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Indigenous Beliefs for Sustainability: On the Significance of Ritual in the Gender Ecology of Tibetan and Mosuo Matricultures of Northwestern Yunnan

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Abstract

The present study explores the intersection of Indigenous beliefs and (eco)sustainability from a gender perspective. Overviewing China's development agenda and strategic environmental assessments in minority areas, it probes into the ritual economy of two matricultural systems in the southwestern province of Yunnan: Deqin (Diqing) and Yongning (Ninglang). In these places, women's engagement in community matters, responsible management of resources, and the ritual exchange between humans and the cognized world of territorial gods and elemental spirits of nature entwine with one another. Special attention is given to the knowledge of mountain forest ecosystems retained by Khamba Tibetan, Mosuo and Naxi people, as well as to the extent to which kin-based arrangements, matricultural concerns, religious norms and taboos motivate economic choices.

Keywords

Indigenous beliefs, sustainability, gender ecology, Chinese minorities, ritual economy

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Dans cette étude, l'auteur explore l'intersection des croyances autochtones et de (l'éco)durabilité dans une perspective de genre. À partir d'une vue d'ensemble du programme de développement de la Chine et des évaluations environnementales stratégiques dans les zones minoritaires, l'auteur explore l'économie rituelle de deux communautés ethniques du sud-ouest de la province du Yunnan: Deqin (Diqing) et Yongning (Ninglang). Dans ces communautés, l'engagement des femmes dans les questions communautaires, la planification, et la gestion des ressources s'entrelacent avec le système d'échange rituel entre les humains et le monde conceptualisé des dieux territoriaux et esprits élémentaux de la nature. L'auteur se penche sur la connaissance des écosystèmes forestiers montagneux des Khamba Tibétains, des Mosuo et des Naxi, ainsi que sur le degré auquel les demandes des relations parentales, les normes religieuses et les tabous rituels motivent les choix économiques.

Mots-clés
Croyances autochtones, durabilité, écologie de genre, minorités chinoises, économie rituelle

INTRODUCTION

In the last few decades, there has been considerable debate over the intricacies of gender inequality, which continues to persist broadly around the world in both traditional and industrial societies despite assiduous efforts and pledges to reduce it. Particularly in the former case, scholarship has shown that a significant structural change in rural hill economies can have enduring effects on gender relations, livelihood choices, and household organization, varying from the consolidation of age-old social divisions of labour to the adoption of new, and inequitable, methods of resource allocation.[1] The equation holding in these settings is that the more restrictive the society toward women, the greater the degree of environmental degradation.[2] Nonetheless, the effect that cultures with a strong matricultural system have on the way humans exploit natural resources and interact with the biotic and abiotic environment remains under-researched.[3] Not only is women's knowledge of the environment in relatively equal or less gender-restrictive societies most often overlooked,[4] but the postulate that the religious beliefs, rituals, and practices found in extant matricultures might represent an invaluable source of knowledge to be used for sustainable development has yet to germinate into a scientifically testable hypothesis.[5]

This paper seeks to initiate a discussion around such hypotheses and interrogate what place, if any, Indigenous women and matricultural concerns should occupy in the rapidly changing Chinese environmental governance and national development. In this article, I draw on examples showing how resource-dependent communities from the Himalayan foothills of northwestern Yunnan conceptualize, forge, and recalibrate reciprocal relationships with other-than-human life forms to make optimum use of the natural landscape. I advance a framework within which people's knowledge of the environment in matricultures is not simply given by the sum of physical and anthropic elements, but extends into a web of symbolic associations, beliefs, and practices where humans come into contact with plants, animals, atmospheric agents, and spiritual or otherworldly entities that remind them of their ritual observances.

In this framework, rituals are seen as a medium for communication between natural, social, and supra-mundane domains. Ritual performance helps to maintain or restore balance in the flow of benefits upon which humans rely for their survival, whilst the mutual obligations built through ritual performance are essential to secure the community well-being. In this sense, rituals structure economic behaviour, as McAnany and Wells understand it,[6] but they are also of great significance for nature conservation. Rituals may discourage people from collecting herbs, cutting wood, hunting, and other unregulated activities that menace the ecological balance, most notably when these take place in sealed numinous enclosures such as forested mountains, snowy peaks, and bodies of water associated with one of the said entities.

Section 2 positions the subject in relation to the theoretical accomplishments of feminist anthropology and offers a critical summary of some readings of nature and technology-based solutions to the ongoing ecological crisis. As brought forth in this first background section, while feminist-informed models have the merit of adding a gender dimension to environmental restoration and climate change mitigation programs, one cannot but notice that such models are easy to flip into empty slogans that provide no concrete answers to how women should be included in the execution of these programs.

Section 3 surveys the institutional framework of China's national development and mechanisms through which, over the recent past, environmental policies have been implemented and modernization delivered to ethnic minorities. While the United Nations (UN) have urged countries with a sizeable minority population to integrate Indigenous practices and values into their development agenda and conservation projects, China's green strategy has been slow to recognize the untapped potential of these practices, and minorities have instead been expected to update their values.

Section 4 presents two case studies illustrating how two minorities: Kham Tibetan-speaking in Diqing Tibetan Autonomous Prefecture and Tibeto-Burman-speaking in Ninglang Yi Autonomous County, have been able to build a vast repository of environmental knowledge. This section pays close attention to matricultural constructs of nature, perceptions of landscape, and ritualized attitudes toward its protection, as well as to the gendered and moral overtones of resource management. The agency inspired by religious loyalties and women's participation in ecological preservation as lay practitioners make the bulk of the analysis.

The paper concludes by elaborating on the contribution of matricultural principles to environmental sustainability,[7] and on the practical aspects pertaining to the potential incorporation of these principles in policy to enhance ecosystem resilience and bio-cultural diversity of the areas under study.

THEORETICAL BACKGROUND

Biological Determinism of 'Woman-Nature vs Man-Culture' and Other Dichotomies

Starting from the 1980s, numerous studies have sought to deconstruct long-held preconceived ideas about female inferiority which tend either to equate women with nature and men with culture or to lock women's experience within the private sphere of family and men's experience within the public sphere.[8] Yet it was not until the early 1990s, with mounting concern about women's role in community development, that social scientists working across many fields of inquiry began to investigate the complexity of gender dynamics in resource utilization and conservation.[9] Over the past decades, the increasing participation of women in development programs sponsored by the World Bank, UN, and other international aid institutions has signalled a rise in public awareness of issues pertaining to gender inclusivity and resource management. Nevertheless, persistent stereotypes about the alleged incapacity of women to contribute actively to economic growth have nullified efforts to integrate gender-sensitive approaches into the drafting, execution, and monitoring of these programs.[10]

Feminist-oriented anthropologists have pointed out that such issues can hardly be tackled without simultaneously engaging in a discussion of the historical and socio-economic conditions which shaped and help to perpetuate them. Some have argued that all human societies, regardless of social organization and degree of integration into the national and/or global economy, imply clear distinctions between the operations of nature and culture, and that gendered meanings more often than not are ascribed to such distinctions and to the manner in which raw natural resources are turned into finite cultural products. "[T]he distinctiveness of culture," affirms Sherry Ortner in this respect, "rests on the fact that under most circumstances it can transcend natural conditions, bend them to its purposes and control them in its interest."[11]

Women apparently do not play any part in these cultural processes. On the contrary, they are seen as an obstacle to their realization for their 'propensity toward polarized ambiguity [makes them] sometimes utterly exalted as symbols of transcendence (i.e. merciful goddesses, dispensers of salvation and heavenly justice), sometimes debased as [incarnations of] subversive[ness] (witches, castrating mothers and moral perverts), [but] rarely within the normal range of human possibilities.'[12] Attempts to avert feminine evils, such as those giving rise to death, epidemics, soil or human sterility, and other kinds of misfortune, can be found in shamanic, witchcraft, or animistic beliefs; as the history of patrilineal agriculturalist societies most clearly attests, these are generally articulated around concepts of pollution and purification.

A well-known aspect of such beliefs is that pollution – which can be roughly associated with either unrestrained natural energies or harmful spiritual powers – is thought to be capable of infecting and overthrowing everything with which it comes into contact. When pollution occurs, self-conscious, controlled, and/or symbolic actions against primordial energies need to be taken. Purification rituals grow out of this need to return balance to society. Women, who in the context of these beliefs bear correlations with the wild and occult forces of nature, are most likely to be identified with the ultimate cause of pollution or, even worse, to be accused of malevolent magic, and to be persecuted accordingly.[13]

The Loose Threads of Ecological Feminism

Parallel with the dichotomous and essentialist views of nature-culture, private-public, and pollution-purification, which have been found to justify women's subordination to men, is the equally dichotomous and essentialist character of ecofeminist critiques of economic development. The ecofeminist analysis contends, for example, that in patriarchal settings 'women can become the site on which tradition is reformulated' and, ergo, be easily subdued.[14] That is, where tradition intersects with patriarchal notions about women as pure, weak and submissive, a discourse often results where both are intimately interwoven and women are portrayed as little more than repositories of traditional Indigenous knowledge.[15] From this perspective, it is very difficult for women to elevate their status, and to assert agency in community development.

