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The Reincarnation of Waste: A Case Study of Spiritual Ecology Activism for Household Solid Waste Management: The Samdrup Jongkhar Initiative of Rural Bhutan

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Abstract: As rural and subsistence households in the Global South take on the consumption habits of industrialized countries, shifting consumption patterns have contributed to cascades of nonbiodegradable solid waste overwhelming the ability of households, municipal authorities, and governments to manage. As global capitalism expands around the world, spiritual ecology approaches to waste and pollution can provide deeper insight into the attitudes and practices that create a “throw away” society. In rural southern Bhutan, the revered Buddhist teacher, Dzongsar Jamyang Khyentse Rinpoche, initiated a waste reduction project based on Bhutan’s guiding development philosophy of Gross National Happiness. Through engaging cultural and spiritual values, and drawing on the inspirational qualities of social and spiritual leaders, the Samdrup Jongkhar Initiative’s Zero Waste project is an example of spiritual ecology activism for household waste management and waste reduction.

Keywords: solid waste management; Vajrayana Buddhism; Bhutan; rural development; re-use; waste reduction; domestic waste; materiality; waste transformation; discard studies; reincarnation

1. Introduction

In cultural traditions across Asia, a spiritual connection with nature has been emphasized to support environmental protection and ecological goals. Rivers are worshipped as living goddesses (Drew 2012) and believed to be self-purifying (Alley 1994; Haberman 2006). Mountains are revered as the divine axis mundi around which life revolves, or as manifestations of deities, and glaciers are perceived as responding to moral infractions (Bernbaum 2006; Allison 2015). Trees have been ordained, hugged, and worshipped to protect them from the ravages of commodification in the global capitalist milieu (Darlington 2012; Shiva 1988; Guha 2000; Maathai 2010; Greenberg 2015). In the iconic Chipko peasant movement of the Garhwal Himalaya, peasant women hugged trees in defense of traditional rights to the forest, while drawing moral and spiritual strength from reading of the Bhagavad Gita (Guha 2000; Shiva 1988). Spiritual perspectives on ecology share an extension of an ethic of care beyond the human community to other life forms and biotic communities.

A connection to life and life-like processes—what the ecologists E.O. Wilson and Stephen R. Kellert have termed biophilia (Kellert and Wilson 1993)—is increasingly identified and elevated in contemporary expressions of religious traditions around the world (Grim and Tucker 2014; Tucker 2003). Such beliefs and practices are frequently understood within the rubric of “spiritual ecology”, an umbrella term to describe the internal, subjective, emotional, mystical or religious connections that people experience in relation with ecology, the environment, and nonhuman nature

(Sponsel 2012; Vaughan-Lee 2013; Taylor 2007).¹ A central commitment of spiritual ecology is the understanding that “the universe is a communion of subjects rather than a collection of objects . . . Existence itself is derived from and sustained by this intimacy of each being with every other being of the universe” (Swimme and Berry 1992, p. 243). This view emphasizes the ontological relationality of all subjects with each other, suggesting that any being is lessened by the loss of any of its relationships with others. The interrelatedness of Earthly bodies is then central to spiritual ecology. Spiritual ecology studies and activism have tended to focus on those living bodies that comprise the “communion of subjects”, emphasizing interactions among and between humans and other living beings.

1.1. *The Social Role of the Discarded*

The material qualities and limitations inherent in bodies necessarily shape interactions with the biosphere. But what of those materials and bodies that are deemed to be polluting, impure, or nuisances that are denigrated and excluded from dominant systems (Bauman 2019)? Discourses of spiritual ecology have not fully grappled with the “remainder”, that which is considered to be excess, inappropriate, or excised from dominant systems. The excess, or what is rejected from a system, is the negative image of that which is included in the “communion of subjects”. Spiritual ecology reflection on material bodies must also consider that which human societies abject or reject: those people or organisms as well as the materials humans create and then discard.

Many of the world religions create and monitor boundaries that separate pure from impure, pristine from polluted, the valuable from the abject, thus contributing to beliefs about purity and pollution (Douglas 1966; Turner 1969; Kristeva 1982). While issues of ritual or symbolic purity and pollution may appear to be categorically distinct from issues of material pollution, litter, and waste, the anthropologist Mary Douglas argues that dirt represents disorder, in so-called primitive societies as well as in “advanced” societies (Douglas 1966, p. 2). Social efforts to “dispel dirt” are equivalent to efforts to maintain the boundaries of society. This analysis compels the field of spiritual ecology to take a deeper look at the roles of religions in creating, understanding, and addressing the discarded material remnants of human societies.

The field of “discard studies” examines the social and cultural aspects of waste, refuse, and decisions to discard (Evans 2014; O’Brien 2011; Hawkins 2010; Douny 2007; Gille 2007; Rathje and Murphy 2003; Thompson 1979). Concepts of waste are not fixed, but are inherently social, relational, and contextual, shaped by the norms of a particular time, place, and society. Although categorization and classification are universal acts, they are hardly universal in content (Foucault 1971). For example, in the “recycled cosmology” of the Dogon of Mali, positive connotations attach to things like animal excrement, food residue, smoke, bodily dirt, and litter that appear to Western eyes to be worthless or unclean (Douny 2007). Conceptualizing waste requires addressing the materiality of what is unneeded or out of place, along with considerations of the social work that concepts of waste, garbage, and refuse perform. If efforts to dispel that which is undesirable—understood as material or social disorder—maintain order in society, conceptions of waste perform political work to influence the behavior of others, and also police the symbolic boundaries necessary to maintain social order (Douglas 1966; Kaviraj 1997; Gille 2007; Nagle 2009). In separating out that which is undesirable, waste designations are ultimately about where and how a society locates value. Those items or materials perceived as waste are lacking in current value. This uni-directional trajectory of waste is profoundly anti-ecological, and ultimately

¹ The study of human religious and spiritual perspectives on nonhuman nature goes by a number of names, including spiritual ecology, religion and ecology, and religion and nature (Sponsel 2012; Tucker and Grim 2001; Taylor 2010). Each of these terms has its own proponents and offers a slightly different valence. Parsing the differences between various ways of articulating a spiritual human-nature relationship is not the purpose of this article, so I will stick with the term “spiritual ecology,” the theme of this special issues, with the understanding that the term is used broadly to include the fields of inquiry known as religion and ecology, and religion and nature.

wasteful, in the sense of being improvident, because resources are segregated away from larger cycles of regeneration.

1.2. Buddhist Approaches Transmuting Waste

While many religious traditions emphasize the separation of pure from impure, Vajrayana Buddhism recognizes the importance of sensory existence as a source of revelation, inspiration, and enlightenment (Ray 2000, p. 2). Vajrayana Buddhism embraces the existence of that which is negative, aversive, or offensive, and seeks to dissolve dualistic perceptions through wisdom and skillful means, transmuting obstacles into tools on the path to enlightenment. Ritual practices can dissolve dualistic perceptions that cause aversion, inviting the practitioner into a broader conception of existence.

