

Pregnancy and Childbirth in Tibet: Knowledge, Perspectives, and Practices

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To Tibetans life does not begin at birth, but rather at conception. After death, a being's consciousness . . . wanders in an intermediate realm until impelled by the forces of its own karma to enter a womb at the instant of conception. Gestation is a hazardous time when women try to consume foods and seek spiritual means to prevent any harm coming to their growing baby. Once born, the child must fight for survival against daunting odds. Infancy is fraught with more hazards than any other stage of the life course, and the infant mortality rate in Nubri is frightfully high. Nearly one in every four children born alive does not live to see his or her first birthday. (Childs 2004: 38)

As far as childbirth is concerned, we note that scientific medicine claims parturition as one of its legitimate domains. It is no surprise, therefore, that wherever scientific medicine is instituted, childbearing becomes absorbed into the medical domain. This amounts to a redefinition of birth as a medical event. (Jordan 1978: 76)

Pregnancy and childbirth in Tibetan communities presents as a series of paradoxes. On the one hand, the creation and bringing forth of new life is deeply valued and rooted in Tibetans' religious and ethical beliefs about the nature of existence, particularly the gift of being reborn as a human being and the possibility for spiritual achievement this might engender. On the other hand, pregnancy and birth are intensely vulnerable times. The high maternal and infant mortality rates in culturally Tibetan communities serve as painful, embodied reminders of the Buddhist First Noble Truth, the truth of suffering (Skt. *Dukkha*). Indeed, within culturally Tibetan communities, birth is part of the larger cycle of death and rebirth that Buddhists call *samsara*, cyclic existence. It is also commonplace: something that happens between harvest and threshing, or as people move from high summer pastures to winter dwellings. Yet pregnancy and birth also precipitate much pain, fear, and loss. In many parts of the Tibetan Plateau, for a mother to survive a complicated delivery, or, as Geoff Childs points out above, for a child to live past age one, is to beat the odds.

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But what do I mean by “Tibetans”? Following Childs (2008) and Melvyn Goldstein (1997), I use the term in a broad sense to include a range of human communities which are not necessarily united politically, but who are linked through common languages (or regional dialects thereof), a common religion (with much local and regional variation) and a common area of origin (the greater Himalaya/Tibetan Plateau). In China, ethnically Tibetan populations are not only found within the Tibetan Autonomous Region (TAR), but also in ethnographic Tibet: portions of Gansu, Qinghai, Sichuan, and Yunnan Provinces. According to China’s 2000 census, Tibetans number 5.4 million, only 2.62 million of whom live in the TAR. Furthermore, there are approximately 130,000 Tibetans currently living in exile (mostly in India), as well as thousands of people who are citizens of India and Nepal but who, in ethnic terms, identify as Tibetan (Childs 2008: 7). The Tibetan Plateau covers approximately 2.5 million square kilometers, much of which lies at 4,000 m above sea level. In China alone, this accounts for one-fifth of the country’s landmass, a region equivalent to the size of Western Europe. Tibetans have historically survived in this high altitude environment, marked as it is by extreme temperature and precipitation variability, by employing a range of adaptive strategies: subsistence farming, agro-pastoralism, nomadic pastoralism, and all manner of trade. Over thousands of years, Tibetan human biology has adapted to living, and reproducing, at altitude (Beall 2001, Wiley 2004) (Fig. 1).

Just as this chapter strives to speak to common themes related to pregnancy and childbirth across culturally Tibetan regions, it also draws on sources from a number