On this count, ecofeminist activists have raised the question of whether environmental problems represent a loss of traditional wisdom, which is to say, wisdom where women held higher status and decision-making authority. Vandana Shiva, one of the leading voices of the ecofeminist movement, suggests that women's knowledge of local ecosystems and adoption of sustainable

practices can help amend some of the shortcomings of the modernizing paradigm. She claims that *shakti* – the feminine and creative principle of Hindu cosmology which, in her line of reasoning, is defined as inherently non-patriarchal, holistic, and by some means hostile to the value-free system of modern science – should be made the key to sustainable development. Recovering this principle would imply re-assigning responsibility for ecological leadership to women, who can thereby transform development from a self-destructive process into a more equitable one.[16] Shiva's argument and others like it are problematic because they tacitly reproduce the aforementioned essentialist and dichotomous polarizations. By establishing an *a priori* intrinsic metaphysical relation between women and nature, Shiva neither provides the historical and material origins of this symbolic association,[17] nor the justification for women's stewardship and ostensibly privileged understanding of the environment. Ultimately, she does not indicate how women should work with specific institutional arrangements so as to deliver a truly eco-friendly approach to development.

Published literature on regional development and economic growth regularly indicates that, despite the above patriarchal, supra-material readings of femininity, women do play a crucial part in climate change mitigation, ecological engineering, and environmental improvement projects. This is all the more so in traditional forest and upland village communities where women maintain some control over natural resources and over decision-making, both within and outside the family.[18] Drawing on this literature, the following section gives consideration to the shifting contents and goals of China's development agenda, the politics of its environmental discourse, and the rationale supporting government-backed investments in the ethnic minority areas of the interior. The excursus will help contextualize China's environmental ambitions in northwestern Yunnan and the two case studies discussed in the last section.

OVERVIEW OF STATE-LED DEVELOPMENT IN CHINESE MINORITY AREAS: HISTORY AND CURRENT TRENDS

In comparison with other countries with a similar population, the diversity of ethnic minority groups in China may appear quite low: so far there are 56 officially recognized nationalities, fifty-five of which are minority nationalities. The latter's total number is, however, surprisingly large. Although Beijing does not label any of its citizens as Indigenous People (hereinafter IP), there have been consistent attempts by authoritative organizations like the World Wildlife Fund (WWF), foreign NGOs in the country, affiliated aid agencies of the United Nations, and other accredited players in the field of environmental governance to use the language of Indigeneity to describe Chinese minority cultures and align them with the predicaments of the global Indigenous rights movement.[19]

Regardless of issues of naming, a 2008 survey by the International Bank for Reconstruction and Development (IBRD) indicated that, with an estimated 105,000,000 IP over a worldwide total of 306,685,852, the Chinese minority population constitutes by far the largest on the planet.[20] These people live primarily in the western interior of the country, which covers an area of 6.87 million km^2 and accounts for approximately 71.5% of China's total land area.[21] According to the 2000 census, this region has an overall population of 364.5 million, of which 21.7% are non-Han ethnic

groups.[22] Even within identified minority autonomous areas in Western China, minority people account for less than half of the population: 94.6 million national minorities people of 215.6 total million inhabitants, or 43.9%.[23]

Alongside high rates of poverty among both Han and minority nationalities people in the national minority autonomous areas, other notable features applying to Western China as a whole are: (1) the high frequency of environmental emergencies; (2) the abundance of energy sources, as well as grassland, timber, water and minerals (either ferrous or non-metal ones); and (3) the high percentage of forest fires and other losses induced by natural and/or biological disasters (i.e. drought, hail, mudflow, snow storm, impoverished land productivity and rodent plague).[24] In the past half century, a wide range of poverty alleviation measures have been undertaken in this region whose aim has been to achieve economic growth and environmental sustainability and to boost national unity and border security. Unfortunately, scholarly evidence reveals that initiatives of this sort have led to uncertain outcomes.[25] These are briefly summarized as follows.

Socialist Modernity and Political Premises of the Open-Up-the-West Campaign

Not long after the Chinese Communist Party (CCP) took power in 1949, the central government tightened pressure on the lives of peripheral minorities through a series of unprecedented land redistribution and confiscation campaigns. These were carried out extensively across the country, affecting even the most remote pastoral villages of the Tibetan Plateau.[26]

Although hill forests, native pastures, and croplands were formally designated as either collective or national lands, which in some places became conducive to their preservation, all kinds of religious activities associated with them, including ancient beliefs about *feng shui* geomantic energies and Daoist (bio-)spiritual practices for life-cultivation, were prohibited *en masse*.[27] It was in this context that, during the Great Leap Forward (1958–61), Mao Zedong mobilized the peasantry under the slogan 'man must conquer nature' (Ch. *ren ding shengtian*). Following the ill-fated path blazed years earlier by Soviet Russia, his goal was to demolish all the structural barriers to socialist modernization.[28] By the summer of 1964, Mao's attempt to reshape the non-human world ushered in the Third Front Policy (1964–71), which bolstered manufacturing production in Western China, mostly weaponry, chemical, iron and steel, energy and nuclear industries, for the purpose of defending the country in case of foreign invasion. Correspondingly, while southern coastal provinces and main cities like Zhejiang, Jiangsu and Shanghai saw no substantial state intervention in the economy, no less than USD 24.96 billion worth of investments were poured into the mountainous interior; three hundred and eighty factories – one fifth of all large Third Front plants – relocated therein.[29]

This came with very low economic returns and catastrophic consequences for both human beings and the ecosystem.[30] Chinese scholar Dong Shikui has described the years from 1949 to 1971 as a period of "no environment[al] governance and stern environmental damage."[31] After a set of new market reforms launched by Deng Xiaoping in the late 1970s started to gain momentum over the subsequent two decades, coastal development became one of the major priorities of the CCP leadership. On the one hand, these priorities managed to bring China into better integration with

the global market economy, on the other they did little to relieve rural areas of the interior from persistent poverty and growing social inequality.

In1999, Jiang Zemin's administration inaugurated a new bold program known as Open up the West (Ch. *xibu da kaifa*), and the effort to balance regional disparities finally began to materialize. New concerns over the region's exposure to the cycle of poverty and environmental decline were raised and written into the development agenda. One of the main goals of the program, coming second only after infrastructural development, was to strengthen ecological reconstruction through a series of fourteen nation-wide key projects. Some focused on grazing retirement, anti-desertification, and nomadic settlement, similar to those underway since September 2003. For example, in the most severely degraded grasslands of the Tibetan Plateau at the source region of the Yellow, Yangtze and Lancang rivers (*sanjiangyuan*), USD 1.15 billion funds have been allocated to Qinghai alone to set up the world's second-largest nature reserve – the Sanjiangyuan National Nature Reserve (SNNR).[32]

Matricultural Principles Toward a New Going Green Approach

The CCP's commitment to modernize the West intensified in the following years, most visibly in 2008, when China, despite the global financial crisis, featured among the top-ranking countries with the highest number of IP-related projects on poverty reduction and biodiversity conservation (China came fifth on the list, right after Brazil, Philippines, Mexico and Vietnam).[33] The number of projects has grown steadily over the last decade.

In 2019, of the one hundred and ninety-six initiatives presented to the Nature-Based Solutions (NBS) work stream of the UN Environment Programme (UNEP) by over seventy governments, private, and public organizations from around the world, fifty-nine were from China (30.1%).[34] A study completed in the same year by Kelly S. Gallagher et al. reveals that over the span of roughly a decade, Chinese policy makers have designed and carried out more than one hundred individual policies to curb greenhouse emissions.[35] In line with this trend, prioritizing renewable energy while promoting development in minority areas has been set as one of the main goals to be reached by the end of 2020. Constructing new megadams on the Yarlung Tsangpo (Brahmaputra) river, as well as the Yellow, Yangtze and Lancang rivers, and expanding the country's hydropower capacity through the West-to-East Electricity Transmission Project initiated during the tenth five-year plan (2001–05) are all key elements toward this goal.[36] The environmental impact and potential destruction in biodiversity hotspots remains to be fully assessed, as the cultural and social impacts of these policies on the ethnic communities of Tibet, Sichuan, Yunnan, and Guizhou. Among the issues of utmost concern is how these developments will affect the mobility of the 16,621 herder households who live within the 123,141 km^2 area brought under protection.[37]

Along with the challenge of responsibly adjusting community interests to the requirements of the central administration, China's state-led development policies and enthusiastic endorsement of ecological modernization (Ch. *shengtai xiandaihua*) have not mobilized enough dialogue between policy makers and Indigenous holders of environmental knowledge. How science and Indigenous views on climate change – especially those subsumed under matricultural principles that advocate communion with nature – can collaborate to undo the damage to environment is a critical

question that so far is not featured in official policies. China's broad strategy of sustainable development is based on the principle that environmental degradation can be prevented and effectively managed through technological innovation. In this persepective, the traditional non-economic mechanisms devised by locals throughout history are seen as either unscientific or not profitable enough to be counted as valid implementation tools. In some cases these very mechanisms have been identified as the ultimate causes of degradation.[38] Furthermore, there is an imperative that development goals should be accomplished by wholesale government intervention, which causes local minorities to lose confidence in their own culture and system of values while providing the central administration with a set of legal and moral justifications to administer community affairs on their behalf. This 'we-know-better' characterization of state paternalism makes it difficult for locals to be positively engaged in decision-making, and for matricultural principles to be incorporated into environmental policy.

