been used to having large forests and rivers to absorb their waste. In the urban centers, people are more closely settled, and must learn to manage in more compact conditions. When people move from the countryside to the city, their environmental imaginaries and habitus travel with them. And yet, when they reach the city, and take up residence with their relatives, they find that the rural environmental imaginary and rural habitus are no longer suitable. Both their mental models and their habitual actions are at odds with their new surroundings. Those who have been educated outside the country have observed the practices of citizens of other countries regarding waste management, and
may have adopted these habits while abroad. However, for most Bhutanese, the actions contained in the mantra ‘reduce, reuse, and recycle’ are not yet part of their ‘feel for the game.’

For this reason, it is not surprising that rural migrants take some time to adapt to the constraints of city living. To address the challenges of adapting environmental imaginaries and *habitus* to the urban condition, scholars and policy-makers might consider more broadly the aspects of Bhutanese culture that shape these ways of thinking and acting. Continuing analysis of the rural Bhutanese environmental imaginary and *habitus* might offer insights as to leverage points through which thoughts and behavior could be shifted, to contribute to more sustainable and hygienic solid waste management. Stated differently, in typical, or “reactive” patterns of learning, established mental models and habitual patterns of action govern learning. To change systems, one must move beyond reactive learning, and move past old assumptions, to gain a greater awareness of the multiple levels of holistic systems and the future possibilities that may be inherent in the systems (Senge et al. 2004). Thus, the traditional patterns of thought and action must be examined within present (changing) holistic reality – not limited to the material technology of waste management – for both their limitations and their potential solutions.

As shown above, rural Bhutanese habitus contains practices of thrift, reuse and recycling, which become attenuated in the urban condition. Instead of discarding rural habits, a thorough examination of them might suggest possibilities for reviving and
promoting these traditions among both urban and rural Bhutanese. Reuse and recycling as practices are not foreign to Bhutan. They exist in the traditional ways, the habitus, of rural villagers. Bhutanese who have grown up in the villages can surely name and describe many more practices of reuse and recycling beyond what are listed in Appendix A. Although rural villagers practice reuse – out of thrift and necessity – this existing practice has not been linked with efforts toward municipal solid waste management (see Appendix A: Examples of Reuse). Similarly, farmers practice composting to enrich the soil of their agricultural fields, but this indigenous practice has not been recognized as an example of the wise use of resources. In the villages, people had ever incentive to be thrifty, practical, and inventive. Now, however, in the rush to the urban areas, with the fervid embrace of 21st century modernity, it seems that these practices, which comprise part of Bhutan’s cultural heritage, are being lost. Not only are the practices disappearing, but so is the mindset, at a moment in time when, if adapted to the urban setting, the traditional practices of thrift, reuse and recycling could prove remarkably beneficial.
Chapter 6 Politicized Studies of Religion and Ecology

Through analyses of local perceptions of forests and of waste in Bhutan, this dissertation has demonstrated an approach to the examination of environmental imaginaries (Watts and Peet 1996b), and the religious and spiritual aspects thereof, to provide better accounts of a world (Haraway 1991a) in which social location and discursive practice (Bryant 1998; Bryant 2000) shape biophysical realities. To bring attention to the religious and spiritual aspects of environmental perceptions and practices into political-economic discussions of environmental issues requires tackling an epistemological challenge of bridging the gap between materially-grounded political ecology, which directs attention to the historical and material specificities of particular situations, with a philosophical view of cosmology that locates human perspectives in the realm of ideas and worldviews.