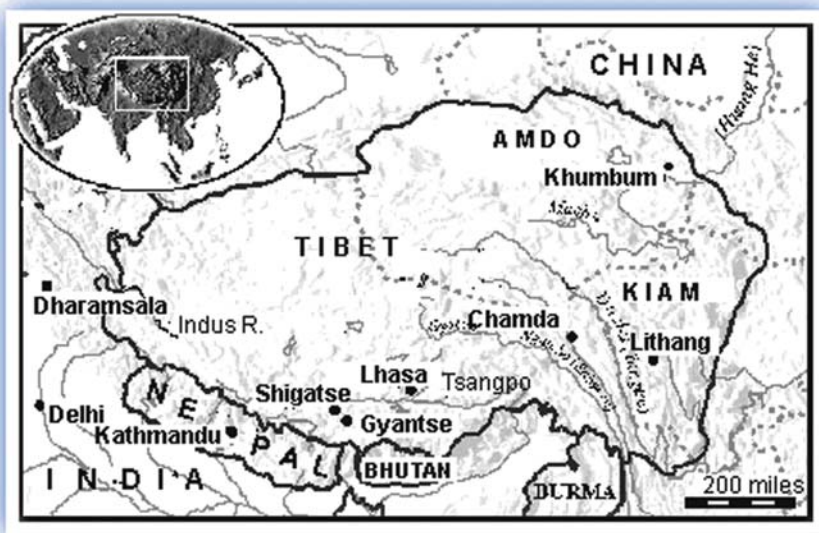


Fig. 1 Map of Tibet in relation to its neighbors

of disciplinary perspectives. Relevant secondary literature from the disciplines of anthropology, religious studies, public health, nutrition, and obstetrics and gynecology cohere with primary data drawn from my fieldwork experiences among culturally Tibetan people from northern Nepal and the Tibet Autonomous Region (TAR), People's Republic of China (PRC).¹ And yet, I do not intend this article to be an exhaustive literature review; rather, I wish to orient the reader to some of the specific cultural practices and structural realities that at once contribute to the miracle of (re)birth in Tibetan contexts, and constrain the possibilities of maternal and child health.

In what follows, I describe the biosocial landscape of pregnancy and childbirth among Tibetan communities living in high Asia. I begin with a conversation about birth. This leads into an exploration of Tibetans' knowledge and practices to do with gestation and parturition. I attempt to reconcile the numerous protective measures that Tibetans take to ensure the safety and well being of their pregnant women and children with the high maternal and infant mortality in many of these communities. In statistical terms, where do Tibetans fit within a global discourse on maternal and child health? In addition to a variety of rites and rituals associated with pregnancy and childbirth in Tibetan communities, to what extent does the unique high-altitude human ecology of the greater Himalaya/Tibetan Plateau region impact pregnancy and birth? How does Tibetan medicine – as a scholarly medical tradition and an epistemology of healing linked to Buddhist philosophy, as well as a lived practice – speak to women's and children's health? Finally, I explore some of the ways that experiences of Tibetan modernity has come to include a biomedicalization of birth, accomplished through both state and NGO-sponsored health development programs targeting Tibetan women, and offer a few comments on some emergent consequences of these transformations.

A Birth Story

Lhakpa Droma² sat under the shade of a cottonwood tree, on a brilliant autumn day in Medrogonkar County (Lhasa Prefecture, TAR, PRC). The tree's leaves blazed gold in the waning light, and the stream beside which we sat coursed clear and cold over small boulders. A neon blue wool scarf, woven through with silvery thread, covered Lhakpa Dolma's head and shaded her eyes from the high plateau sun. Her chapped cheeks hinted at days spent laboring under the clear intensity of Tibet's skies. It was harvest time now and, as she was from a farming community she had worked alongside other villagers all day, cutting barley stalks; soon they would begin the threshing.

Lhakpa Dolma, who was 32 and married, wore another scarf across her back, into which had been tucked a sleeping infant. As we talked, a minibus driver, a few cyclists, and a man in a horse-drawn cart moved past us, each with his eyes cast down against an imminent sunset. Older village children scampered about, tossing discs of dried yak dung at each other (Fig. 2).



Fig. 2 The author with an interviewee in Medrogongar county, Tibet Autonomous Region, China. Photography by Pasang Tsering

“How many times have you been pregnant?” I began.

“Four,” she answered.

“How many children do you have now?”

“Two,” she said.

“What happened during the other pregnancies?”

“When I was pregnant about four months, I lost one [miscarried]. The other child was a girl. She came early and did not live long,” Lhakpa Dolma answered. Her eyes did not meet mine.

“Why did the baby die?” I asked. This was a difficult question to ask, and, I assumed, for Lhakpa Dolma to answer.