In a highly innovative approach to waste management through spiritual ecology, the renowned Buddhist teacher Dzongsar Jamyang Khyentse Rinpoche launched the Samdrup Jongkhar Initiative (SJI), a project to enhance livelihoods, reduce waste, and slow rural-to-urban migration in rural southeastern Bhutan. The Samdrup Jongkhar Initiative works to put Bhutan's "Gross National Happiness Development philosophy into action on the ground and at a grassroots level, as a model for the rest of the country" through initiatives that support rural livelihoods, promote a democratic culture, and care for the natural environment, bringing about a "zero waste culture" (SJI 2018a). Drawing on Bhutanese cultural traditions of thrift, creativity, and artisanry, as well as Buddhist values, SJI strengthens self-reliance in rural Bhutan. Embracing the nondual perspective of Vajrayana Buddhism, the project helps villagers re-identify the value inherent in household materials perceived as waste, and restores these materials into the circulation of matter.

Dzongsar Jamyang Khyentse Rinpoche, also known as Khyentse Norbu, is understood to be a *tulku*, or reincarnation a previous Buddhist teacher, Dzongsar Jamyang Khyentse Chökyi Lodrö (1894–1959), a position that commands great honor and respect.² Though free of the wheel of *samsara*, the unending cycle of birth and death, a tulku manifests within *samsara* in accordance with local conditions.³ A traditional metaphor provides insight into the general understanding of the tulku: the appearance of tulkus from the timeless ground of wisdom is like the moon effortlessly manifesting as many appearances of itself as there are pools of water to reflect it.⁴ Recognized for numerous charitable efforts and foundations to promote the Buddha dharma and improve the lives of Himalayan peoples, Rinpoche is known around the world for his teachings, popular books, and production of four critically-acclaimed popular films.⁵

Heralding the spiritual ecology approach of the project, Rinpoche launched SJI at Chökyi Gyatso Institute, a *shedra* or monastic college that began as a small temple built by Dzongsar Khyentse

² Dzongsar Jamyang Khyentse Chökyi Lodrö was one of the primary gurus of the meditation master and scholar Dilgo Khyentse Rinpoche (1910–1991), who was a teacher of His Holiness the Dalai Lama and the lineage holder of the Nyingma school of Vajrayana Buddhism. When Dilgo Khyentse Rinpoche first met his guru's reincarnation, Dzongsar Jamyang Khyentse Rinpoche, as a young boy, he is reported to have wept tears of joy and devotion as he perceived the contemporaneous presence of his guru (Ray 2002, p. 399).

³ A tulku is one who has carefully chosen their rebirth by exercising thoughtful and deliberate choice to benefit sentient beings (Kyabgon 2015, p. 71). While tulkus are generally understood to be expressing wisdom, rather than ego, and to be the re-appearance of a previous holy person, tulkus seem to have a wide range of spiritual attainment (Ray 2002, p. 374). Tulku Thondup identifies three types of tulku: (1) the manifestations of the Buddha who serve beings through their fully enlightened power; (2) the manifestations of highly accomplished adepts who appear through their highly realized wisdom; and (3) rebirths of virtuous teachers or *lamas* who are fulfilling their own spiritual goals (Thondup 2011, pp. 1–2). Trungpa Rinpoche offered a different tripartite typology, consisting of (1) the tulku who occupies the position more in name than in fact, and who has been chosen in the present life to carry out particular social, religious, and political functions; (2) the "blessed tulku", a being far along the bodhisattva path, who is chosen by the previous incarnation to receive a transmission of spiritual energy from the predecessor; (3) the "direct tulku", a bodhisattva of a high level who takes reincarnation repeatedly to aid sentient beings (Ray 2002, pp. 374–78).

⁴ Aaron Weiss, a doctoral candidate in Tibetan Buddhism at the California Institute of Integral Studies, kindly shared this metaphor.

⁵ The films are: *The Cup* (1999); *Travellers and Magicians* (2003), the first full-length feature film shot in Bhutan, which featured Tshewang Dhendup, a Bhutanese journalist, actor, and producer, who later became the Executive Director of the Samdrup Jongkhar Initiative; *Vara: A Blessing* (2013); and *Hema Hema: Sing Me a Song While I Wait* (2016).

Rinpoche's maternal grandfather, the late Lama Sonam Zangpo, in Dewathang, Samdrup Jongkhar in 2010. The Prime Minister Lyonchhen Jigmi Y. Thinley, one of the chief architects of the Gross National Happiness paradigm, delivered the keynote address. Over the course of three days, experts in organic farming and sustainable practices, included Dr. Vandana Shiva, presented public talks (SJI 2018b).

This article presents the Samdrup Jongkhar Initiative, and particularly its Zero Waste Project, as a case study of spiritual ecology activism. Through the discussion of this unique case, salient factors of spiritual ecology activism can be identified which can contribute to theory generation (Yin 2003). In developing this case study, I triangulate multiple data sources to demonstrate the cultural context in which the project arose, and to highlight aspects of the project that have contributed to public engagement and subsequent household waste diversion.

Beginning with the cultural, political, and ecological context, the article discusses the particular intersection of spirituality and ecology in Bhutan. The article then discusses historical waste management practices in Bhutan, and identifies a sudden shift in the late 20th century in the sources and composition of the waste stream, which gave rise to a waste crisis that threatened ecological and economic sustainability. Government efforts to address this emerging waste crisis were seen as incompletely effective. While national and municipal governments struggled to engage citizens in new practices of waste management, the spiritual ecology approach of SJI, instigated by a revered, charismatic religious leader, incorporated and expressed local values to ignite greater public awareness of and engagement with waste management. The project evinced a systemic and interconnected view of human and ecological well-being, promoting the conditions that support the flourishing of both.

2. Methodology

This article builds on ethnographic field research on the influence of religion on environmental management conducted over the course of six visits to Bhutan, ranging in length from one to seven months, totaling fourteen months between 2001 and 2008. During eight months of sustained ethnographic fieldwork in 2007–2008, I researched attitudes and practices of household waste management in the context of local religious beliefs and practices as a participant observer with the Ministry of Works and Human Settlements. With the assistance of three primary research assistants who provided translation for interviews conducted in languages other than English, I interviewed 105 people throughout six of Bhutan's twenty districts. Interview transcriptions, ethnographic descriptions, and newspaper articles were sorted and coded in the qualitative analysis software program ATLAS.ti to generate analytical categories for the production of grounded theory (Glaser and Strauss 1967; Lofland and Lofland 2006, pp. 186–97) regarding the influence of religion on environmental management. This ethnographic data regarding historical and contemporary attitudes and practices related to religion and waste management provides the foundation for this paper.