Envisioning a Place in the World

With feminist theorist Donna Haraway (1991a) and political ecologist Raymond Bryant (2000), I have described locating a place in the world as a process of envisioning, in which biophysical conditions, socially- and materially-conditioned practice, spiritual perceptions and discursive interactions all come into play in shaping the place and location that is envisioned. Bryant shows that the practice of environmental conservation is a matter of envisioning, in which political, economic, cultural and discursive forces are mutually constituted around nature (2000: 677). Inherent in the process of envisioning social relations is the process of envisioning the
moral discourse, “because each and every conservation project tells us much about what participants believe to be good and proper” (Bryant 2000: 677). This insistence on the importance of accepting the incorporation of spiritual perceptions into our understanding of the process of envisioning builds on and extends Bryant’s (2000) call for a theoretical examination of the mutual constitution of moral discourse and socionatural place.

Like traditional ecological knowledge, spiritual perceptions may carry information within specific practices that is irreducible to current constructions of rationality, but might expand our understanding of the world. The ways that Bhutanese Tibetan Buddhists engage with their biophysical environment – particularly the places where deities are believed to reside – through prayers, offerings, shamans, and ritual taboo, serve as an important mode of connection and communication between humans and other-than-human life, despite their less-than-obvious mechanisms. As Bourdieu has shown through the “logic of practice,” practical knowledge cannot always be reduced to theoretical understanding (Bourdieu 1994/1998). We can recall here the earlier example of the Saudi fisherman, who remarked that there were no fish in the nearby ocean “because of all the naked sunbathers on the beach” (Ruitenbeek and Cartier 2001: 9). While Western science teaches us to seek out a proximate material cause, such as over-fishing or pollution from new hotels, the fisherman identified the cause that most upset the harmony of his world and could thus be attributable for the lack of fish in the sea. The New Sciences
of chaos and complexity theory are beginning to demonstrate – scientifically – that the nature of complex adaptive systems is more sensitive and interconnected than reductive, mechanistic science would have us believe (Gunderson 2000). This is the piece that has been missing from Western-trained scientists’ understandings of the mutual constitution of moral discourse and socionatural place: the acceptance of the local reality of spiritual perceptions that are not reducible to social epiphenomena, as Durkheim claimed (1915/1965).

Contrary to expectation, religion did not die out with the rise of rationalism and industrialism. Religion and spirituality continue to be important in many people’s understandings of the world. The Gallup International Millennium survey found that 87% of the world’s population professes religious faith (Carballo 1999). Theories of society that emphasize the role of the state and of capitalism do not fully address the lived reality of many of the world’s people. While largely convincing, these theories fail to provide a complete picture of human society, in that they neglect the role of religion and spirituality. Religious underpinnings powerfully shape norms and values, as demonstrated in the case of Bhutan. Therefore, a comprehensive analysis of society must grapple with the role that religion and spirituality play in people’s lives. As American hegemony extends around the globe through networks of media, global capitalism, and international aid and diplomacy, Western paradigms of nature and culture are also spread around the globe. Therefore, our understandings of nature have
important material effects on residents of other countries, including decisions about the form and content of development aid.

Thus, political ecology analyses of the meaningful and material constitutions of environmental dilemmas need to incorporate attention to the ways that religion and spirituality shape the environmental imaginaries that underlying deep discourses of environmental debate. The mutual constitution of moral discourse (which I take to include religious and spiritual perspectives) is relatively easy to see in Bhutan, where the distinctive version of Tibetan Buddhism is very much in evidence in everyday life among the Ngalops and Sharchops with whom I conducted my research. As philosopher Harold Kincaid has noted, a geographically and demographically small, culturally distinct, and relatively homogeneous country like Bhutan is ideal for teasing out the social laws that shape societies.

Small scale societies are ideal candidates for explanation for several reasons....[Small scale societies] are likewise more isolated from outside cultural factors while at the same time more directly tied with their ecological environment. So, small scale societies present cases where the number of variables are relatively reduced and provide us with a rich set of data for testing hypotheses (Kincaid 1994: 126).

Having modeled an approach to the examination of material effects of religious and spiritual perceptions of nature in a relatively discrete and bounded small scale

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29 Again, I must point out the cultural, ethnic and religious distinctiveness of the Lhotsampa, with whom I did not study. Even within the Drukpa groups, there are regional differences, and the Khengpa of Zhemgang had spiritual beliefs and practices that were similar but distinct from those of the Sharchops.
society, it may be possible to extend this approach to more complicated and contested terrain to illuminate environmental dilemmas in other places.