“Maybe because I was working too hard when I was pregnant,” she said. “Because I carried heavy things on my back. Many women say this can cause a child to die, or make birth difficult. But if you don’t work when you’re pregnant, that is not good either. You become weak. When the baby’s time arrives, you struggle.”

“Who did you tell when you knew you were pregnant? When did you tell them?” I asked.

Lhakpa Dolma’s face flushed. Although she had given birth three times, simply *speaking* about pregnancy made her embarrassed, even now. This reaction was characteristic of many of the Tibetan women with whom I spoke.

“I told my husband at about three, four months. Everyone else knew when my belly became big,” she answered. Lhakpa Dolma then explained that it was normal to *not* focus attention on a new pregnancy because it might engender jealousy in other women, particularly those who had struggled to conceive.

“How old is your new baby?” I gestured toward the bundle on Lhakpa Dolma’s back.

“Two months now.”

“Did you find the birth easy or difficult?” I asked. “Did you give birth at home, in the township clinic, or in the county hospital? Who helped you?”

“The baby came without much trouble,” responded Lhakpa Dolma. “I gave birth at home. I’ve never given birth anywhere else. With this one, my husband was with me. With my others, I had help from my mother-in-law. But the old woman has since died.”

“Where did you give birth?” I continued.

“After my water came, my husband prepared a place in the corner of our house, away from the hearth.”

“Why away from the hearth?” Do you worry about *theep* (*grib*) [pollution, defilement]?” I asked, referring to a source of pollution or defilement that some liken to an “invisible, unclean halo or a “darkness.”³ Lhakpa Dolma nodded in affirmation.

“My husband was with me, but he did not help me cut the cord because he would have to cook while I recovered. He handed me a knife and I cut the cord myself.”

“Did you clean the knife before or after you cut the cord?”

“After,” she said. “To contain the *grib*.”

Lhakpa Dolma’s response was typical. Among Tibetans, as in many other cultures, rules about pollution and purity govern much social behavior. In Tibetan contexts, the blood of childbirth is considered defiling. “Would you consider giving birth at a clinic or a hospital?” I asked.

“Maybe,” she responded, blushing. “If something went wrong. If I were bleeding too much, or if the baby was still not born after many hours. But then, I would have to find the money for a ride on a tractor or in a car. In an emergency, sometimes people will charge you more. I know women who have gone to the hospital to have their babies,” she continued. “Sometimes the result is good. But sometimes they die. Or the baby’s *bla* [soul or essence] can leave its body. With all those strangers around, anything can happen.” Lhakpa Dolma spoke with a sense of authority now, as if she had heard this adage many times. Everyone knows that a young sentient being, not yet at home in this world, is particularly vulnerable to assaults by spirits or demons.⁴ Indeed, an infant is rarely taken out of the house at night to prevent evil spirits or other maligned beings from causing the child to become ill. Many Tibetans take particular care to protect children from experiencing undo fright, since it is believed that infants – closer to the liminal state between death and rebirth than the rest of us – can see, experience, and be harmed by forces to which adults are immune.

“Before your baby was born, or after, did you go to the township clinic for check-ups?”

“I went once before giving birth. The health worker took my blood pressure and listened to the baby’s heart. I know that I could go more often. The checkup is not expensive. We just pay a few *yuan* to belong [to the Cooperative Medical System (CMS)]. But sometimes the health worker is not around. Other health workers do not know much, and sometimes I feel shy around them. Also, the ride to the clinic is expensive and uncomfortable, and it is difficult to find time.” As if to illustrate, Lhakpa Dolma glanced toward the dirt road, potholed and weathered, that connects this ‘natural village’ to the nearest township, and then on to the county seat.

“I would only take a child to the doctor if it were sick – if it refused to drink my milk, if it had a fever or diarrhea.”

“Do you know any women who have died during childbirth?” I asked.

“Yes, a few,” said Lhakpa Dolma.

“Why did they die?”

“Sometimes they lose too much blood. Other times they are weak or they have fits,” said the young mother, signaling conditions we might ‘read’ in biomedical terms as postpartum hemorrhage (PPH) or eclampsia – two leading causes of maternal mortality.

“And if a new baby dies soon after birth? What are some reasons this can happen?” I asked.