TWO RITUAL ECONOMIES OF NORTHWESTERN YUNNAN

The rich animistic repertoire of Indigenous peoples found in upland Southwest China reveals that humans are not the only beings with an individual personhood and that each being is assigned a specific ecological niche in the landscape. The relatedness of all-life forms requires that balance to be maintained through mutual aid, and humans to make offerings to appease or gain the favor of other beings and earthbound deities in control of natural forces. Among the minorities whose native tongue belongs to Hmong-Mien, Tibeto-Burman and Kra-Dai language families, for example, livelihood strategies and attitudes toward these forces are informed by beliefs about sacred forests and their protection, ceremonies of weather-making, and geo-pietistic reverence toward the elemental spirits of water, fire, and soil.[39]

In the matricultural systems of northwestern Yunnan, a sense of maternal bonding and intimacy pervades human interactions with the spirited nature, and cosmocentric views of life are combined with ritual magic that is deemed essential to economic choices. Indigenous men and women resort to it to compensate for poor crop yields, severe weather, deforestation, high livestock mortality and other types of loss. This epitomizes what McAnany and Wells call a ritual economy – an economy where the "process of provisioning and consuming materializes and substantiates worldview[s] and [...] cognitive realms of human experience."[40] In the ritual economy of the two ethnic communities discussed below, the agency of women is well accepted, if not institutionally sanctioned, even in strongly patrilineal settings. Among Khamba Tibetans and Mosuo people, ritualized behaviours and actions do not just create a linkage between natural and anthropic landscapes, earthly and otherworldly realms, individual and social body(ies), they make a transfer between any of these planes possible. Thus, in charting the effects of such behaviours and actions on economic processes, one is brought to wonder whether the acceptance of multiple planes of cognition – ranging from biotic life to the abiotic environment and expanding further beyond the materiality of phenomenal world – might provide a new working framework of analysis. It is within such a tentative framework that ecological relations in Khampa and Mosuo matricultures must be understood.

Case Study 1: Diqing Tibetans

The Diqing Tibetan Autonomous Prefecture (DTAP) is an administrative division of Yunnan Province with about 400,000 inhabitants. A combination of several factors make this high plateau region on the eastern slopes of the Himalayas and, in particular, the village communities of Deqin County a case study quite unique of its kind.[41] With the Jinsha (Upper Yangtze), Lancang (Mekong), and Nu (Salween) rivers, the DTAP is home to one of the most biodiverse ecosystems in the world. In 1998, the prefecture was included in the Great Rivers Project, a large-scale conservation and development plan late, and the area hosts two entries in the list of UNESCO heritage sites: the Shangri-la Ecological Tourism Zone (2001) and the Three Parallel Rivers National Park (2002).[42] Within its administrative boundaries is Yunnan's biggest area of forested land. In this forest, which makes barely the 0.2% of Chinese national territory and 3% of the province's territory, there are over six thousand sub-species of wild plants distributed within twenty-two micro-climate zones, one hundred and seventy-three types of mammals, four hundred and fourteen of birds, fifty-nine of reptiles, thirty-six of amphibians and seventy-six of fish.[43] There stands also one of the highest peaks of the Hengduan Mountains and one of the eight most sacred peaks of the Tibetan tradition – the imposing Khawa Karpo (Meili Xueshan, 6740 m). This mountain complex is the seat of a homonymous warrior god celebrated in the *Epic of Gesar of Ling* (Tib. *Gling ge sar rgyal bo'i sgrung*) and his relatives. Many pilgrims, Buddhists and Bönpo animists alike, as well as mountaineering teams are drawn here every year.[44]

Landscape Cosmologies and Sense of Community in Polyandrous Social Settings

According to Tibetan beliefs, the physical world is inhabited by a pantheon of territorial deities – mountain gods (*yul-lha*), protectors of the ground (*sa-bdag*) and water spirits (*klu*) – who, like humans, have intentionality and exercise some control over the environment.[45] To ensure a balanced human-nature relationship, their needs must be either satisfied or kept at bay through rituals of worship, purification ceremonies, invocation formulas and techniques of propitiation.[46] These are regularly performed by a *trulku* (reincarnated Buddhist teacher) at prescribed shrines and, until the early 1950s, also by *sngags-pa* or tantric masters of various sectarian affiliations, whose magical abilities enjoyed an exceptional reputation in the village communities of eastern Tibet (Khams) where modern DTAP lies.[47] As in other Tibetan areas in and out of the People's Republic of China (PRC), religious leaders here are called upon to intercede with the aforesaid deities on behalf of the villagers so that they can be better prepared to face crises and secure the necessities of life.

A significant factor, which hitherto has not been sufficiently investigated in connection with these beliefs, is women's perceived centrality in the family. Although in Kham society descent is mostly traced patrilineally and a strong patrilineal bias can be detected in matters of inheritance, land ownership and succession to authority, kinship through women is also a consideration in attributions of social ranking. Especially in cases where fraternal polyandry (*bza' gsum*) remains predominant over other marital systems, wives may hold complementary positions of authority and domestic obligation to men, acting as headwomen alongside or sometimes in place of their male counterparts.[48] Some have held that it is due to ecological reasons and the hardship of maintaining life in such inhospitable environment that this time-honoured form of group marriage was widespread till recently and continues, to a lesser extent, even nowadays in Diqing. Ju'an

Huang, a scholar-cum-administrator who was dispatched to the area by the Nationalist Party (KMT) during the mid-1930s, offers insight on the multiple centers of power found in polyandrous households:

> One of the theories about polyandrous alliances (Ch. *yifu duoqi*) is that such alliances originate because of adverse environmental conditions which require a family to have more than one husband who provide for its needs. […] Another theory is that males are busy outdoors and someone else – another husband – must take care of the wife. […] I believe that the main reason for its origins is the fear for wealth dispersion caused by the harshness of people's living environment. Nevertheless, Deqin folks embrace polyandry [without distinction of socio-economic status]. Traditionally, the peasant household is made up of a group of brothers sharing the same wife (*xiongdi gongqi*), and the very same pattern is followed by the nobles and *tusi* (hereditary chieftains). […] Under such circumstances, not only [family] disputes never take place, but greater harmony can be promoted [in society] exactly because people accept orders from women.[49]
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> In peripheral areas, the family structure of [Deqin's] society is one where everything gravitates around women. […] Besides plowing the fields and chopping wood, the man is responsible for child's care, selling goods [to the local market], doing the laundry and mending clothes. […] What I learned from my personal experience with Tibetans of Qinghai's pastoral areas – that is […] "the weight of the economy is measured on the scale of a woman's skirt" (Ch. *quanheng jingji shu qunju*) – certainly applies well to herder households in here. This is a good reference for all those who uphold gender equality (*nannü pingdeng*) in society.[50]

Although a wife's position as headwoman is not equal to household head, this account brings to the fore the practical resourcefulness of Deqin women in raising polyandrous households to wealth.[51] The fact that there is no single locus of domestic authority forces us to reframe the argument of women's positionality in prevailing readings of polyandry. The latter have somewhat misconstrued the internal dynamics of this social organization by overstating the importance of hierarchies between co-husbands and brothers, especially in disputes over inheritance.[52] In a fashion similar to the Nyinba Tibetans of Nepal,[53] the influence of Deqin headwomen extends out of the household. The embedment of feminine sacrality in the natural landscape suggests a multiplicity of religious concerns which correlate women's headship and related aspects of social life with local beliefs in goddesses, mythological heroes, or celestial females (Tib. *dpa'mo*), such as the mountains Sman btsun mo (Mianzumu, 6054 m) and Pa' lha dkar rdzong (Balagezong, 5545 m), consort and daughter of Khawa Karpo, respectively.[54] Furthermore, women's primal connection with the nourishing element of water is viewed as strengthening their capacity to deal with the subterranean *klu* spirits, whose worship can increase fertility and preserve life.

It follows that the gendered division of labour is not simply a reflection of marital alliances and livelihood choices. It is mirrored in access to religious resources, and, as the case of the *klu* rituals discussed below clearly attests, is found also in lay religious functions which support environmental regeneration. By performing these rituals, women carve out a space of their own in a system of practices and beliefs built around the cult of protective deities who guard over the

household and community welfare, beyond the male-dominated realm of Buddhist monasticism. In this system, ritual actions are gender specific and women's social sanction to perform them attests to the enjoyment of an unequivocal degree of autonomy. This implies the existence of an order of moral power which has less to do with Buddhism and more to do with a sense of community, its sufficiency of natural resources, and its security against external forces. Combined together, the status of women in polyandry and their execution of lay rituals grants them a maternal role in human-nature interactions.

Human Interactions with Local Deities and Territorial Sealing

Mountains are worshipped by and identified with villages and individual households. They are also considered kin relations, which implies human corporeality and embodied personhood. Mountains are therefore subject to the same rules of karmic retribution as humans, and mountain-gods are understood to be emanations of Buddha or transcendental beings (Tib. *'jig rten las 'das pa*). In Deqin there are many stories about mountain-gods taking animal forms or altering human subjectivities through nightmares, omens, and theopanies.