An approach to politicized religion and ecology studies

As I see it, five distinctive aspects shape the research approach to bring religious and spiritual understanding of environmental dilemmas into the political ecology framework. By embedding these aspects in the political ecology approach, the researcher remains attentive to the issues of power, distributive justice, and historical and material conditions that shape environmental dilemma, while adding an additional aspect to the analysis. The distinctive aspects are:

1) An attentive familiarity with local religious and spiritual beliefs and practices.
2) An openness to consider these beliefs and practices as part of the explanatory framework for analyzing environmental dilemmas.
3) A willingness to look for contributing factors in unexpected places.
4) A willingness to ask questions that may sound foolish.
5) An appreciation of the subtleties of intuition.

Equipped with these attitudes, the researcher is prepared to listen deeply with the intention of comprehending the local environmental imaginary. This open and appreciative attitude is not dissimilar to the techniques that Kathryn Anderson and Dana C. Jack describe in their discussion of feminist practices of oral history (Anderson and Jack 1991). Anderson and Jack point out, “If we want to know how
women feel about their lives, then we have to allow them to talk about their feelings as well as their activities” (1991: 15). They describe a situation in which

A woman’s discussion of her life may combine two separate, often conflicting, perspectives: one framed concepts and values that reflect men’s dominant position in the culture, and one informed by the more immediate realities of a woman’s personal experience (Anderson and Jack 1991: 11).

Similarly, interview respondents and participants in environmental dilemmas may identify the material and political aspects of the dilemma as being the salient aspects of the issue under discussion, while maintaining spiritual and religious perspectives in a separate realm. As we have seen in the case of Bhutan, however, these perspectives may be relevant, if the researcher is open to listening attentively and sympathetically to them. Likewise, if we wish to incorporate religious and spiritual perspectives into our analyses, we must be willing to listen to them with an open and sympathetic mind. Because religion and science (including ecology and environmental issues) are so often positioned on opposite sides of a divide in modern life, respondents may be uncomfortable raising religious and spiritual issues without sympathetic probing.

**Enspirited places, material traces**

As we have seen in Chapters 3, 4, and 5, religious and spiritual attitudes and practices contribute to environmental imaginaries and actions with regard to forests and waste in Bhutan. Reflecting taboos that contribute to the maintenance of social order, by separating that which is contaminating from that which can be contaminated,
in both the material and symbolic realms (Douglas 1966), beliefs about deities and about ritual pollution mediate the ways that the Bhutanese interact with their landscape. Taboos designate some areas as off limits for human use, protecting them from ritual and material pollution, which limits ecological degradation. Belief in deity punishments resulting from ritual pollution or drib causes believers to maintain the quality of lakes and particular forested areas. Sacred natural spaces may be protected even when the surrounding environment becomes degraded, because of the grave consequences of violating religious norms, and for this reason have recently become of interest to protected areas managers and others interested in the conservation of biological diversity. As Colding and Folke (2001) have shown, a range of different “resource and habitat taboos” restrict resource withdrawal by certain groups of people; at certain times; by certain methods; during certain life history stages of species; and in certain places. Further, some taboos completely prohibit the use specific species (Colding and Folke 2001). Thus, taboos provide a wide range of mechanisms for limiting and controlling resource use.

In the examples provided, we see environmental imaginaries coming into conflict, as the traditional structures of Bhutanese culture flex to adapt to and incorporate new aspects of material culture. As Mary Douglas (1966) has shown, modern concerns with cleanliness – like those of the Bhutanese government – are closely related to issues of ritual pollution, embedded in the more traditional Bhutanese environmental imaginaries. Traditional taboos that have protected
important natural resources through the preservation of sacred natural sites that may serve as *in situ* germplasm repositories (Sharma et al. 1999; Bhagwat and Rutte 2006). Further, these traditional taboos have contributed to the maintenance of human sanitation and hygiene through beliefs about ritual pollution or *drib*. In these ways, the taboo system maintains environmental quality with regard to important natural resources and waste that exist within the realm of traditional material and symbolic culture.