“Sometimes they are too small or weak, or cannot drink their mother’s milk. Or their bodies are fine, but they are breathless,” Lhakpa Dolma continued. Although her understanding of “breathlessness” likely differed in some ways from the biomedical category of birth asphyxia,⁵ her intuition about predominant cause of mortality for children under five aligned closely with county health statistics and with clinical observations made by foreign researchers working on this project, including verbal autopsies.

“How did you feel when you gave birth to your daughter?” I asked, motioning to the sleeping papoose on her back.

“I was worried,” she said, “and also happy, and tired.”

Tibetan Health/Global Health

Unlike many cultures in the world, Tibetans have no history of formalized birth attendants, or midwives. A female relative often assists during childbirth. Sometimes a husband is present. But women just as often give birth alone. Sometimes women will deliver in an animal pen, so as not to offend household protector deities and other spirits or pollute the hearth. Women rarely prepare a layette until after the birth, because, “When there is too much preparation, the baby may die at birth (Sangay 1984: 6). Even in the postmodern milieu of urban Lhasa, with its high rises and wide boulevards, approximately two thirds of women still deliver at home (One-HEART 2007).⁶ Many women access hospitals as a last resort, for reasons that are both cultural and socioeconomic (Adams et al. 2005a; Chertow 2008; Heydon forthcoming; Pordié and Hancart Petitet forthcoming; Gutschow n.d.). From a biomedical and public health perspective, many of these practices are viewed as “unsafe”⁷ in that they put women at risk of dying from what biomedical providers and public health experts would consider “manageable” complications such as pre-eclampsia, sepsis, or PPH. Furthermore, from a biomedical perspective, practices such as giving birth in animal pens, cutting the umbilical cord with an unsterilized knife or feeding a child butter and roasted barley flour in its early weeks of life, places Tibetan women and their newborns in harm’s way. These practices may contribute to the high maternal and infant mortality and morbidity rates among Tibetan communities. Likewise, one can argue that poverty, malnutrition, and a variety of other conditions of we might recognize as products of structural violence – social, economic, and geographic barriers to reaching medical services or to receiving adequate care, state enforced policies that delimit a politics of reproduction, etc. – are a factor in the premature deaths of Tibetan women and children.

Mortality and morbidity rates in Tibetan areas of China, and to a lesser extent among culturally Tibetan communities in India and Nepal, are difficult not only to access but also to assess for accuracy. However, the information available is remarkable. For example, the maternal mortality rate (MMR) for some regions of the TAR is reported to be as high as 400/100,000 (Adams et al. 2005a: fn. 1). This is compared with an average of 290/100,000 in Nepal, 45/100,000 in China as a whole, and 11/100,000 in US (WHO 2007). Likewise, infant mortality is at once high and chronically difficult to measure. Some health development agencies have

Fig. 3 A mother and child in Mustang district, Northern Nepal, Photo by the author



said that as many as 20–30% of Tibetan children die within their first 12 months of life; other statistics put the numbers at approximately 90 neonatal deaths per 1000 live births (OneHEART 2007). One Lhasa-based hospital study of maternal and neonatal outcomes ($n = 2540$) reported a neonatal mortality rate of 42.9/1000 (Yangzom et al. 2008: 319). Despite the variation in quantitative data, the numbers still point to high rates of suffering and death among Tibetan mothers and children (Fig. 3).

Let us put these numbers in a global context. According to the WHO (2007), approximately 536,000 maternal deaths occur worldwide each year, 99% of which are in developing countries, and 86% of which occur in Sub-Saharan Africa and South Asia. This translates into the oft-cited statistic of nearly one maternal death *per minute*. More than 60% of these deaths occur during or just after labor and delivery. Over half of these maternal deaths are caused by PPH, sepsis/infection, and obstructed labor. Death and disability from maternal causes account for nearly 20% of the total burden of disease for women of reproductive age in developing countries. These stark numbers have led the United Nations to include in their

formulation of the Millennium Development Goals (MDGs) the aspiration of reducing by two thirds the mortality rate of children under five (Goal 4), and reducing by three quarters the maternal mortality ratio, and achieving by 2015, universal access to reproductive health (Goal 5) (<http://www.un.org/millenniumgoals/>). According to the WHO, the two most effective ways of decreasing maternal and neonatal mortality is to (A) have a skilled birth attendant (SBA) present and (B) have timely access to emergency obstetric services. In many Tibetan communities, neither is possible.