This qualitative case study is intended to show how a waste management project that harmonized with local beliefs, practices, and values inspired local engagement and commitment. The construction of a case study calls for multiple data sources, including documents, archival records, interviews, direct and participant observation, and artefacts (Yin 2003). These sources come together with news articles, project websites, scholarly and grey literature to provide perspective on recent developments in Bhutan. Since 2008, I have continued to study issues of religion and environmental management in Bhutan through digital ethnography using unobtrusive observation of extant social media and internet posts (Salmons 2018). In developing and analyzing the present case study, I highlight factors that program staff and evaluators identified as salient to the success of the project, as well as those aspects of the project that resonate with themes that emerged from my earlier interviews including religious and spiritual perspectives, perceptions of waste, and methods and motivations for addressing it. My analysis is further informed by my previous professional experience managing a waste education and reduction program in Marin County, California, as well as literature on effective organizations (e.g., Scharmer 2009; Collins and Porras 1994; Senge 1994). The guiding question here is: how are religious

concepts, language, images, and practices incorporated into or reflected in environmental management policies and practices?

3. Spiritual Ecology of Bhutan

The kingdom of Bhutan buffers its two gigantic neighbors, India and China, across the ridge of the Himalaya mountains. The last remaining Mahayana Buddhist kingdom, persisting after India annexed Sikkim and Ladakh, and China absorbed Tibet, Bhutan promotes its Buddhist heritage, the religio-cultural background of about three-quarters of the population of 735,553 (RGOB 2018a), as essential to national identity. Bhutan's Constitution, adopted in 2008, identifies Buddhism, which "promotes the principles and values of peace, non-violence, compassion and tolerance", as the "spiritual heritage" of Bhutan in Article 3: Spiritual Heritage, while granting freedom of religion (RGOB 2008a, p. 9). The importance of Buddhism to the culture of Bhutan is further explicated in Article 4: Culture, which requires the State to "endeavour to preserve, protect and promote" sacred places like Buddhist temples and pilgrimage sites. The government supports the National Monk Body of the *Drukpa Kagyu* school, the dominant school of Buddhism in western Bhutan. In eastern Bhutan, the *Nyingmapa* ("old") school of Vajrayana Buddhism is more influential. In addition to the Buddhist majority, about one-quarter of the Bhutanese are Hindu, primarily living near the southern border with India.⁶

Bhutanese government documents and popular discourse articulate a connection between spirituality and ecology based in the dominant ethos of Vajrayana Buddhism. Bhutan is "one of the most peaceful countries in the world and is considered a champion of the environment" (RGOB 2019). Explicating the cultural values that shape interaction with the natural environment, *Bhutan 2020*, a guiding vision document, identifies "formal and informal rules and norms" that teach people to "interpret nature as a living system in which we are part" (RGOB 1999).⁷ The Foreword to *The Middle Path: National Environment Strategy for Bhutan* begins by identifying the ancient relationship between people and their environment, asserting "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" (RGOB 1998, p. 12).

3.1. Gross National Happiness as an Economic Development Paradigm

The integral connection of religion, spirituality, and ecology is further developed in Bhutan's guiding development paradigm. Bhutan's Gross National Happiness (GNH) development paradigm seeks to balance socio-economic development with environmental conservation, cultural preservation, and good governance. These four "pillars" make clear that socioeconomic development represents only one-quarter of the necessary conditions for the promotion of GNH. Rather than being a central metric for measuring progress, economic development is part of a constellation of metrics. The fourth king, Jigme Singye Wangchuk, who ruled from 1972 to 2006, asserted his preference for "Gross National Happiness" as a measure of domestic well-being over "Gross National Product", challenging prevailing economic development theories (Munro 2016). In the late 1990s, the Prime Minister, Jigme Y. Thinley, promulgated the idea of Gross National Happiness as a development paradigm in international speeches. In emphasizing a preference for Gross National Happiness, the architects of the new development paradigm built on earlier Bhutanese social and political thought based in the 1200-year history of Buddhism in Bhutan.

While Gross National Happiness has garnered global attention as a development approach that does not reduce all of human endeavor to a single economic statistic, bringing the components of GNH into

⁶ The *Lhotsampa* of Nepali ethnicity have been subject to marginalization and persecution, resulting in a mass exodus to refugee camps in Nepal in the 1990s, and resettlement in third countries during the early 2000s. See Michael Hutt's *Unbecoming Citizens* (Hutt 2003) for a discussion of this contentious situation.

⁷ As of 2019, a new guiding vision document was in preparation that would set out a vision for "for the next 100 years or at least for one lifetime" (RGOB 2019).

harmony has not always been straightforward. As some socio-economic indicators have increased, newly available consumer products have led to a decline in other parameters of GNH. In reviewing the progress made toward Gross National Happiness development goals, a 2011 report observed the decline of Bhutan's cultural traditions and environmental conservation: "Changes in traditional social value systems are already quite noticeable and becoming increasingly manifest in social behavior such as rising trends of ostentatious consumerism, drug abuse among youth, delinquency, desecration of temples and religious edifices, etc. Traditional values that once were the basis of the sound environmental conservation practices are possibly eroding and economic values, to an extent, are gradually overshadowing considerations for the natural environment" (RGOB 2011, p. 30).

3.2. Maintaining Ecological Quality

Yet, maintaining the quality of the natural environment is a "fundamental duty of every citizen" according to Article 5 of the Constitution, which requires citizens 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). Bhutan's environmental conservation record is notable in the region: estimates place forest cover at 60 to 70% (Bruggeman et al. 2016), better than the 60% required in the 2008 Constitution. In addition to maintaining its forests and biodiversity, which has allowed it to become carbon negative, absorbing more carbon than it emits, Bhutan is seeking to convert all its agriculture to organic processes and to become a "zero waste" country by 2030 (Gyem 2019).

The obligation to prevent "ecological degradation, including noise, visual and physical pollution" has become a greater challenge in the past three decades, as economic development and greater integration into global markets have provided new material abundance that contributed to proliferating uncontrolled household waste by the early 2000s. Governmental and non-governmental agencies initiated studies, policies, and programs, seeking to harness extrinsic motivation to address solid waste, defined in the Waste Prevention and Management Regulation 2012, "**Waste**—means any material or substance in whatever form, whether solid, liquid, or gaseous, hazardous or non-hazardous, organic or inorganic that has lost its primary value and is disposed of, intended to be disposed of or recycled" (RGOB 2012a, p. 59; bold in the original).

In disavowing waste and separating it from centers of activity, waste materials are imagined to disappear into some unseen "away". In Bhutan's Waste Prevention and Management Regulation 2012, "**Disposal**—means the deposit, dumping, spilling, leaking, or placing of any kind of solid waste into or on any land or water so that such waste or any constituents thereof may enter the environment or be emitted into the air or discharged into any ground or surface waters" (bold in the original), which could include an open⁸ or controlled⁹ dump site, incinerator¹⁰, or sanitary landfill¹¹ (RGOB 2012a, p. 53). However, despite these efforts to address the waste crisis, uncontrolled litter continued to proliferate, much to the consternation of the government (Allison 2014).