However, when confronted by new materials that are not addressed within the taboo system, its ability to provide guidance with regard to actions in the environment breaks down. As we have seen, plastic wrappings, that have been introduced into Bhutan along with economic development, are not considered to be dirty or polluting because they lack the qualities that cause *drib*. Thus, there are no rules within the traditional system of taboos for handling plastic wrappings, and they are discarded casually, leading to a littered landscape. Wanting to establish a clean and hygienic territory, the Bhutanese government establishes policies and rules with regard to household and municipal waste management. However, these new rules are not easily incorporated by the rural populace, because the existing taboo structure provides such a comprehensive means of organizing and thinking about materials within the traditional cultural realm. Indeed, Bhutanese officials have suggested that the perception of sacred natural sites could contribute to an indigenous system of
“borderless and boundary-less” environmental conservation (Ura 2001a; Chewang 2003).

The examples of sacred natural sites and ritual pollution in Bhutan demonstrate the value of traditional systems of environmental management which comprehensively address all important materials existing within the cultural realm within a comprehensible framework of taboos. At the same time, these examples show the fragility of such traditional systems in the face of exogenous products and systems, introduced through economic development and capitalist enterprise. Traditional taboo systems do not quickly or easily adapt to incorporate strategies for dealing with new materials, or addressing emergent social conditions, such as urban life. Given both the value of the traditional taboo systems for managing local natural resources, and the potential disruption of urbanization and development, the Bhutanese government’s strategies of promoting ways for villagers to remain in their villages, with enhanced amenities, rather than migrating to the urban areas, seems wise. The question remains, however, to what degree enhanced amenities, such as packaged food and telecommunications, may disrupt the traditional taboos. It may be necessary to promote the value and importance of these taboos to ensure that the younger generation learns them.

In the case of economically developed and industrial societies, anthropologist Mary Douglas (1966) has shown that “modern” societies attach the same types of taboo-based symbolic content to their efforts to dispel dirt, which is “essentially
disorder” (p. 2), as do “primitive” societies. A deeper investigation into the efforts to protect particular areas in “modern” societies may show that these practices have a similar symbolic content to the “resource and habitat taboos” that Colding and Folke describe (2001). That is, modern societies may maintain the same practices of protecting privileged and symbolically-important areas as “primitive” or traditional societies, but the reasons may be cloaked under the veil of “scientific conservation.” Examining the symbolic and ritual content behind decisions to preserve or protect particular species and areas may provide additional insight into the efficacy of certain programs and methods of harmonizing Western-devised conservation programs with the needs and interests of people in developing countries. This is a rich vein for further research. Anthropologist Dan Brockington (2008) has begun to investigate the competing environmental imaginaries and social politics at play in celebrity involvement in environment conservation. As icons and holders of symbolic value, celebrities are also influential in the promotion of spirituality and the global spread of religions. Further studies that investigate the symbolic and ritual content of choosing particular places or species to protect in Western societies, as Colding and Folke (2001) examined in their study of “resource and habitat taboos,” could identify the deeper values and symbolic functions behind our “scientific” taboos.

*The ecological crises as a moral crisis*

The addition of religious and spiritual insights to the analysis of environmental dilemmas has important practical ramifications because the ecological crisis is
increasingly understood as a moral crisis. As early as 1949, conservationist Aldo Leopold recognized the ethical component of land conservation. In *A Sand County Almanac*, he wrote,

> No important change in ethics was ever accomplished without an internal change in our intellectual emphasis, loyalties, affections, and convictions. The proof that conservation has not yet touched these foundations of conduct lies in the fact that religion and philosophy have not yet heard of it. In our attempt to make conservation easy, we have made it trivial (Leopold 1949/1966: 246).