No god better than Khawa Karpo exemplifies such ability. Superimposing the two concepts of *yul-lha* and *gnas ri* (holy mountain), he is the most important tutelary deity of the Karma Kagyü lineage of Buddhism (*Kar ma Bka' brgyud*); he is also regarded by other Tibetans as the mandala of Cakrasaṃvara (paradise of *Bde mchog*, or the wheel of supreme happiness) and chief of all the local gods (*gzhi bdag*).[55] Due to his high merit (*bsod nams*), he can transform himself into any class of being; he can press hunters to cease excessive hunting by inducing harmful psychic visions which may result in death.[56] That is only one reason to fear Khawa Karpo, and there is a devotional route (*skor ra*) which begins at Yunling and goes forth to the mountain top; it carries tens of thousands of pilgrims yearly to pay their respects to the powerful god. The route includes a stop at the Yubeng springs, whose holy waters are assumed to possess healing properties.[57] During the circumambulation around the summit, which requires at least fifteen days for the external circuit and a week for the internal one, devotees buy a sprig of *Cupressus Duclouxiana* – an aromatic variety of coniferous tree which grows only in this region – to make offerings on the way. Pilgrims circumambulate the mountain to cleanse themselves of sin (*sdig pa*), and simultaneously help the forest's natural lifecycle by praying for the safety and protection of all life forms found there, from grass, flowers, trees, and insects to large animals.[58]

To enhance wildlife conservation, villagers regularly implement the *Ri-rgya sdom-pa* ritual (closing of mountain passes), a centuries-old custom overseen by the highest Buddhist authorities. Through a solemn ceremony of border demarcations, they impose a wholesale ban on tree felling, plant collecting, and hunting above a certain altitude, in some cases even on human activities *in toto*.[59] In a 1948 report about KMT-backed economic construction in Deqin, Ju'an Huang states that:

> Most mountain forests are made inaccessible by lamas, *tusi* and the local public administration who in addition to the seasonal closure of passes (Ch. *fengshan*) prohibit hunting and deforestation. […] Medicinal herbs and [animal] products like the *Ophiocordyceps Sinensis*, liliaceae plants, musk, the skin of fox, lynx and sable, antler

> velvet, bear bile and other extremely valuable items found in the mountains [around Deqin] are all subject to restrictions.[60]

Far from being a mere political tool aimed at ameliorating resource utilization, these prohibitions stem from a contractual relationship between the guest-community down in the valley and host-gods in the remote uplands which stand as an extension of the numinous world.[61] In Yubeng and Mingyong, both at the feet of the Khawa Karpo complex in the south-central part of the county within the administrative boundaries of Yunling township, they apply to all mountains above 3000–3400 metres. John Studley's 2013 survey of twelve hamlets in the Yubeng valley gauges that out of a catchment of 89 km^2, there is an average of three *gzhi bdag* [local deities] locales with an area of 700 ha per village. Villagers know well the location of the line that demarcates the ritually sealed enclosure of each locale and what kind of activities are allowed inside, including male access only to the mountains (8.3%) and special access for women (8.3%).[62] The line can be drawn in manifold ways, but usually it is neither clear-cut nor stable. In any case, agreements on demarcation need to be routinely ratified and conditionally updated based on proofs of moral undertaking, ritual performance, and social commitment. Around Yubeng, for example, the demarcation is marked by two large rocks, one of light colour embodying the peaceful character of savior-goddess White Dölma (Tara) and another in black personifying the fierce Green Dölma.[63]

Supernatural Readings of Meteorological Phenomena

As well as being visibly inscribed on this mandalized physical landscape with symbols referring to the many manifestations of divinity, gender attributions are also found in ceremonial sequences. For the most part, women are not allowed to climb up and burn offerings to mountains where male deities reside except during New Year celebrations (*lo gsar*) and only if accompanied by a man of the family. In the remaining part of the year, they are permitted to make offerings at home from village shrines specifically designed for the purpose.

Nevertheless, as lay persons, women's primary responsibility is to perform rituals for the *klu* spirits who, like the *nāgas* in South Asian cosmology, are believed to dwell close to trees or waterways. It is in these places that, under the supervision of local *trulkus*, women gather in processions by means of which they ask the spirits for a blessing upon the crops and their family, or for a cure to karmic diseases.[64] But sometimes their actions can bear unwanted consequences, such as occurred on 2 January 1991, when, independent of any clerical authority, women rallied following the announcement that a climbing team had been given permission to camp on top of Khawa Karpo and planned to conquer its summit the following day. They walked out to the Namkha Tashi Temple (Ch. *Feilaisi*), from which one can admire the view of Khawa Karpo's majestic glaciers, and raised their skirts in ritual protest, thereby expressing their disappointment over the god's surrender to the team. Their yelling and cursing angered the capricious god, who in turn provoked an avalanche that killed as many as seventeen climbers.[65] The mountain peak has remained unclimbed until today, and a poem was composed in 1999 by a local intellectual as a warning to anyone who violates its territory:

> Being spontaneously erected, the silvery snow mountain has the nature of a *stupa* / […]
> In such a supreme sacred place as *Kha ba dkar po*/ Humans […] have climbed on the

> head of the Lord of snow/ The *stupa* [performed then] all sorts of magical displays, [and] snow-dust spontaneously piled up into a heap/ [Therefore] men were buried in the deep snow in one instant.[66]

Further evidence of Deqin women's active participation in their communities' spiritual lives comes from the first-hand accounts of Chinese ethnologists, who reported that, until the 1980s, there was a specific class of house priestess known in the local Khams dialect as *tshang-pa* – in all probability a local variation of *sngags-pa* – who was very close to the Kagyü lineage. Among other activities, the *tshang-pa* recited mantras and passes from Buddhist scriptures devoted to Hayagriva and Avalokiteśvara, with the purpose of ending insect plagues and droughts or pleading for rain. In his 2009 publication, Enchang Song claimed that while every village formerly had its own *tshang-pa*, in 1983, there were perhaps twenty remaining.[67]

In the Ganden Yangcan Phuntshogling Monastery, monks also perform ceremonies that are meant to free the community from the burden of unexpected frosts, snow storms, hails and mudslides.[68] When summer comes around, women and men of Yubeng and Mingyong take part in expiatory processions and through intense sessions of collective prayer, during which incense is burnt, sutras recited, and prayer flags (Tib. *rlung rta*) hung on trees. These apology sessions are offered to local deities for chopping more fuelwood than needed, grazing livestock on the other side of the border, and other shortcomings.[69] Besides bringing down the gods' anger upon the community in the form of poor harvest, glacier retreat, incurable diseases, or adverse events of various kinds and severity, trespassing over demarcated borders may also result in a pecuniary sanction. This is imposed by a council of elders which, complementing the work done in the past by *tusi* and now by religious leaders, is in charge of overseeing social intercourse and ensuring that human activities do not disrupt the ecological balance. A practice in use until the establishment of the PRC, discarded for the entire Maoist era (1949–76), and rehabilitated in the early 1980s, the imposition of sanctions on transgressors extends today to most of the villages in Deqin. In the case of Yubeng and Mingyong, it consists in the payment of a sum of money, but until recently, wheat seeds and other types of non-cash compensation were also accepted.[70]

Conservation under Changing Socio-Economic Conditions

These measures have been matched by new legal mechanisms which have not substantively affected the council of elders system. However, threats to traditional Deqin social institutions are posed by the lucrative lumber industry and the re-branding of ethnic villages as exotic ecotourism destinations.

Due to the ongoing changes in state policy, the long-term effects of overexploitation of forest resources on the local economy are impossible to predict. Since the mid-1990s, central and local administrations have oscillated between very permissive policies on wood trade and the mandatory closure of timber factories. Estimates indicate that between 1960 and 1990, the total woodland area in DTAP dropped from 1,309,000 to 822,000 ha. Following the frequent floods which occurred on the lower reaches of the Yangtze River as a consequence of this dramatic shrinkage, the Central People's government announced a deforestation ban in most Tibetan upper reaches areas. Starting from September 1998, when the ban became thoroughly effective,

tremendous new efforts to stimulate tree growth were made but, unfortunately, by 2005 the DTAP's green ratio had increased only 0.3%. Meanwhile, tourism became the pillar of the economy and the motor for the construction of new facilities and the establishment of services. Lumberjacks, off-farm employees, and virtually all those who lost their job due to the deforestation ban were either absorbed into this sector or reemployed as manpower for state-run forest farms, ecological stations, and other bureaus.[71]

Notwithstanding, the traditional council of elders still stands. In this sense, the case of Yubeng is emblematic in that, just a few years ago, local elders rejected the proposal of a logging lobby who showed some interest in buying a piece of forested land where cypresses and other centenarian species flourish.[72]

Case Study 2: Ninglang Mosuo

In present-day Ninglang Yi Autonomous County (NYAC), Yunnan, natural scenic spots and ethnic tourism attractions have been created with no less institutional enthusiasm around Lugu Lake or, as known by the Mosuo, *Xienami* (Mother Lake). Together with another fourteen counties and cities, this area was also brought into the 1998 Great Rivers Project.[73] According to the classification criteria in use by the PRC, the Mosuo are a branch of the eastern Naxi, who identify themselves as a culturally distinctive group. On account of their strong matrilineal practices and largely marriage-less society, the Mosuo can be regarded as one of the last surviving matriarchal societies in the world.[74]