⁸ "Open dump—means an open solid waste disposal site with minimal engineering and maintenance requirement which may be closed or upgraded with additional engineering and structural addition" (RGOB 2012a, p. 56; bold in the original).

⁹ "Controlled dump—refers to a disposal site at which solid waste is deposited in accordance with the minimum prescribed standards of site operation . . . Disposal site—means an open dump or sanitary landfill site approved under this Regulation." (RGOB 2012a, p. 53; bold in the original).

¹⁰ "Incinerator—means any structure or furnace in which controlled combustion of waste takes place which is implemented as a final disposal of waste or part of material recovery technique" (RGOB 2012a, p. 55; bold in the original).

¹¹ "Sanitary landfill—means a disposal site with specified criteria for its engineering design, maintenance requirement for specific waste type for the health and environment" (RGOB 2012a, p. 58; bold in the original).

3.3. The Organic Metabolism of Rural Livelihoods

Overwhelmingly rural until the late 20th century, and still included on the United Nations list of world's least developed countries, Bhutan has experienced greater socio-political change in the past fifty years than in the previous 500 years (Phuntsho 2013, p. 583). Historically, sparsely-populated rural subsistence farmers produced little that could not be returned to the land to decompose, returning nutrients to the land. Dispersed disposal of organic materials in the forests and fields was a sort of in situ composting that embedded villagers in the metabolism of the landscape. Bhutan's cultural traditions exemplified the habits and practices that are now termed "zero waste".

Manufactured consumer products were rarely available in the rural areas through the 1990s and into the early 2000s. Villagers' ingenuity and thrift devised useful second lives from the few manufactured products that were available. Like the concepts of karma and rebirth central to Vajrayana Buddhism—in which the karma, or fortune, accumulated during a lifetime would influence one's rebirth in the next lifetime—each item took multiple trajectories, moving from one useful phase to another. Plastic and glass bottles stored the famous distilled *arra* homebrew, cooking oil, or milk; plastic bags were used for carrying lunch to the agricultural fields; rice sacks were universally valuable for corralling supplies to be transported from one village to the next (Allison 2014). Old clothing was used to make scarecrows to frighten wildlife away from crops, as well as pillows or children's clothes. Even spent flashlight batteries could be used for drawing black lines, measurements, patterns, and black paint, which can be used for prayer flags or painting houses. Intact bottles were either reused or taken by a scrap collector, who paid one or two *ngultrums*¹² per bottle (Allison 2008).

Household goods were handcrafted from local organic materials to be beautiful, useful, and durable. Nearly every item needed for rural daily life—from baskets, to clothing, to construction—had been attentively elevated into an art form, feeding the need for beauty as well as usefulness. These traditional arts and crafts were codified into the "thirteen traditional arts and crafts" (*zorig chusum*)¹³ of Bhutan, believed to have been established by Tenzin Rabgye (1680–1694), the fourth *Desi* (ruler) in the 17th century, an origin that weaves religion into daily life. Durability was prized over disposability. Items that ceased to function as intended were returned to the forest floor to decompose. In this way, artisanal household products could later experience a rebirth as nutrients for medicinal herbs, animal fodder, and forest products. Embedded within Bhutan's cultural practices were a range of habits that prevented the creation of extraneous waste: manufactured items were creatively re-used; artisanal items were valuable and durable.

4. Economic Development, Modernization, and Unintended Consequences

Within living memory, Bhutan has transformed from a nearly roadless feudal kingdom where Buddhist monasteries were the only public institutions, to an international thought-leader in environmental conservation and alternative economic and human development theories. Throughout its economic development and transition to a modern state, Bhutan has been guided by India. India has been the chief provider of economic development assistance and remains Bhutan's largest trading partner. The Indo-Bhutan Treaty of 1949 established free trade and commerce between the two countries, allowed India to guide Bhutan in external affairs, and provided a subsidy of 5 lakh¹⁴ rupees to Bhutan (Phuntsho 2013, p. 562). Following the visit of India's Jawaharlal Nehru in 1959, Bhutan began modernization and national road construction. With Indian support for a succession of five-year plans, Bhutan built 1770 kilometers of motorable road during the first five-year plan (1961–1966),

¹² The *ngultrum* is the primary unit of Bhutanese currency. It is subdivided into 100 *chetrum*. The *ngultrum* is pegged to the Indian rupee, at a one-to-one value. At the 31 July 2019 exchange rate, one *ngultrum* is equivalent to \$0.015 USD.

¹³ The thirteen traditional arts and crafts are drawing and painting, sculpture, papermaking, calligraphy, casting, construction, masonry, carving, wood-turning, blacksmithing, gold- and silver-smithing, tailoring (including embroidery and applique), and weaving.

¹⁴ One hundred thousand, an Indian unit of measurement for large sums.

instituted its postal service, and began offering secular education. In 1959, eleven secular schools enrolled 440 students; by 1966, the number of schools had increased nearly ten-fold to 108, with 15,000 students enrolled (Phuntsho 2013, p. 587). The Trade and Commerce Agreement of 1995 further updated and maintained free trade between the two countries. In the 21st century, around 90% of exports from Bhutan went to India, the source of three-quarters of all imports (RGOB 2012b).

With Bhutan's economy so closely connected to India's, changes in the Indian economy greatly affect Bhutan. When India liberalized its economy in 1991, allowing greater access to private and foreign investment, as well as international trade and imported products, the consequences were felt strongly in Bhutan. A proliferation of manufactured products suddenly appeared in the marketplace.

A well-known Bhutanese historian and author recalled in an interview:

"The problem happened suddenly. Before, there was no waste. There were only subsistence farmers. We got things from the garden, and stored them in the basement and the attic. Nothing was packaged. Now the main waste from households is food and food packaging. In Bumthap, we call it *jolepa*—the food waste for animals. The change wasn't slow. It was just overwhelming. The availability [of packaged food] came quickly, there were no facilities, no preparation . . . People my age can remember when we didn't have soap. We used leaves and berries. Convenience is a seductive quality". (interview in English with the author, Thimphu, 26 March 2008)

The introduction of processed packaged food, international fashions, and electronic gadgets increased the throughput of short-lived items destined to become waste (Dorji 2006). Shops on Thimphu's Norzin Lam, the main street of the capital, previously dedicated to fabric, sewing notions, religious and ritual objects, became filled with plastic bottles of shampoo and hair dye, disposable razors, dishwashing liquid and plastic sponges, Wai Wai noodles, and all manner of snacks in colorful plastic packaging.