Nearly fifty years later, more than 800 environmentalists and international scholars of the world’s religions attended a series of conferences on religion and ecology held at Harvard’s Center for the Study of World Religions in the late 1990s. The conferences resulted in the publication of nine anthologies that address the perspectives of the world’s religions on ecology (Tucker and Williams 1997; Tucker and Berthrong 1998; Chapple and Tucker 2000; Hessel and Ruether 2000; Girardot et al. 2001; Grim 2001; Chapple 2002; Tirosh-Samuelson 2002; Foltz et al. 2003), and launched the field of religion and ecology as an area of academic study. The Forum on Religion and Ecology (FORE) was established, and is now housed at Yale University. FORE is at the forefront of efforts to involve the world’s religions in addressing the global environmental crisis (Tucker 2003: 9), and to engage “the knowledge and wisdom of psychologists and philosophers, poets and preachers, historians and humanists to help us see and communicate hard truths and inspire individual and social change” (Leiserowitz and Fernandez 2008: 13).
Spirituality as a font of resistance to state control and simplification

Finally, the study of religion and ecology in a politicized environment can provide insights into the ways in which spirituality serves as a font of resistance in the face of state territorialization and simplification. Territorialization allows the state to enumerate, settle, and control its people, and to protect the income it gains from taxes and natural resources (Vandergeest and Peluso 1995b: 390). Modern states reorganize land and people in nested territories delineated by spatial boundaries and hierarchies of administration – strategies that allow the state to control people’s activities, including their use of natural resources (Vandergeest and Peluso 1995b: 401). If modern statemaking is “the ideological and organizational power of the central government to penetrate society, extract compliance, and invoke commitment” (Sivaramakrishnan 1999: 5), then the new emphasis on solid waste management in Bhutan, and in particular, personal responsibility for household waste management, represented a new method of articulating the state and its role in citizens lives. In Bhutan, the Ministry of Agriculture, which oversees the forests, parks, and protected areas that cover nearly half the country, and the Ministry of Works and Human Settlement, have been the key state agencies in regulating citizen practices in the environment. With the implementation of Solid Waste Management Rules and Regulations, which established environment inspectors as agents of the state, and the adoption of the Waste Prevention and Management Bill, under discussion by both houses of Parliament as of June 2009 (Pem 2009), the state has further extended its reach into the lives of the citizens. In Chapter 5, I described how these territorializing
practices represented a resurgence of state power and authority on the eve of the first
democratic elections.

In this context, we can see the deity beliefs and practices, which the
government views with ambivalence, as a source of everyday resistance (Scott 1987)
to the simplifying and territorializing actions of the state. Communing with unseen
spirits, as in animism, may appear as a challenge to the State because it removes
believers beyond the reaches of state control. Boons people get, or believe they get,
from reciprocity with the spirit world may lessen the degree of control that human
social institutions, including the State, have over people. By affiliating with the
divine, the spiritual practitioner may become unmoored from these human circulations
of power, and disconnected from the social rules necessary for the maintenance of
society. Paradoxically, religious believers are encouraged to loosen their ties to the
earthly world, but not so much that they wander outside the boundaries of society. In
some traditions, the promise of better future conditions in the afterlife keeps religious
believers from demanding social justice and equitable conditions in their earthly life.
As social institutions that serve the dominant social structure, religions have an
interest in maintaining people within that structure.