Scattered on the Yunnan-Sichuan border across Ninglang, Yanyuan, and Muli counties, which are located on the southern, eastern and northern shores of Lugu Lake, respectively, the Mosuo population in 2006 was about 40,000 people. Nearly half of the Mosuo population lives on the Yongning plain in Yunnan, a 50 km^2 strip of land with an average altitude of 2600 MAMSL, while the other half dwells in southwestern Sichuan, beside the same lake but on the other side of the border. Yunnan's 2006 census statistics show that the Mosuo population in that province had grown by only 30% over the past century, the lowest growth rate ever recorded in China by far. With a total 2006 population of 248,057 people in the NYAC, the Mosuo are the third most populous group in the county (17,170) after the Yi (156,518) and Han (47,341) peoples. Nevertheless, only 10,138 more men than women in NYAC bespeaks a significantly balanced sex ratio: 4.09% instead of 15%, the average sex ratio of Yunnan province in 2005.[75]

Matriarchal Consensus, Networks of Mutual Assistance, and the Ndaba View of Nature

Traditional Mosuo family organization pivots on the matriarch or *dabu* (household manager), whose age may range from 45 to 60 years old. Far from representing a reversal of patriarchy into another type of sexist ideology built to favour women, she incarnates a model of political solidarity wherein decisions are taken unanimously by the elderly members of a village council, authority is shared by both sexes, and the means of production (i.e. land, draught animals, work tools, and labour) are managed through mechanisms of mutual aid called *idi*. The *dabu* mediates every aspect of the village economy, from crop farming to domestic and communal responsibilities, from various forms of daily consumption to the sharing of public spaces and land plots, and the

administration of family inheritance. A network of kin-structured social relations revolving around her is understood to optimize crop yields and distribute resources in a more efficient and fair way.[76] In her capacity as house priestess, she is also responsible for rituals to please the spirits of the soil (*dibu*), as well as of initiation rituals in which young girls are recognized as reborn female ancestors.[77]

Scholars agree that, along with poor population growth, a matricultural organization of society, and its geographic isolation, the good environmental status of this remote lacustrine region is also due to the social function of the Daba [*ndaba*] ritual specialists. Before Tibetan Buddhism became a major presence during the seventeenth century, the Daba operated in a Pu-Pa (male-female) dyad[78] where incantatory skills were accorded to men and divinatory ones to women.[79] However, it is likely that in the wake of the Buddhist conversion of Mosuo and Naxi chiefs, female diviners were proscribed and that this proscription expedited the transformation of said dyadic partnership into a male-only Daba priesthood. Even if some Pa-Daba were reported as holding services in Yongning until the establishment of socialist China in 1949, nowadays virtually all Mosuo ritualists are men.[80]

In the Daba belief system, ritual observance and respect for the environment are intimately interwoven with each other. These beliefs rest on an inherently cosmocentric view of life which acknowledges each of the organisms found in nature as sentient beings endowed with a spirit. Animate or inanimate objects from the animal, vegetable, and mineral kingdoms of life, as well as the set of physical phenomena which, like wind, thunder, fire and lightning, occasionally unleash their destructive power upon these objects, are all considered emanations of a divine quintessence that infuses the universe. All these, therefore, are venerated, feared, and, whenever possible, appeased through appropriate ceremonies similar to those performed by Naxi Dongba [*dto-mba*] priests.[81] Both Mosuo and Naxi, in fact, believe that such elemental powers can provoke serious illness if not readily addressed.[82] For example, if a person extinguishes a fire by urinating on it, he/she may suddenly fall ill and develop disturbing genital pathologies. Likewise, if someone offends the god of water, he/she will contract rashes easily, along with other harmful skin conditions. As a consequence, distinctions are made between wells from which water can be collected for human consumption and wells unsuited for such purpose because gods abide in them. Moreover, natural landscapes also affect human activities in a variety of other ways: some mountains and water streams can make people dull and vulnerable to diseases, while others can make them smart and healthy.[83] Despite such similarities, there is evidence that nature worship is more central to the Mosuo Daba than it is to the Naxi Dongba; for example, meaningful differences are noticeable in the way mountain-gods are revered.[84]

Ecological Function of Mountain Worship and Customary Law

As with the Khamba Tibetans of nearby DTAP, the Mosuo ascribe corporeality to mountains. They view almost all the deities who reside there as giant relatives, not simply as otherworldly entities or lords of the natural world. For example, the goddess Gamu, the legendary patroness of Yongning who dwells on the Lioness Peak (ca. 3990 m) and whose feet bathe in the western shore of Lugu Lake, is canonized as Great Mother or First Mother.[85] She is held responsible for the rise and fall of population, the productivity and failure of crops, and the increase and decrease of animal husbandry, as well as for female fertility and childbirth. Because of this, on the twenty-fifth

day of the seventh month of every lunar year, people climb the Lioness Peak to ask for the goddess' protection and favour. As tradition goes, any woman who is unable to conceive after paying her respects to Ganmu is recommended to visit Muli's wrathful protective deity Panden Lhamo (Tib. *Dpal ldan lha mo*) at the mountain cave where she lives, and drench in her holy waters. Processions similar to those for Gamu would have been held at the foothills of Mount Wuaha (ca. 4100 m) ten days previously; this massive piece of limestone is the dwelling of the strongest among Mosuo male deities, who, despite his greater height and strength, ranks lower than Gamu in the Daba pantheon.[86]

Related to the practice of worshipping sacred sites is a cluster of taboos which help preserve biodiversity. These include (1) a prohibition on damming the lake or polluting it with excrement and waste material; (2) restrictions on tree felling in the mountains and close to funerary sites; and (3) a hunting ban on the Lioness Peak during the *ri-rgya sdom-pa* season.[87] Whoever contravenes a taboo is subject to grave moral or monetary sanctions. Since the forests of oak and pine, with miscellaneous floral varieties, as well as the bears, leopards, goral, bharal and a great many other rare species of wildlife – that till the first half of the twentieth century were found on the hillsides – are all considered a symbol of community well-being, everyone in the community feels a social responsibility to safeguard them. The customs and taboos which prohibit deforestation in places of worship were so powerful that, even today, there is an anecdote circulating among Yongning residents about an unfortunate man who had one of his fingers amputated as expiation for cutting down a tree. Those who may have desecrated the forest to obtain timber illegally are said to live in fear of being soon caught by death, losing the ability to procreate, and/or exposing his/her loved ones to incurable diseases. In some cases, presumably due to the influence of Tibetan Buddhism over the region, a violation of taboos and laws implies divine punishment for the entire community, who may be assaulted by unnamed calamities with severe repercussions for crops, livestock, or the wealth of the community itself.[88]

Social and Environmental Consequences of Cultural Change

The Naxi and Mosuo, centered on Lijiang and Yongning respectively, are classed as one official minority nationality by the PRC and they are believed to be descended from the same people. Among both ethnicities, before the establishment of the People's Republic of China, there was a diversity of marriage and family customs, with higher degrees of sexual freedom and flexible patrilineal arrangements in the more remote mountain regions. Throughout their territory, which expands from the Lijiang Basin to the western shores of the Jinsha River at Fengke, the Naxi are universally patrilineal. Within the Lijiang basin itself, they are known to have observed a patrilateral cross-cousin marriage prescription, strict betrothal customs, and expectations of female chastity. While the Mosuo people living in Labei, a mountainous region adjoining the Jinsha River, are patrilineal, matrilineal and mixed-descent families are found in the Yongning plain.[89]

In 1971, Anthony Jackson argued that the Naxi people of Lijiang were once matrilineal and that the Naxi had become patrilineal as a result of the imposition of Confucian political ideology by the Qing empire in the eighteenth century, when Naxi Indigenous chieftains were removed from office and the Naxi prefecture was integrated into imperial administration (Ch. *gaitu guiliu*). Further, Jackson argued that after Emperor Yongzheng (r. 1722–35) annexed Lijiang, sweeping changes in

the dress code, clan names, marriage and burial customs were enforced, and women's status was drastically reduced, giving rise to a massive wave of female suicides.[90]

Christine Mathieu, however, asserts in her 2003 monograph, *A History and Anthropological Study of the Ancient Kingdoms of the Sino-Tibetan Borderland: Naxi and Mosuo*, that the annexation of Lijiang in 1723 aggravated a process that was set in motion earlier during the Ming dynasty (1368–1644). From the fifteenth century onwards, the Lijiang élite (Mu lineage) implemented structural adjustments that shifted a system of bilateral and matrilateral marriage exchange to a patrilateral cross-cousin marriage system in order to transform the former tribal polity into a feudal three-tiered class system. After the 1723 annexation, patrilateral cross-cousin marriage exchanges endured among the most Sinicized Naxi groups of the Lijiang basin but not in the peripheral hill regions. Meanwhile, in Yongning, although Gelugpa Buddhism had supplanted the Daba animistic tradition by ca. 1710, and, as mentioned above, liturgical functions that until then were performed by female ritualists (Pa-Daba) began to be vested in their male counterparts (Pu-Daba), matriliny was incentivized through taxation, customary law, and mythological ideals. Mathieu also proposes a genealogical link between the Mosuo and Lijiang aristocracies and the Supi (Tib. *sum pa*) queens of a matriarchal state of Qiangic origins situated around modern-day Muli – the *Nüguo* described in the Sui (581–618) and Tang (618–907) dynastic chronicles. As a whole, the above measures proved advantageous to the Mosuo feudal regime in that they helped maintain a balanced gender ratio, optimize land-use planning and ensure the continuation of existing social relations. Prior to 1949, for example, rice cultivation was prohibited in Mosuo territories and the land made less attractive in order to deter Han peasant men from settling on the plain and taking Mosuo women as their brides. In patrilineal Labei, though, Mosuo genealogies begin with a female ancestor and the status of wife-givers has remained higher than that of wife-takers – the opposite of what is found in patrilateral cross-cousin marriages. The people of Labei also practice uxorilocal marriage when necessary to guarantee the continuity of their households.[91]

In the wake of the earliest Communist reforms, Mosuo matriliny was weakened by the imposition of collectivisation and monogamous marriages. Especially during the Cultural Revolution (1966–76), official policies mandated monogamy, forcing the Mosuo to renounce the custom of *nana sésé* (visiting or walking marriage), and cohabitation (*ti dzï jï mao the*).[92] Whereas during the 1960s, roughly 73% of adult Mosuo were still practicing *nana sésé* relationships and the remaining 26% had either a co-resident partner or no partner at all, by 1976 about two thirds of the total population had entered monogamous marriages.[93] Post-collectivisation, in the 1980s, the Mosuo largely returned to their former kinship practices.