The appearance of these new items represented a major shift in the material culture of Bhutan. New exogenous categories of materials baffled Bhutan's traditional disposal systems of decomposition and re-use. In rural areas, health workers and teachers advised villagers to dig pits in which to bury or burn non-biodegradable waste materials. However, adherence to this method of waste disposal was intermittent at best and failed to truly address the problem of nonbiodegradable waste. The influx of non-biodegradable materials and habits of consumerism was not accompanied by a concomitant practice for managing materials that had outlived their useful lives. As the historian Karma Phuntsho observed: "People initially fell for the new, light, cheap and weather-proof materials [plastic and other synthetic materials] but their attraction is slowly fading away as the non-biodegradable synthetic materials outlast their use, clogging drains or littering even remote sacred sites" (Phuntsho 2013, p. 587). Central to understanding waste is its *materiality*—the specific physical qualities of waste in a particular context (Gille 2007). The material qualities of new waste forms resisted traditional practices, creating new problems such as befouled sacred sites, and clogged drains, especially problematic during the summer monsoon season. With no systematic way to incorporate exogenous materials into the comprehensive organic worldview, the new nonbiodegradable materials were ignored and disavowed. The increasing prevalence of non-biodegradable waste materials quickly overwhelmed Bhutan's historical practices of household waste management: thrift, in situ composting, creative re-use, and cherishing of artisanal items.

4.1. Uncontrolled Waste as a Threat to Economic Development

By the early 2000s, the lack of formalized waste disposal systems was causing household waste, comprising an estimated 70–80% of the waste stream, to be disposed of in Bhutan's rivers and forests (UNEP-RRCAP 2001), threatening Bhutan's identity as an environmental exemplar. Bhutan's reputation as "clean and green" tourist destination made the rectification of the situation economically imperative as well. At a 2005 World Environment Day presentation to government and NGO leaders, Lyonpo

Kinzang Dorji, the Minister of the Ministry of Works and Human Settlement, warned that litter and uncontrolled solid waste threatened Bhutan's reputation as a "green" destination (Dema 2005). Tourists, important to Bhutan's economic growth, were complaining that garbage on the footpaths, open sewers, and indiscriminate littering were interfering with their enjoyment of tourism in a nation positioned as a spiritual and environmental exemplar (Rai 2007; RGOB 2007; Dendup 2008; editorial 2008).

Tourism, an important source of foreign exchange, has been a steadily growing industry in the 21st century, increasing tenfold between 2008 and 2017 (RGOB 2008b, 2018a). The "high value, low volume" tourism policy that prevailed at the end of the 20th century was relaxed to a "high value, low impact" standard, allowing Bhutan to welcome 254,704 tourists in 2018, nearly 1 for every three citizens, which contributed nearly \$80 million USD to the approximately \$2.4 billion USD gross domestic product in 2017, or about 3% of GDP, comparable to the contributions of the forestry sector, but far less than electricity generation and water supply, which accounted for 13% (RGOB 2018a, 2018b). The dispersed disposal of waste was destroying Bhutan's most valuable assets: its relatively pristine forests, threaded with trekking destinations and day hikes, and age-old cultural institutions (Dendup 2016).

4.2. Ecological Modernization and Its Deficiencies

Globally dominant approaches to waste management draw on theories of ecological modernization, a technologically-optimistic management paradigm that relies on expansive human ingenuity to continually devise improved technology to address environmental harms (Allison 2016; Mol and Sonnenfeld 2000). Ecological modernization theory, developed by European social scientists in the 1980s, suggests that environmental concerns can be incorporated into the project of modernity, woven into existing social practices of neoliberal capitalism and governance through technological innovation, requiring no major overhaul of these systems (Mol and Sonnenfeld 2000; Spaargaren and Mol 1992). Ecological modernization theory supports efforts to apply rational "management" to the environment, to address environmental concerns through private sector innovations in manufacturing and disposal, and to "improve" the environment through large-scale infrastructure projects like dams, power plants, and waste incinerators which decrease litter but increase air pollution (Buttel 2000).

Bhutanese government officials absorb these globally-dominant ideologies through education at universities in Australia, USA, and UK, and through collaboration with European development organizations. The adoption of ecological modernization theories has the benefit of building on existing research and policy, but may not adapt to local conditions. As the waste researcher Taylor Cass Stevenson notes, "Officials involved in the creation and enforcement of Bhutan's waste regulations admitted that some aspects of the regulation were likely brought in from abroad, though couldn't cite specific examples" (Stevenson 2013, p. 53).

In this way of thinking, technology is deterministic; increasing technology is the best way to address ecological concerns (Spaargaren and Mol 1992, p. 336). In Bhutan, government agencies and foreign donors favored purchase of expensive technology, such as garbage compactor collection trucks, concrete waste collection bins, and machinery for a municipal scale composting plant (whose construction and operation were plagued by delays and mismanagement, resulting in a short-lived facility) over less material-intensive interventions like education, community-level composting, and traditional reuse practices. The waste researcher Stevenson learned from a World Bank representative visiting Bhutan that "the World Bank would only be interested in easily quantifiable technological assistance aimed at waste treatment rather than education or waste prevention initiatives" (Stevenson 2013, pp. 54–55).

It is only by contrasting ecological modernization with other eco-social theories that prioritize different values—such as, for example, deep ecology which emphasizes the interconnected nature of life—that the pitfalls of ecological modernization come into sharp relief. Ecological modernization privileges the technologically connected and adept, and lacks intrinsic value for nonhuman nature. Ecological modernization emphasizes a single dimension of human life—technological ingenuity—at the expense of all other aspects of the multi-faceted experience of being human. This paradigm prioritizes the experience of the world's "haves"—who have been called WEIRD (Western, educated, industrialized,

rich, and democratic)—while ignoring the varied complexity of the human experience across a diversity of cultures and environments. Ecological modernization does not recognize spiritual and religious perspectives on human life, and leaves untouched the harms that late modern capitalism imposes on nonhuman nature and poor and marginalized human communities. In Bhutan, technological improvements designed to corral and contain waste, including the introduction of garbage collection trucks and the installation of steel collection drums around town, while necessary, were not sufficient because they did not address the social and relational nature of waste (Allison 2014).

5. A Buddhist Spiritual Ecology of Waste

An approach to waste management that harmonizes more closely with Bhutanese cultural and religious values was introduced in the rural southern district of Samdrup Jongkhar by a revered Buddhist teacher. In contrast to waste management initiatives that had appeared to be “fragmented” or “atomistic” (Stevenson 2013, p. 33), this comprehensive rural development program included waste reduction as one component of a holistic approach to rural livelihoods. Through the civil society organization that he created, Dzongsar Jamyang Khyentse Rinpoche sought to advance livelihoods and well-being according to the Buddhist values enshrined in Bhutan’s guiding development philosophy of Gross National Happiness. The Samdrup Jongkhar Initiative’s Zero Waste project is an example of spiritual ecology activism for household waste management and waste reduction. By engaging cultural and spiritual values, and drawing on the inspirational qualities of social and spiritual leaders, the project was able to inspire villagers to address household waste management.