Institutions of power, such as the State and the Church, maintain ambivalent
positions in relation to spirituality, because it loosens people's connections to the
worldly realm, turning their focus to a transcendent realm, and causing them to
become potentially less governable. Religion structures, organizes, and even coerces,
maintaining people within the circulations of power that Foucault (1997) has shown to be inescapable. Within the Church (the organized body of religion), power circulates, exchanges and manages through donations, hierarchies, and privileges (Bourdieu 1994/1998). In this way, religion serves to reinforce the dominant order. Although governments have supported and encouraged religion for political ends, governments tend to maintain a suspicion of spirituality. The prophetic tendency of religion – in which an individual’s spiritual experience conveys new insight or understanding about the nature of the world – calls the existing order into question. In light of the territorializing practices of the State, for scientific control of both biopower (Foucault 1997) and the biophysical environment, the prophetic voice of spirituality will remain a necessary bulwark against homogenization.
REFERENCES


BBC (2007). Goats Sacrificed To Fix Nepal Jet BBC.


Blench, R. (2005a) "Livestock Predation In Central Bhutan: The Impacts Of Social And Economic Change."


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Gadgil, M. And R. Guha (1992). This Fissured Land: An Ecological History Of India. Delhi; New York, Oxford University Press.
Gadgil, M. And R. Guha (1993). *This Fissured Land: An Ecological History Of India.* Berkeley, University Of California Press.


Hickman Jr., H. L. (2001). "A Brief History Of Solid Waste Management In The US In The Last 50 Years:

Part 8: Sometimes Composting Does Not Sell." *MSW Management*.


371


Religion And Science For The Environment (1992). Joint Appeal By Religion And Science For The Environment: "DECLARATION OF THE 'MISSION TO WASHINGTON'".


Williams, R. (1976). Keywords: A Vocabulary Of Culture And Society. New York, Oxford University Press.


APPENDIX A  Examples of Reuse

- Large bottles, such as oil bottles, reused for planter for flowers
- Oil cans as planters
- Oil cans as dustbins
- Soda bottles, water bottles, oil bottles, jugs reused for arra
- Water bottles, beer bottles used for water in toilet
- Plastic bottles and jars used for storing spices
- Cans to hold soap, toothbrush
- Plastic sugar packets for carrying lunch
- Plastic packets for thread
- Plastic packets for storing other small items
- Grain sacks for storing grain
- Grain sacks for carrying snacks (tengma, zow)
- Grain sacks for carrying supplies on horse
- Old clothes as scarecrows
- Old clothes as bandages
- Old clothes as rags
- Old clothes as for children’s clothes
- Old clothes as stuffing for pillows
- Black powder from batteries used to make chalk line
- Black powder from batteries used to make black ink for prayer flags
- Black powder from batteries used to make black paint for houses
- Newspaper to wrap doma
- School exercise paper to wrap doma
APPENDIX B        Forest and Deity Study Interview Questions

Background

1. What is your age? Occupation? Gender? Education level?

2. How long have you lived in this village? Have you lived elsewhere?

3. Do you own land? How much?

4. Do you grow crops on someone else’s land?

Village economy

5. Where do you get your food?

6. How often do you go to the forest?

7. What products do you get from the forest?

8. What animals live in the forest?

9. Where do you get medicinal plants?

10. Where do you get ceremonial plants?

11. Has the location from which you harvest these plants changed over time?

12. Are there places that you can’t go to harvest these products?

Prohibited places in the forest

13. Are there places in the forest that you cannot go? Why?

14. Is entry into these places prohibited by the government? Why?
15. Are there places that are prohibited but not by the government? For other reasons?

16. How do you know where they are?

17. Who owns these places?

18. How do you learn that you can’t go there? How do you learn appropriate actions for these places?

19. Have you ever accidentally stumbled into a prohibited place? What happened?


22. What kinds of plants and animals are there? What else is there?

23. Are there certain conditions under which you can go to these places? Are there certain people who are allowed to go to these places?

24. If you accidentally go into the prohibited place, what can you do to correct your mistake?

25. How do you know when you’re near or entering a prohibited place?

26. Can domestic animals go to these places? Why/why not? What happens if they go there?

27. Were people ever allowed to go there? Perhaps in the past?

28. Do you know of anyone who went to these prohibited places? Why did they go there? What happened to them?
Deities

29. What deities are associated with these places? What are their names, types, characteristics?

30. Why does the deity chose to reside there? How did the deity come to reside there? Did it reside elsewhere in the past?