By contrast, in Lijiang, the PRC government sought to proscribe the custom of ritual love suicide known as *yuvu* [to love much]. Government policies banned arranged marriages along with the traditional Dongba ceremonies that exorcised the demons of suicide (*har-la-llü-k'ö*) and were thought to contribute to the custom's romantic appeal to young women. *Yuvu* disappeared in the wake of these reforms, with isolated cases having been reported during the 1960s and 1990s. By contrast, in Yongning suicides have always been extremely rare.[94]

In the 1980s, social transformations have largely stemmed from economic integration and market reforms. This is all the more evident in the timber industry where, until the beginning of the 1980s,

private ownership of forested land was almost non-existent. With the opening of new markets, people have begun to cut trees in private- or community-own forests but are allowed to do so exclusively for wood energy consumption and housing purposes. Most of the profits from forestry production go to state-owned enterprises who comply with quotas set by the state. The years between 1959 and 1983, when the land was redistributed and nationalized, witnessed an extraordinarily high incidence of wildfires. Official sources estimate that up to 5,824 uncontained fires broke out, with 218,000 ha of forest being destroyed everlastingly and an average annual loss of over 6,650 ha. Efforts toward afforestation have been made ever since, mostly voluntarily by women, but deforestation-induced erosion of soil, mud-rock flows and floods remain frequent. These have come with deleterious consequences for the socio-ecological balance. If one considers, for example, that in 1989 Ninglang had a total forest area of 265,333.33 ha and an average ratio of forested land of 1.32 ha per capita – at that time the highest in the whole country – the fact that between 1949 and 1993 almost a quarter of it had already been logged suffices to illustrate the pressure exerted on the ecosystem.[95]

Starting from the 1990s, the development of tourism has led to an increased demand for firewood and building materials from local households. In a small village like Luoshui which counts only a few hundred permanent residents, for example, the inflow of tourists on average has exceeded 80,000 visitors a year. Activities like farming and fishing have been replaced by tourism. In 1996, nearly every household built new wooden guesthouses. Eileen R. Walsh observes that in 1999, more than fifty hotels and over 1,300 beds were made available to tourists, and in 2005, the village had beds to accommodate as many as 3,500 visitors. With villagers becoming wealthier and the young generations seeking employment in the cash economy, the imbalance in the gender division of labor has also grown. Men consume more of the household resources, and women bring in most of the earnings.[96] He Zhonghua notes that men in Luoshui receive technical training in conservation projects, whilst women are given fewer opportunities to join them while they see their own capacity in forestry being devalued, despite the fact that they collect firewood, plant and fertilize trees. On the contrary, in the village of Zhengbo where firewood supplies are extremely low, the total amount of labor spent by women and men is essentially the same. Differences between sexes are minimal and chiefly the result of seasonal adjustments: if women work more in the slack and rainy season, men are committed to do heavier jobs throughout the rest of the year. What is most significant, instead, is that women are by far more sensitive to environmental degradation. It is easier to mobilize them than men in afforestation (80%) and fighting mountain fires (40%). As to the control and distribution of household resources, women and men enjoy equal rights.[97] Up-to-date findings confirm the narrowing of gender gap. Pascale-Marie Milan (see this issue of *Matrix*) stresses that labor depends less on gender than on seniority in that, although the daily household affairs are managed by the *dabu*, all adult members – brothers and sisters – have a say in decision-making, especially decisions pertaining to heavy jobs, and assign duties (i.e. work on the fields, grazing of animals, etc.) according to age and sex.[98] In other words, gender issues are relatively complex and nuanced: the gender gap has narrowed in tourism-related areas like boating, horse riding, singing and dancing where both men and women are involved in equal measure, but in all the other areas the traditional division of labor has undergone little change. Men engage in economic matters outside of the village and contribute in the physically heavier jobs. Women take on the bulk of domestic and agricultural labour. Nevertheless, the division of labor is flexible and may vary due to circumstances and availability of labor force.

CONCLUSIONS

The foregoing dynamics speak of religious ways of knowing and being that hail from and are promoted locally by matricultures. In assessing the health of Indigenous ecosystems and strategic approaches to sustainability, the traditional beliefs of these cultures should be taken as a point of departure for exploring the virtually uncharted territory of trans-species ecology(ies) and for building a genuinely inclusive environmental ethic based on self-sustaining solutions and mothering values that encompass the welfare of both sexes and all species.

When viewed from the perspective of these beliefs, Indigenous knowledge of the environment is not simply about the taken-for-granted biotic and abiotic factors that make up an ecosystem. Beneath all of these lies a layer of matricultural concerns, religious taboos, geo-pietistic sentiments and attitudes, social norms and obligations, as well as a series of ritualized behaviours and actions that, taken altogether, are instrumental in heightening ecological awareness among community members and punishing who has done damage. Among them, as the two cases herewith presented best exemplify, gender-inflected ritual actions hold a central position for, without them, native conceptions of sustainability may not ensure the degree of social cohesion and self-motivation necessary to attain an equitable distribution of resources and constrain eco-unfriendly behaviours. Indeed, downplaying them in the evaluation of environmental assessments will thwart the efforts made so far in the implementation of development programs, with the inherent risk of not achieving the expected outcomes both in terms of social equity and environmental impact.

The above case studies show that women's performance of rituals in Indigenous matricultures acquire distinctive nuances in that they act as mediators of connectedness with nature but escape formal religious structures. If they have only a complementary role in religious ceremonies, the gender-equal arrangements of these cultures make women privileged decision makers within the family and their sharing communal responsibilities toward ecological resilience make them visible far beyond the domestic sphere. Tibetan and Mosuo communities of northwestern Yunnan showcase many of these arrangements. The way they envision the environment as a humanized deity and mould the socio-ecological balance upon matricultural principles could serve as a valuable model for other areas with similar settings, both in China and abroad. These principles should not simply become a further addition to the field of environmental philosophy. Nor should they become the subject matter upon which ecofeminist theory rebuilds its ontological foundations. They have practical implications for policy making that may help revamp ongoing development programs.

Development and conservation policies in DTAP and NYAC could greatly benefit from taking matricultural principles into account. Policy makers may provide a structured set of recommendations that concentrate on the following mechanisms, values and knowledge. First, monitoring and coping mechanisms which are rooted in matricultural cosmovisions and religious beliefs and which shape general knowledge about the environment, rather than mechanisms that are based solely on structural measures aimed at technological change and innovation. More attention must be attached, for example, to rituals for mountain gods and community taboos which contribute to reducing psychological vulnerability to extreme weather conditions. Such rituals exorcise lingering fear from past disaster-related life experience and deepen an

understanding of the risks posed to the community by altering human-nature relations. Second, capitalizing on the mothering values and traditional knowledge of Tibetan and Mosuo matricultures through anecdotal storytelling, myths, and cautionary poems, bio-cultural archives, ritualized procedures, and other culturally appropriate means of communication. Although these do not provide immediate solution to local environmental issues, they still help in giving advance warning to community members when things are going wrong, and in reinforcing emotional links with nature and relational empathy with species besides humans. Matricultural traditions may not only transmit viable disaster-coping strategies to younger generations, thereby minimizing knowledge or identity loss, but also serve to enhance the community's capacity to predict developing hazards and adjust their livelihoods correspondingly.

The importance of Indigenous knowledge in resource management and conservation should, nevertheless, not be over-idealized. To become fully effective, this type of knowledge, which is deeply localized, socially scattered among a plurality of actors (village elders, religious authorities, headwomen, lay practitioners, etc.), and culturally embedded in an open system of shared cognized experiences, needs to be compounded by economic incentives that are gender-inclusive and compatible with religious beliefs. The life-affirming values of mothering that in matricultures permeate the economy and connect humans with deified nature should be called upon in a decision-making process while the institutional scaffolding of development campaigns has much to gain by being inclusive of traditional cultural knowledge.

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Endnotes
1. On upland Asia in general, see Kelkar and Nathan, "Introduction"; Agarwal, "The Gender and Environment Debate", pp. 136-138. On China with reference to both Han and minority

cultures, see Jacka, “Approaches to Women and Development”, pp. 587-588, 590-591; Du, “Gender Norms among Ethnic Minorities”, pp. 249-251, 257-259.