Dzongsar Jamyang Khyentse Rinpoche, a revered and internationally-known Bhutanese Buddhist teacher and tulku, understood to be the reincarnation of a previous Vajrayana Buddhist teacher,¹⁵ created the Lho Mon Society in 2010 and registered it as a civil society organization in 2012. Among the projects of the Lho Mon Society is the Samdrup Jongkhar Initiative, which works to improve rural livelihoods, strengthen communities, and protect the natural environment in Samdrup Jongkhar dzongkhag, a district in southeastern Bhutan, in accordance with Bhutan’s guiding development philosophy of Gross National Happiness (SJI 2018a). Taking a holistic approach to rural livelihoods and well-being, the project infuses principles of Gross National Happiness and ecological sensitivity into development activities, including organic agriculture, appropriate technology, waste reduction, and youth engagement, to strengthen self-reliance and food security, with a larger goal of slowing rural to urban migration.

The website of Rinpoche’s organization, the Lho Mon Society,¹⁶ observes: “Bhutan is facing a tidal wave of consumerism, conflicts, and waste that comes with modernization. There is no turning back and no way to keep the floods at bay. Through Lho Mon’s grassroots initiatives, we are creating small islands of refuge, beacons to guide, and essential skills training to help the people chart a sustainable course that encourages equitable economic development, environmental conservation, cultural promotion, authentic education, and good governance”. This purpose statement identifies the problem of waste in Bhutan, and implicitly links it with the Buddhist concept of “three poisons”—greed, ignorance or delusion, and hatred—that provoke consumerism and conflict. In proposing to provide “small islands of refuge”, the Lho Mon Society harkens to the Vajrayana Buddhist idea of the *beyul* (Tib.:

¹⁵ Dzongsar Jamyang Khyentse Rinpoche, whose honorific title means “precious teacher”, is heir to an important Buddhist lineage. He is the son of Buddhist teacher Thinley Norbu Rinpoche, and grandson of the influential Dudjom Rinpoche. At age seven, Dzongsar Jamyang Khyentse Rinpoche was recognized as the main incarnation of Dzongsar Jamyang Khyentse Chökyi Lodrö (1894–1959). In addition to his secular education, Rinpoche has studied with a number of contemporary Buddhist masters, including H.H. the 16th Karmapa; H.H. Dudjom Rinpoche and Lama Sonam Zangpo (his paternal and maternal grandfathers); Chatral Rinpoche; Nyoshul Khen Rinpoche; and Khenpo Appey. He is a leader of the Rime (nonsectarian) movement for Vajrayana Buddhism, and the guardian of the teachings of the Dzogchen master Jamyang Khyentse Wangpo.

¹⁶ In Dzongkha, the national language of Bhutan, *lho* is “south” and *mon* refers to the people living south of the Tibetan Plateau, which includes Bhutan, Assam (India) and Burma. According the website, this name was chosen to indicate that people are united not only by political borders but also by ecological regions. <https://www.sji.bt/the-lhomon-society/>.

sbas yul), or sacred hidden valleys found throughout the Himalaya, believed to have been hidden by the great Buddhist teacher and second Buddha, Guru Rinpoche, as sites of refuge for Buddhists during future times of trouble. The final clause of the statement echoes the four pillars of Bhutan's guiding development philosophy, Gross National Happiness, and adds, as a fifth pillar "authentic education". This addition likely refers to a Buddhist "middle path" for education between the monastic education that prevailed before planned economic development began in the 1960s, and the subsequent secular education modeled on the Indian system and guided by Indian teachers that did not particularly adapt to or incorporate the uniquely Bhutanese context.

With an international perspective gained from his education at Sakya College in India and at the School for Oriental and Asian Studies (SOAS) in London, as well as his lectures around the world, Rinpoche is known for his subtle teachings of Buddhism that extend beyond lectures to include several popular films and books, in addition to his leadership of several charitable efforts to preserve the teachings of the Buddha and improve the well-being of Himalaya peoples.

5.1. Rural Development to Reduce Waste in Samdrup Jongkhar

Samdrup Jongkhar is one of the poorest and most remote of the twenty dzongkhags of Bhutan, with food security and rural to urban migration as issues of concern. While 83% of the population continued to practice subsistence agriculture, farmers faced increasing difficulty in meeting their household needs with the growth of the cash economy and increasing development: only 39% of the households were sufficient in-home grain production for consumption in 2008 (Green-Tracewicz and Landry 2015). The district has less than 180 miles of roads of any type, making transportation across the rugged terrain slow and difficult (RGOB 2017, p. 165). The livelihood challenges, as well as the lack of healthcare resources, education, and economic opportunities, drive rural to urban migration, eroding community connections, and creating labor shortages for farming. Young people are increasingly departing from rural districts, especially in the south and east, to seek education and livelihood opportunities in Thimphu (Gosai and Sulewski 2014). By enhancing livelihood opportunities and self-sufficiency, SJI seeks to slow rural-urban migration and re-invigorate village life.

The Samdrup Jongkhar Initiative approached socio-ecological resilience in this remote and poorly-resourced dzongkhag with a comprehensive and systemic lens, recognizing that villagers would be more able to address waste reduction from the position of stable livelihoods. From the outset, the project exemplified the holistic relational awareness of the human connection to deities, animals, and other living beings. In a conversation with the author, a former project director recalled: "... before we construct a house ... that ceremony is when we seek permission from the deities ... who actually are the actual owners of the land. So knowing that we are just guests in this world ... we have to be very, very mindful of our actions and their consequences, this consciousness is at the very core of zero waste, and without that, it's not going to be functional" (25 June 2019).

The project began by addressing farmers' livelihood needs, including supporting the transition to organic agriculture which could help Bhutanese farmers receive a premium for their crops and advance the carbon-negative status of the country. At the outset of the project, two dozen farmers were taken on a study tour to Punjab district in India, where they observed the consequences of heavy agricultural chemical use, including decreased productivity of the soil, poisoned drinking water, and even suicide among farmers unable to profit from their labors. They also visited Dr. Vandana Shiva's demonstration farm, Navdanya, in Dehradun where they learned about methods of enhancing soil fertility (Dorji 2011). In addition to providing an educational opportunity and cultural exchange for farmers from Bhutan and India, this study tour expanded the worlds of the Bhutanese farmers, many of whom had not even visited the capital city of their own country (Dorji 2011). This demonstration of respect allowed the farmers to feel valued for their participation in the project. While an agricultural study tour may seem to be far removed from waste reduction, the launch of the SJI project with this study tour shows the project's commitment to assisting farmers in tangible ways that are valuable in their lived experience, and providing needed benefits.

SJI's approach to collaborating with the farmers reveals a Buddhist acceptance of present conditions. The project met the farmers where they were, presenting information via study tours, direct interaction with other farmers, peer-to-peer learning, festivals, dances, and handicrafts which fits with the farmers' customary ways of gaining knowledge. Illiterate farmers typically gain knowledge through story, myths, narrative, repetition, rhymes, and traditional art forms in this oral culture. To promote public education and participation, the project organized Zero Waste Festivals, at which school children performed Zero Waste dances, wearing costumes fashioned from waste materials like plastic wrappers, bottles, and straws (Lindström 2012, p. 7). The festivals included presentations on composting and bio-gas techniques from Indian experts, as well as a recycled art workshop by an expert from the USA (Lindström 2012, pp. 8–9).