31. What is the relationship between the deity and your village?

32. Are there certain plants or animals associated with this deity?

33. Have you noticed any change in the deity’s actions or in the citadel itself over time?

34. Has the village itself changed over time, in location or size?

Would you be willing to show me where the citadel is?

Prohibited times

35. Are there times of the year when you cannot go the forest to get these products? When? Why?

36. Are there any conditions under which you could go to these places? What if there are severe shortages elsewhere? What if someone was sick and needed an herb found only in that place?

37. Does your village practice La Dam/ Yi Dam? When is La Dam practiced? For how many years?

38. What are the rules for La Dam?

39. How do people come to know these rules?

40. What happens if someone breaks the rules? Will the person experience consequences? Will the village experience consequences?
41. Does government policy affect this practice?

Questions for Religious Leaders

1. What deities are associated with _____ village?

2. What are the qualities of those deities? Where are they found? What are the characteristics of the places where they are found? Plants, animals, natural features, etc.?

3. Can people go to these places? What happens if they do? Are there any conditions under which you could go to these places? What if there are severe shortages elsewhere? What if someone was sick and needed an herb found only in that place?

4. Can domestic animals go to these places? Why/ why not? What happens if they go there?

5. Were people ever allowed to go there? Perhaps in the past?

6. Do you know of anyone who went to these prohibited places? Why did they go there? What happened to them?

7. What happens if you go near, but not into, the prohibited places? If you accidentally go into the prohibited place, what can you do to correct your mistake?

8. What deities are associated with these places? What are their names, types, characteristics? How do they interact with the village? Are deities in the village or only in their citadels?

9. Are there certain plants or animals associated with this deity?

10. Have you noticed any change in the deity’s actions or in the citadel itself over time? Has the deity resided elsewhere in the past? Has the village itself changed over time, in location or size?
11. What ceremonies do you do for the deities? Where do these take place? Who is involved?

12. What powers does this deity have? What actions are needed to propitiate the deity? What happens if the deity gets angry?

13. Would you be willing to show me where the citadel is?
APPENDIX C  Household Waste Management Study Interview Questions

Background

1. Gender
2. Age
3. Educational background or religious training
4. Religion
5. Profession/ main occupation
6. Length of time living in this village

Waste management

7. Management of food/ cooking waste
   a. Types of food/ cooking waste generated - examples
   b. Amount per day/ week – more during certain times? (festivals?)
      i. Has there been any change in amounts of waste produced?
      ii. If food is left over after festivals, what is done with it? Reused for
          fermentation, dried...?
   c. Location of disposal – where? Can I see this place?
   d. Do other households use same site?
   e. Process of disposal – who carries?
   f. Frequency of disposal – when, how often?
   g. Problems with vermin/ mice/ rats/ other pests?
8. Management of other household waste, including manufactured products

a. Types of other waste generated – examples

b. Have these products replaced biodegradable products? Why?
   i. Is it possible to repair any of these items?
   ii. Why/ why not?
   iii. If you do repair items, would you prefer to get new ones instead?
       1. What are the limitations on getting new ones?
   iv. Do you encounter any difficulties with your repaired items?

c. Why do these items need to be discarded? (broken, container contents used up, no longer needed, dirty, etc.)
   i. Are batteries used? Florescent light bulbs?
   ii. How many/ how often?
   iii. What is done with them after they are used up? (hazardous waste issue?)

d. Amount per day/ week
   i. Has there been any change in amounts of waste produced?

e. Location of disposal – where? Can I see this place?

f. Do other households use same site?

g. Process of disposal – who carries?

h. Frequency of disposal – when, how often?
i. Do items purchased or created for one purpose get reused for another purpose?

   i. Why/ why not?

   ii. Which items are reused?

   iii. Are you happy with the reuse process?

   iv. Would you prefer to use a different item (that was not reused) if one were available?

   v. Why/ why not?