2. Gabriel et al., “Roles of Indigenous Women.”
3. I hereby endorse Guédon’s wisdom and use “the expression ‘matricultural system’ to designate that part or those components of culture that sustain, express, and welcome women’s participation in the socio-cultural fabric, whether it sustains a matrilineal kinship system or not” (Guédon, “Introduction”, p. 6). This implies, as Passman puts it, “partnership between the sexes, with the expected division of labor determined by gender” (Passman, “Out of the Closet”, p. 185). For the purpose of this study, social polyandry, as discussed in section 4 (case study 1), is also included into such system.
4. Following Huber and Pedersen’s example, I replace the vague notion of nature with that of ‘knowledge about the environment’ which I believe conveys a more accurate approximation of people’s understanding of, and approaches toward, the physical and phenomenal environment. Huber and Pedersen, “Meteorological Knowledge and Environmental Ideas”, pp. 577-578.
5. That religion may serve as a thermostat that regulates human-environment interactions and that ritual performances may fulfill adaptive functions in declining ecological conditions has been a subject of anthropological reflection since Rappaport published his most-cited ethnography of the Tsembaga of New Guinea in the late 1960s. Contributions from this strain of scholarship have informed a new experiential and non-materialistic approach to sustainability. They have shown, for example, that ritual arises from practical concerns and ritualized relationships with the other-than-human world help ecosystems maintain equilibrium rebalancing man-land ratios, redistributing food surplus, and facilitating exchange of goods (Rappaport, “Ritual Regulation”, pp. 28-29). Despite greater public attention to religious beliefs, ethics and practices in biodiversity conservation and sustained effort to write the protection of sacred natural sites into law (see *inter alia* UNEP, *Cultural and Spiritual Values*; IUCN, *Information Paper*), thus far international institutions and specialized agencies that work to promote environmentally sustainable growth in traditional societies have yet to organically integrate ritualized aspects of Indigenous resource utilization into their policy pronouncements.
6. McAnany and Wells, “Toward a Theory of Ritual Economy.”
7. In drawing on Göttner-Abendroth’s notion of ‘mothering’ (Göttner-Abendroth, *Matriarchal Societies*, p. 33) and aligning myself with Wolfstone’s effort to transcend ecofeminist scholarship, I define matricultural principles as the maternal ethics of care-taking and reciprocal giving as applied to human-nature relations, economics and socio-political institutions. These principles are understood to be embedded in a culture that: (1) “recognizes the power to generate life [a]s critical to [its own] continuity”, and (2) “valorize[s] natality, in its literal and metaphoric meanings, [by] elevat[ing] the maternal for its creative, spiritual, affective, educational and judicial contributions to cultural continuity” (Wolfstone, “EcoPhilosophies”, p. 7).
8. Merchant, *The Death of Nature*, pp. 1-41, 164-190; Siltanen and Stanworth, “The Politics of Private Woman and Public Man.” Most noteworthy are the theoretical advancements brought about by Marxist and post-modernist thinkers, like Haraway, whose watershed essay on anti-essentialized femininity(ies) has exposed how the construction of gender roles alongside nature/culture, public/private and like distinctions is invariably tied up to patriarchal modes of

economic organization and the exercising of coercive power by modern state apparatuses and their technocratic assumptions (Haraway, “A Manifesto for Cyborgs”, pp. 100-102, 106-108).

9. Zein-Elabdin, “Development, Gender, and the Environment.”
10. An up-to-date comprehensive report on this topic is UN Women, *Turning Promises into Action*.
11. Ortner, “Female to Male”, pp. 72-73.
12. *Ibid.*, 86 (own rephrasing).
13. Douglas, *Purity and Danger*, pp. 2-4, 94-98, 146-155 (*passim*); Winkelman, *Shamans, Priests and Witches*, pp. 77-81, 86-87. Cfr. Turner, *The Ritual Process*, pp. 40-41 (elaborating on the work of R. Herz, R. Needham, P. Rigby, and T. O. Beidelman).
14. Mani, “Contentious Traditions”, p. 153 (text slightly modified).
15. *Ibidem*.
16. Shiva, *Staying Alive*, pp. 38-54.
17. Zein-Elabdin, *op. cit.*, p. 934.
18. IUCN et al., *Training Manual*, pp. 155-158; WEDO et al., *Gender and Climate Change*, pp. 8-21; UNEP, *Global Gender*, 2016(a), pp. 152-166, and Id., *Global Gender*, 2016(b), pp. 58-63.
19. Hathaway, “China’s Indigenous Peoples?”
20. Sobrevila, *The Role of Indigenous Peoples*, pp. 3-5, tab. 1.
21. Shen, “Population Growth, Ecological Degradation and Construction”, p. 637.
22. Goodman, “The Campaign to Open up the West”, pp. 322-323, tab. 1.
23. NBSC, *China Statistical Yearbook*, tab. 25.19. Autonomous areas refer to the five ethnic autonomous regions – namely Guangxi (Zhuang minority), Inner Mongolia, Tibet, Xinjiang (Turkic Uyghurs) and Ningxia (Hui or Sinophone Muslims) – 30 autonomous prefectures and 120 autonomous counties.
24. *Ibid.*, tabb. 8.5, 8.6, 8.11, 8.25 and 8.27 on natural resources by region; tabb. 8.30, 8.31, 8.32, 8.33 and 8.34 for detailed statistics on environmental conditions.
25. Jeong, “Ethnic Minorities.”
26. Grunfeld, *The Making of Modern Tibet*, pp. 122-126; Hayes, *A Change in Worlds*, pp. 105-112. On the gender undertones of these campaigns, see Makley, *The Violence of Liberation*, pp. 114-119.
27. Coggins, “When the Land is Excellent”, pp. 108-109.
28. Shapiro, *Mao’s War Against Nature*, pp. 67ff.
29. All key financial figures quoted in this paper are converted from the Chinese Yuan based on the exchange rate as of December 14, 2020 (1 USD = 6.538 RMB).
30. Shapiro, *Mao’s War Against Nature*, pp. 145-149 (cit. Shi and He, *Zhiqing Beiwanglu*, p. 161); Wei, *Regional Development in China*, pp. 77-82.
31. Dong, “Environmental Struggles and Innovations”, pp. 29-32.
32. Yeh, “Green Governmentality and Pastoralism”, pp. 10-12; Ptackova, “Sedentarisation of Tibetan Nomads”; Du, “Ecological Resettlement of Tibetan Herders”, pp. 116-117.
33. Sobrevila, *op. cit.*, pp. 20-21, and fig. 5.
34. UNEP, “NBS for Climate.”
35. Gallagher, “Assessing the Policy Gaps.”
36. IWGIA, *The Indigenous World*, pp. 227-228.
37. Administration Bureau, “Sanjiangyuan Guojia Gongyuan.”
38. It is believed, for example, that the hill tribes who keep practicing traditional slash-and-burn agriculture have gravely deteriorated forest ecosystems in Yunnan and other minority areas in

Southwest China on the grounds that they waste huge amounts of fuelwood to maintain their livelihoods (Yin, *Wenhua Shengtai Tixi*, pp. 9, 12-13, 22-35, and Id., *Ren yu Senlin*, pp. 10-17).

39. See respectively Schein, *The Miao and the Feminine*, pp. 214-216, 221-228; P.K. He, "Zhongguo Shaoshu Minzu", pp. 44-46 (cases 4.11, 4.15), and pp. 51-53 (cases 4.6-12, 4.6-13, 4.6-14); Pei, "Conservation of Biological Diversity."
40. McAnany and Wells, "Toward a Theory of Ritual Economy", p. 1.
41. Figures come from NBSC's official website, see http://www.cnstats.org/rkpc/ (last retrieved October 31, 2018). They refer to the fifth official census of Chinese population by ethnic composition and distribution as estimated on November 1, 2010. The other two counties that together with Deqin make up the DTAP are Shangri-la (formerly Zhongdian, in the easterly portion of the prefecture) and Weixi (to the southwest). Altogether they have an ethnic population of 326,789 individuals (81.7% of total), whereby Tibetans represent the largest group (129,496, equivalent to 32.4%).
42. Ou, "The Yunnan Great Rivers Project", p. 74; UNESCO, *World Heritage Nomination*, pp. 1-5.
43. Qi et al., *Diqing Zangzu Zizhizhou Gaikuang*, p. 144; Ma, "Dangdai Zangqu de Shengwu Duoyangxing", pp. 3-4.
44. Wang, "Zangqu Shenshan Chongbai", pp. 75-76.
45. These local deities manifest themselves in the natural landscape following a three-layers spatial ordering, whereby (1) the *yul-lha* occupy the upper domain of gods (*stenglha*); (2) humans are right beneath them together with the *sa-bdag*, boulders, mountain springs and animal spirits in the so-called *barsam* (lit. the middle realm); (3) the *klu* dwell in the underworld (*yoglu*) alongside fishes and semi-aquatic chthonic beings. Such tripartite cosmology is also ideally replicated on a lower level in the household with the shrine of house divinities (*p'alha*) and family's living spaces. Mills, *Identity, Ritual and State*, pp. 151-153. On the myriad of other deities who are ingrained in the landscape and act as both protectors and angry gods, see also de Nebesky-Wojkowitz, *Oracles and Demons*, pp. 203-252.
46. Huber and Pedersen, *op. cit.*, pp. 584-585; de Nebesky-Wojkowitz, *op. cit.*, pp. 467-480.
47. de Nebesky-Wojkowitz, *op. cit.*, p. 470. The most representative case is that of Rinpoche Khamtrül Ngak'chang Yeshé Dorje (1926–93), a leading exponent of the Nyingmapa school (Tib. rNying ma pa) who originally came from the nearby Markham County, in today's Chamdo Prefecture (Tibet Autonomous Region, TAR). For a detailed account of his engagement in weather-control rituals, refer to Woolf and Blanc, *The Rainmaker*, pp. 25-34, 49-52, 57ff (*passim*).
48. These women are known as *nang ma* (lit. mothers of the house) in Bainang (southern Shigatse Prefecture, TAR), and *dag mo* among the Tibetan-speaking Nyinba in Humla (northwestern Nepal). Levine, "Fathers and Sons", pp. 271-272; Jiao, *Socio-economic and Cultural Factors*, pp. 101-102; Luintel, "Agency, Autonomy and the Shared Sexuality", pp. 52-53.
49. Huang, "Yunnan Deqin Shezhiju", pp. 464-465 (emphasis in the original). All translations from Chinese are my own.
50. *Ibid.*, p. 466.
51. This is not the place to reiterate old debates on whether polyandrous women have equal, lower or higher status than men, nor is this an attempt to align my work with those who, like the author of the excerpt above, ascribe purely economic causes to polyandry. For a critical examination of the economic concomitants and implications of polyandry for women's status, see Levine and Sangree, "Conclusion", pp. 390-393.