Another important aspect of the project, according to a former director of the project, was its community-based design. In conversation with the author, he commented "Being on the ground, being in the grassroots with the community allows you to gain more realistic and more profound understanding of the realities on the ground . . ." Being on the ground, he continued, means being "able and physically present to provide backstopping and advocacy and interaction with the community at a consistent level" (20 June 2019).

5.2. The Zero Waste Project

A core activity of SJI is waste reduction and the promotion of "zero waste". The Zero Waste Project of SJI was launched in July 2012 with the goal of initiating "responsible and sustainable waste management practices that help preserve the environment and, at the same time, create economic opportunities in the region, thereby also contributing to the GNH pillar of promoting sustainable and equitable socio-economic development" (SJI n.d.) The project sought to contribute to the minimization of plastic use in the dzongkhag, and also to promote the segregation of wastes in households and institutions so that "new small-scale recycling, re-use and up-cycling businesses for non-biodegradable waste" could be created—thereby contributing to slowing rural to urban migration—and biodegradable waste could be diverted to composting and bio-gas generation (SJI n.d., p. 1).

The Zero Waste project began in two *gewogs* (blocks, subdivisions of the district), Dewathang and Wooling, and then was extended to a third *gewog*, Orong, with the goal of scaling up to other locales in the dzongkhag, and eventually creating a replicable model as a "Zero Waste region" from which other dzongkhags could learn. In 2017, the project received a grant to 1.707 million ngultrum (about \$24,700 USD) from the Bhutan Trust Fund for Environmental Conservation to expand to three villages in nearby Trashigang dzongkhag (Subba 2017).

The project established Zero Waste teams in each village, and identified Zero Waste Trainers, who received both a stipend and international training for taking on this role. From the beginning, the project focused on eliciting local concerns and preferred methods for addressing waste in the community (Lindström 2012, pp. 15–16). Such bottom-up organizing recognizes and builds on community strengths, enhancing a community's capacity to articulate and address its own challenges, and avoiding imposing one-size-fits-all predetermined interventions from a central government or NGO office (Cheki 2017). Beginning with listening to local needs is essential to eco-spiritual activism to advance a holistic approach that incorporates the whole person in their surroundings, recognizing inherent strengths and abilities to respond to emergent challenges.

Building on Bhutan's rich tradition of thrift and creativity (Allison 2014; Choden and Roder 2008), as well as the dedication to artisanal production of household goods and handicrafts,¹⁷ the Zero Waste project provides education and support to help local producers create goods by re-using discarded

¹⁷ The thirteen traditional arts and crafts (*zorig chusum*) are a highly valued aspect of Bhutan's cultural traditions. Traditional artisans, including weavers and other textile artists, painters, sculptors, and woodworkers are revered; students can attend Zorig Chusum schools to be trained in the thirteen traditional arts and crafts.

materials. This process, in which people look more closely at that which they have abjected or discarded, can be likened to Vajrayana rituals that deconstruct dualistic perspectives and challenge attachment by transforming aversive or disgusting substances into vehicles on the path toward enlightenment (Stevenson 2013, p. 73). Exemplifying the Vajrayana “crazy wisdom” approach of using sly tricks and inverted hierarchies to teach about Buddhism, Rinpoche envisions sending monks across Bhutan to “beg not for money or food, but for garbage”, and plans “to build a trash chorten (stupa) to encourage people to take a closer look at their waste” (Stevenson 2013, p. 78).

The project works with local people to establish small-scale and low-cost waste collection, recycling, reusing, repairing clothing and shoes, and ‘up-cycling’ businesses that both improve livelihoods and reduce waste (Dahal 2012). These projects of re-creation connect people to their identifies as artisans and makers, rather than consumers and disposers. Deploying creativity and ingenuity, artists from the Voluntary Artists Studio Thimphu (VAST) in the capital, along with an internationally-known re-use artist from the United States, Taylor Cass Stevenson, guided students in learning to make a range of household items and crafts from re-used materials, including useful items like totebags, containers, boxes, lamp shades, and brooms. Traditional Bhutanese weaving techniques were adapted to strips of plastic bottles and wrappers that were woven into bracelets, belts, and bags. Discarded cement bags were re-made into rope. Broken umbrellas were remade into cushions, filled with shredded plastic wrappers (Lindström 2012, p. 10). To bring waste materials back into the stream of useful materials, the district acquired a machine to manufacture bio-degradable plates and cups from areca nut bark—the shells of the ubiquitous beetle nut—which is readily available.¹⁸

In addition to training students in making handicrafts from re-used materials, Stevenson trained more than one thousand villagers over three years to make “bags, boxes, brooches and other jewellery [sic] from used truck inner tubes, plastic bottles, wrappers and used phone vouchers” (Lindström 2012, p. 13), transforming 1200 kilograms of waste plastic into attractive and useful goods. Dzongsar Jamyang Khyentse Rinpoche asserted that, with the right motivation, these crafting practices could become Buddhist practice: “that I can confidently tell you, yes. Especially in Mahayana Buddhism, all you have to do is have the right motivation and everything becomes practice. Especially like with zero waste, that is very wholesome” (interview with Rinpoche in Stevenson 2013, p. 79).

5.3. The Zero Waste Tschechu

To link waste reduction with religion and culture, the project assisted the village of Wooling in hosting a “Zero Waste Tshechu”. The *tshechu*, meaning “tenth day”, is an annual religious festival honoring Guru Rinpoche, in which monks perform intricate dances, providing didactic lessons in Buddhism. Each district, as well as many towns and villages, hosts a *tshechu*, which is the most important religious and social event of the year. In linking waste awareness and reduction to this central event, the SJI organizers established a strong link with Bhutanese religion and identity in the minds of participants. The Zero Waste committee encouraged ritual participants to honor the festival with “zero waste” offerings—at any ritual, gifts of food, incense, butter for butter lamps, and money are traditionally presented. With the increased availability of manufactured products, offerings have tended to be packaged biscuits and commercially-bottled juices. The Zero Waste committee encouraged participants to revert to offering local produce, such as fruit, and homemade biscuits and traditional cakes.¹⁹ The Committee identified and set up three-bin waste segregation stations, collecting PET bottles and tetra paks in one container, paper in another, and glass bottles in a third to facilitate collection and recycling. Other buckets collected biodegradable waste to be fed to livestock

¹⁸ <http://www.sji.bt/2017/07/02/slowly-but-surely/>.

¹⁹ On its website, the Lhomon Society, the parent organization of SJI, offers a list of eco-friendly and sustainable choices that can serve as feast offerings as a temple or home, including “cooked rice, boiled potatoes, cooked vegetable, egg . . . dumpling . . . apple, guava . . . ” emphasizing fruits, grains, and cooked vegetables (meats are generally not appropriate religious offerings). “What is a simple choice”? Lhomon Society.

and used for fertilizer on fields. The efforts paid off. At the conclusion of the festival, “Wooling elders and leaders mentioned repeatedly the marked reduction in the littering in the courtyard [of the temple, where the tshechu was held]” (Lindström 2012, p. 16). Weaving waste reduction activities into the annual tshechu incorporates waste reduction into an annual ritual central to Bhutanese identity, as the structure and inspiration for the ritual came from Guru Rinpoche. This links responsible use of the material world directly to the Buddhist identity of the worshippers.