9. Management of livestock waste

   a. How many livestock?

   b. Where are they kept?

      i. If not under house, were they recently moved, per water supply and sanitation programs?

      ii. How has this affected household?

      iii. Less warm in winter?

      iv. Changes in illnesses? Which ones? More or less frequent?

      v. Greater risk of cold, theft, wildlife?

   c. Location of disposal – where? Used to fertilize fields?

      i. Use of chemical fertilizer? How often? How much? Why?

   d. Process of disposal – who carries?

   e. Frequency of disposal – when, how often?
10. Composting? Does local RNR office provide training on composting for farming?
   i. Have you participated?
   ii. What did you think of the training?
   iii. Do you do composting now?
   iv. Why/ why not?

11. Management of human waste
   a. Satisfaction with toilet situation
   b. Changes in illnesses? Frequency? Severity?
   c. Is toilet convenient? At night? In winter?
   d. Assistance in constructing toilet – available? Needed?
   e. Proximity to water supply?
   f. Are human wastes composted?
   g. Social stigma re: human waste?

12. Satisfaction with solid waste management methods
   a. If satisfied, is current acceptable state expected to continue?
   b. Are any problems expected to arise?
   c. What problems might arise? When? Why?

13. Concerns about solid waste management methods

14. Have these concerns been raised with anyone? Who?

15. Involvement with communally organized clean-up activities at home or in village?

17. Have you seen or heard television or radio programs addressing waste management?
   a. What is your opinion of these programs?
   b. Did you make any changes in your household management after seeing or hearing these programs?

**Perceptions of surrounding environment**

18. Has the village itself changed over time, in location or size?

19. Concerns about quality of the surrounding environment
   a. Changes in your lifetime?
   b. What was the source of these changes?
   c. Do your surrounding seem better or worse?
   d. What role has the government played in these changes?
   e. Was there ever a government project that you opposed? Why?
      i. Any development projects that were thought to disturb deities?
   f. Which government organizations have been involved?
   g. Are there other changes you would like to see?

20. What do you find most pleasing in your surroundings?

21. Do you have other concerns about your surroundings?

22. Are there places that you cannot/should not throw waste? Why?
   a. How do you know where they are?
b. Who owns these places?

c. How do you learn that you can't throw waste there?

d. How do you learn appropriate actions for these places?

e. How big is the area?


g. What kinds of plants and animals are there? What else is there?

h. How do you know when you're near a protected place?

i. Do you know of anyone who went to these prohibited places? Why did they go there? What happened to them?

j. What deities are associated with these places? What are their names, types, characteristics? Stories about them?

k. How did the deity come to reside there? Did it reside elsewhere in the past?

l. Have you noticed any change in the deity's actions or in the citadel itself over time?

m. Do you do ceremonies/puja for the deity?

   i. How often?

   ii. What do you offer?

   iii. Who leads?

   iv. Where do the puja take place?

   v. What happens if you don't do the puja?
n. Would you be willing to show me this area?

**Migration**

23. Has anyone in your family migrated to a town or urban area?
   a. Who migrated?
   b. To which area?
   c. Why did he/she go?
   d. When did he/she go?
   e. What is he/she doing now?
   f. Is this new situation satisfactory?
   g. Does he/she visit? How often? At certain times of year (e.g., tsechu)?
   h. What changes has this caused for your family/village?

24. Have any of your friends or neighbors migrated to a town or urban area?
   a. Who migrated?
   b. To which area?
   c. Why did he/she go?
   d. When did he/she go?
   e. What is he/she doing now?
   f. Is this new situation satisfactory?
   g. Does he/she visit? How often? At certain times of year (e.g., tsechu)?
   h. What changes has this caused for your family/village?

25. What are your thoughts on moving to a town or urban area?
a. Have you considered it? Why/why not?