52. Fjeld, “When Brothers Separate.” In Fjield’s analysis, the in-married wife (Tib. *mna’ ma*) is depicted as a passive reproductive subject, and her inability to distribute affection fairly among co-husbands is seen as instrumental for their claims over land ownership. If it is true that these might manipulate the situation for their own interests, Fjield seems to ignore that the way the *mna’ ma* designates paternity and works to minimize the risk of household partition triggered by fraternal hostilities offers a space for women to exert themselves. This is per se a source of power in that it allows women to validate kinship ties and strengthen their position within the household and society.
53. Levine, *Dynamics of Polyandry*, pp. 118-119, 209-210.
54. Sman btsun mo is regarded as holy by the Naxi as well. Coggins and Zeren, “Animate Landscapes”, pp. 218-221; Wang, *op. cit.*, pp. 77, 80 (tab. 1).
55. Buffetrille, “The Pilgrimage to Mount Kha ba dkar po”, pp. 198-201, 213.
56. Da Col, “The View from Somewhen”, pp. 221-222, 226-228; Studley, *Custodians of the Tibetan Spiritscape*, pp. 40, 41 (note 133), 43-44.
57. Litzinger, “The Mobilization of Nature”, pp. 496, 502-503; Guo, *Fazhan de Fansi*, pp. 175-177.
58. Ai, “Zongjiao Shengjing”, pp. 75-76.
59. Generalities on this practice in Huber, “Territorial Control by Sealing.”
60. Huang, *op. cit.*, p. 455.
61. Coggins and Hutchinson, “The Political Ecology of Geopiety”, pp. 93, 99 (cit. Da Col, pers. com. 2004).
62. Studley, *op. cit.*, pp. 22, 27.
63. Guo, *op. cit.*, p. 184.
64. Coggins and Hutchinson, *op. cit.*, pp. 95, 97 (cit. Yangzong and Sinang Dorje, pers. com. 2006). Cfr. Woodhouse et al., “Religious Relationships with the Environment”, pp. 299-300 (with reference to western Sichuan, still in the Khams region of ethnographic Tibet).
65. Litzinger, *op. cit.*, pp. 496-497.
66. Buffetrille, *op. cit.*, p. 198.
67. Song, “Diqing Zangzu Lamajiao”, p. 92. Cfr. Wang, “Diqing Zangzu Lishi”, pp. 100-101. I am grateful to Kun-chen Alan Chang (National Cheng-chi University) for double-checking the transcription of these Tibetan terms and confirming this piece of information.
68. Yin, *Qihou Renleixue*, p. 190.
69. Guo, *op. cit.*, pp. 184-185.
70. Zhang, “Yunnan Zangzu de Shenshan Xinyang”, pp. 135-136.
71. Qi et al., *op. cit.*, pp. 144, 170-171, 254-255 (all land area estimates are converted from the Chinese mu, 1 mu = 0.07 ha). Western analysts, based on data gathered from the forestry bureau, explain that the timber market before the 1998 ban was able to generate up to USD 55.96 million a year (over the 80% of the GDP of the entire prefecture), and 58 million in government revenues and taxes. More in Hillman, “Paradise Under Construction”, pp. 175-176 (notes 3, and 5).
72. Guo, *op. cit.*, pp. 188-189.
73. Litzinger, *op. cit.*, p. 490 (note 6). Other counties comprise Deqin, Zhongdian and Weixi in DTAP; Gongshan, Fugong, Lushui and Lanping in Nujiang Lisu Autonomous Prefecture; Dali, Binchuan, Jianchuan, Heqing, Eryuan and Yulong in Dali Bai Autonomous Prefecture. Besides them, there is also the prefecture-level city of Lijiang. Accommodating more than 3 million

people (7.5% of Yunnan's total) over an area of about 68,000 sq. km, these are mostly inhabited by minorities of varied ethnic ancestry.

74. This distinguishes them from their sinicized Naxi cousins of the nearby Lijiang basin (the western Naxi, or Naxi proper), whose élites broke off with matrilateral alliance customs no later than the middle Ming period (ca. 1545) (explored further below). Mathieu, "Love and Marriage", pp. 252-254.
75. Yang et al., *Ninglang Yizu Zizhixian Gaikuang*, p. 10; Yan et al., "Analysis of the Role of the Mosuo Culture", p. 52.
76. Göttner-Abendroth, *op. cit.*, p. 108; Cai, *A Society Without Fathers or Husbands*, pp. 122-125, 171-175; Shih, "Genesis of Marriage", p. 385. Some, however, hold the view that while in some places (Labei) the *dabu* is indeed a female-only institution, in some others (Yongning) it is not necessarily so.
77. Li, *Daba Wenhua*, pp. 89-90; Göttner-Abendroth, *op. cit.*, pp. 113, 129 (note 8).
78. *Ndaba* can refer either to the person who supersedes ceremonies and recites magic formulas (transmitted only by spoken word) or to the set of religious beliefs which is embodied by such person. Etymological clarifications in Rock, "Shamanism of the Tibetan-Chinese Borderland", p. 805 (cit. in Mathieu, "The Moso Ddaba Religious Specialists", pp. 209, and 232, note 1).
79. Mathieu, *Kingdoms of the Sino-Tibetan Borderland*, p. 123.
80. The official conversion of the Yongning chiefs to the Gelugpa school of Buddhism (Tib. *dGe lugs pa*) came after terrible conflicts between Bön-po animists and the Gelugpa backed by the Mongols. The Lijiang chiefs, instead, opted for the Karma Kagyü which enjoyed the support of Manchu emperors. Mathieu, "The Story of Bon", pp. 373-375; Cai, *op. cit.*, p. 99.
81. Li, *op. cit.*, pp. 83-99.
82. Wang et al., *Yunnan Sichuan Naxizu*, pp. 175, 217.
83. P.K. He, "Senlin yu Minzu Yiyao", p. 73.
84. Mathieu, "The Moso Ddaba", pp. 223-224.
85. *Ibid.*, pp. 224-225; Rock, *The Ancient Na-khi Kingdom*, pp. 382-383.
86. Wang et al., *op. cit.*, pp. 32-33.
87. Rock, *op. cit.*, pp. 418-419; Li, *op. cit.*, pp. 154-157; Yan et al., *op. cit.*, p. 51.
88. P.K. He, *op. cit.*, p. 52; Z.H. He, "Forest Management", pp. 160-161.
89. Z.H. He, *op. cit.*, pp. 147, 153; Mathieu, *Kingdoms of the Sino-Tibetan Borderland*, pp. 19, 45 (note 58), 235-236.
90. Jackson, "Kinship, Suicide and Pictographs", pp. 59-61, 87-88.
91. Mathieu, *op. cit.*, pp. 164-166, 240-243 (*passim*), 402-403, 407-409; Id., "Love and Marriage", pp. 252-253, 260-261.
92. Cai, *op. cit.*, pp. 185, 385-395; Shih, *The Moso*, pp. 85, 99 (cit. in Mathieu, *Kingdoms of the Sino-Tibetan Borderland*, pp. 241-243, 399).
93. Knödel, "Yongning Moso Kinship", p. 57.
94. Mathieu, "Love and Marriage", pp. 236-238, 263-264; Yang, *Yulong Qingshang*, pp. 2-7, 12-17. Although the oldest ritual text dealing with the *har-la-llü-k'ö* dates 1851, love-pact suicide in Lijiang may have very ancient roots that go back to the Yongzheng reign or even before the Manchus ruled over China, but given the current state of research it is hard to estimate with certainty when the Naxi started to practice it.
95. Yang et al., *op. cit.*, p. 126; Z.H. He, *op. cit.*, pp. 150-151.
96. Walsh, "From Nü Guo to Nü'er Guo", pp. 458-459, 478-479.

97. Z.H. He, *op. cit.*, pp. 154-155, 164, 167-168, 171.
98. Milan, “Entraide et Réciprocité.”

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