Becoming Human: Buddhism, Tibetan Medicine, and Folk Knowledge

And yet, both Tibetan religious and medical traditions speak directly and extensively to the experiences of pregnancy and birth. Indeed, the history of Tibetan Buddhism and the “science of healing” (*gso ba rig pa*) are deeply intertwined. Found within the vast corpus of Tibetan medical and religious writings is a deep, scholastic, and morally imbued discourse about embryology – what it means to, as Garrett (2008) puts it, “become human” in the Tibetan context. From the *Four Tantras* (*rgyud bzhi*), the fundamental text in Tibetan medicine elaborated in the 11th–12th centuries (Meyer 1995), and its numerous commentaries, to more overtly “religious” texts such as the text often referred to as the *Tibetan Book of the Dead* (*bar do thos grol*) and treatises on Buddhist tantric practice, the processes by which a consciousness reincarnates are described in detail. Explanatory models of conception and gestation rest first on a moral epistemology (Craig and Adams 2007). The fetus is actually formed by a sense of desire in the wandering consciousness of a previous incarnation. While the five cosmo-physical elements (earth, air, water, fire, and space) that make up the physical elements of a sentient being dissolve at the time of death, the consciousness is directed toward the “womb door” through the law of cause and effect, known as *karma*. According to the *Four Tantras*, the primary causes of conception are the union in a mother’s womb of a “psychic individuality in search of a new incarnation with the non-vitiated sperm and menstrual blood of the parents” (Pordié and Hancart Petitié forthcoming). The *Four Tantras* elaborate on the nature of such cosmic union, and the formation of a physical and sentient person. The development of the fetus is divided into three phases – the fish, tortoise, and pig stage – that roughly map onto the three trimesters with which we are used to conceptualizing pregnancy in biomedicine. These and other texts also enumerate ways to determine – and change – the sex of an unborn child, as well as complications in the duration of pregnancy and the health of both mother and fetus (Sangay 1984; Garrett 2008) (Fig. 4).

These intricate discussions of embryology, pregnancy and childbirth, and even a class of illnesses known as “women’s diseases” (*mo nad*) raise questions about the intended audience for this knowledge, its practical applications, and its contemporary salience to maternal and child health. In her new book, Frances Garrett (2008) argues that the detailed textual histories of Tibetan embryology speak to two distinct, if related, ways of knowing: namely, a *medical* universe, concerned



Fig. 4 This painting, the fifth in a series of 80 medical thangkas first produced in the 17th century, depicts Tibetan conceptions of human embryology. Reproduced with permission, *Tibetan Medical Paintings: Illustrations to the Blue Beryl Treatise of Sangye Gyamtsö* (2 Volumes). Edited by Yuri Parfionovitch, Gyurme Dorje and Fernand Meyer (London: Serindia Publications, 1992)

with empirical explorations and practical advice about the mechanics of conception and the process of fetal development (albeit often written by erudite monk physicians who knew little about women’s health at a ground truth level); and a *moral* universe, in which religious scholars and tantric masters were concerned with articulating and enumerating a Buddhist ethics and a guide to spiritual practice and liberation through the language of embryology. Here, rather than serving as a medical textbook, exegeses on fetal development serve as metaphors for all that can go right (or wrong) by engaging in the contemplative sciences of meditation. This distinction is important to remember. Otherwise, one might struggle to reconcile these detailed medical and religious texts devoted to the subject of pregnancy and childbirth with the variety of cultural practices – from infant welcoming ceremonies to social stigmas associated with childbirth – present in Tibetan communities. And this is not to mention the usual absence of Tibetan medical practitioners (*amchi*) at the site of a birth – particularly if the *amchi* is male, which, in rural areas across the Tibetan



Fig. 5 A Tibetan doctor examining a female patient, Mustang, Nepal. Photo by the author

cultural world, is usually the case. Nor does this presence of information on pregnancy and childbirth in scientific and religious literature do much to address the high rates of mortality and morbidity among Tibetan women and children.