6. Conclusions: Spiritual Ecology Activism for Waste Management

Building on the rural habits of reuse and the value of thrift in the context of teachings from a revered Rinpoche, the Samdrup Jongkhar Initiative has connected with existing local mores to incorporate waste reduction and re-use into local practice. The project emanated from the religious and moral authority of a revered Buddhist teacher who is widely renowned for his sophisticated and subtle teachings of Buddhism. Rinpoche commands a devoted following in Bhutan and around the world. His words and actions convey moral authority by dint of his extensive education in Buddhism and secular matters. This moral authority and attention from a globally renowned teacher likely inspired intrinsic motivation among the villagers in a way that admonitions from a government agency would not. As in the rest of Bhutan, farmers in this area are deeply religious, blending Vajrayana Buddhism and local animistic belief in terrestrial deities to guide their agricultural decisions. More than three-quarters of farmers interviewed pray to local deities, and more than half of farmers interviewed reported that they consult a local astrologer (*tsipa*) to identify auspicious days for planting (Green-Tracewicz and Landry 2015, p. 83). A former project director recognized “When we discouraged burning of waste, we could link it with the prevailing spiritual ethos of respecting the realms of other beings including the protectors, deities and animals” (interview with the author, 7 July 2019).

SJI’s waste management and reduction strategies exemplify Buddhist values of interconnection, harmony, beauty, and self-efficacy. In keeping with the centrality of interconnection, or interdependent co-arising, in Buddhist thought, SJI weaves a holistic web of support structures for reaching goals of rural development and waste reduction that include youth and adult education, engagement with local monasteries, and supporting rural collaboratives, in contrast to neoliberal technocratic structure that would place responsibility for waste reduction on the individual without significant community support.

SJI promotes public engagement and reducing waste by employing strategies that are compassionate and holistic, encompassing all aspects of rural livelihoods, and addressing basic human needs such as food security as well as engaging villagers in projects that enhance the beauty and harmony of their surroundings. SJI honored cultural traditions, drawing on cultural and traditional ecological knowledge of farming, weaving, and other livelihood practices to strengthen community self-reliance. Recalling habits of two decades ago, plastic bags have been banned in favor of reusable cloth bags from Dewathang, which now avoids more than 600 kg of plastic bags every month (SJI 2018b). In beginning with Gross National Happiness as a guiding principle, SJI has sought to balance the multiple aspects of human life, recognizing the importance of cultural preservation and environmental conservation along with economic development. No single goal has taken precedence over others. In keeping with the Buddhist notion of a “middle path” between asceticism and luxury, SJI sought to walk a middle path of rural development to increase food security and economic opportunity while decreasing litter and waste. In so doing, the project gives lie to dominant economic arguments that suggest that through put of materials is a necessary by-product of increasing human material well-being.

SJI’s activities fit within the ecological economics paradigm of *degrowth*, a concept that promotes civilizational change toward societies where material consumption is de-emphasized, and local, democratic, place-based values come to the fore, with sharing, healthy relationships, and care for the commons as priorities (Gerber and Raina 2018). Creative crafts projects put villagers into attentive interaction with these materials that formerly seemed to be useless, showing how diverse and novel materials can be incorporated into the Buddhist cosmology. The Project Coordinator, Cheku Dorji,

noted that people realized the value of waste materials (Dorji 2016). Waste materials are placed back into the relational, reciprocal circulation of animated Buddhist cosmology. Rather than remaining inert and unidirectional, waste materials become source materials for new useful creations that participate in social circulation. As waste artist and researcher Stevenson learned in her interview with Rinpoche, from the Buddhist point of view, there is nothing that is not useful and must be excised from social life:

“Dzongsar Jamyang Khyentse Rinpoche asserts that Tantra discounts the idea of uselessness:

[In] the Sharchopka language ... the word for garbage, *tsokpa*, means dirty. *Tsokpa* and waste are actually two different things, and this is what Tantra teaches. There is nothing called *tsokpa*. Everything is useful and more than useful, actually. Everything is primordial pure. It is your habit and patterns that make it so complicated” (Stevenson 2013, p. 89)

This statement about the always-already primordial purity of substances that appear to be impure to the relative—rather than absolute—perception is profoundly ecological in that organic materials continually break down—sometimes undergoing chemical transformations or other types of transmutation—to become nutrients for other living beings. In ecological systems, everything is useful. In modern technological societies our “habits and patterns” complicate the situation such that technological transformations of materials then require *subsequent* technological transformations of wastes to prevent material harm to humans or other living beings. As the science and technology theorist Donna Haraway has argued, humans are “kin” with all other living beings, as well as with the “cyborgs” we have created, including transgenetic organisms and transuranic elements (Haraway 2016). As “kin” on a finite planet, we must then find ways to live together with these unruly organisms and elements, recognizing that they are now part of our Earth, and “away” is never very far away from someone. The Bhutanese villagers have confronted the by-products of their newly-consumerist society and have found methods to transform and transmute previously rejected materials into useful items. The *tsokpa*, or “dirtiness” Rinpoche refers to (also known as *drib* in Tibetan and Dzongkha (*sgrib* or *grib*)) is a form of ritual or spiritual pollution that can result from upsetting the social or moral order, and requires the intervention of a ritual specialist for rectification (Allison 2014). Like waste, it is not a permanent condition, but can persist without outside intervention and steps to rectify the moral or spiritual infraction. As Rinpoche indicates, this condition, too, might lead to deeper insight or moral improvement, and thus would no longer be *tsokpa*. From the Vajrayana perspective, disturbed emotions and situations can become grist for Buddhist meditational practice and deeper wisdom.

The Samdrup Jongkhar Initiative has gained government and grant support to expand into other districts around the country. Like the Zhabdrung Nawang Namgyal who traveled throughout Bhutan in the seventeenth century, providing Buddhist teachings and introducing rituals and practices that became central to Bhutanese society, the practices of waste reduction and waste management that build on existing belief systems may be woven into the fabric of society across the country. As the example of SJI shows, connecting with local values and practices is vitally important to engaging local people in sustainable waste management. Furthermore, initiatives that draw on local values can be self-sustaining in that they can be incorporated into the habitual practices of daily life, rather than requiring continual inputs of material, energy, and training. Similar to other religion and ecology efforts around the world that link religious teachings to sustainable environmental practices, such as those of the Alliance of Religions and Conservation and Interfaith Power and Light, SJI’s Zero Waste project connects environmental sustainability concerns with the heart of religious practice, linking new habits to a beloved age-old customs, and helping believers incorporate new environmental practices into their existing religio-cultural identities.

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