But let us explore in a bit more detail some of the “folk” idioms and cultural practices that define this moment in the lifecycle for many Tibetans. During pregnancy, Tibetans seek blessing from Buddhist teachers to ask that the developing fetus be protected. Medical scriptures include ritual instruction to help end a long, difficult labor (Sangay 1984: 8). Women may consult with *amchi*, who will analyze the health of mother and child through pulse diagnosis, and proscribe both dietary advice and, when needed, medicines made from plant, mineral, and animal *materia medica* (Fig. 5). Indeed, many expectant mothers eat special foods that are said to strengthen women and their developing fetus (Adams et al. 2005a; Pathak forthcoming; Sangay 1984). Women and other family members go on religious pilgrimages and make offerings in preparation for a safe delivery. Indeed, some might go to great lengths to gather up substances that will aid a woman during a difficult labor. Some eat the small fish that swim in Lake Manasarovar in western Tibet, at the base of sacred Mt. Kailash. One of the most pervasive such rituals is the creation of a fish out of butter that is then ritually imbued with *mantra* (Sangay 1984: 8; Pordié and Hancart Petiet forthcoming). Tibetan medical treatises also enumerate specially formulated medicines to help speed and aid delivery (Adams et al. 2005b). Likewise, before a newborn nurses for the first time, he or she often has a small bit of butter mixed with honey, saffron water, and musk water to give the child the power of wise speech and to protect the child from harm by a variety of earth spirits (Sangay 1984: 9).

After birth, families will often ask a respected religious figure to name the child. If an infant gets sick frequently, parents might give the child a new name – that of a blacksmith, for instance, or others whom Tibetans consider to be of low birth – as a way of tricking malevolent forces into leaving the child alone. A mother, spent from delivery, might have her abdomen massaged with oil – a means of quelling the pains of childbirth and helping her uterus contract. When a child is anywhere from a few days to a few weeks old, the new member of the community is honored with elaborate life-welcoming (*bang tsol*) and long life (*tshe dbang*) ceremonies (Adams et al. 2005a:831; Childs 2004: 41; Chopel 1984: 26). At this time, many women offer a first feeding of a mixture of butter and barley flour: the staples of life on the Tibetan Plateau. This act not only grounds the infant in this world, but also ties the child to its home and lineage, endowing this new life with the strength of generations (Adams et al. 2005a). Other texts and oral traditions describe processes by which the umbilical cord should be cut, the placenta handled, and the birth area cleansed. This is also the case with prescriptions for common childhood illnesses such as diarrhea and fever, as well as illnesses whose cause lies with malignant spirits (Sangay 1984). Of course, many of these somewhat idealized practices may not bear out in lived experience. But I have observed many of these practices during my tenure among Tibetan communities, both rural and urban.

Bone Soup and Rickets: Nutritional Prescriptions and Limitations

Given the short growing seasons and high seasonable variability across the Tibetan Plateau and Himalayas, as well the pervasiveness, as one early Tibetologist put it, of a life defined by wresting survival from “fields on the hoof”, (Ekvall 1983), dietary intake is relatively limited and meeting micronutrient requirements for healthy development of the fetus and nourishment of expectant mothers can be difficult. Added to this are a variety of restrictions, codified in Tibetan medical theory and played out in folk knowledge, about which foods are desirable or harmful to eat during pregnancy. Foods that are cool in nature are generally preferred over foods that are hot in nature, as well as those that are “spicy” by western gastronomical standards. After birth, a mother is instructed to eat and drink strong, nourishing food such as milk, meat stew, or bone broth. In theory, pregnant women also have greater access to increased caloric intake than at other times in their lives. However, this is somewhat complicated by the cultural taboos around announcing one’s pregnancy, as well as structural limitations such as poverty and the price of desired food in the marketplace.

Although the consumption of alcohol (particularly *chang*, barley beer) is common during pregnancy in many Tibetan areas, both *amchi* advice and textual sources warn against imbibing in great quantities. However, in practice, many Tibetan women drink large quantities of *chang* that might place them at greater risk for giving birth to a child with Fetal Alcohol Syndrome (Pathak forthcoming). In addition, many Tibetans routinely drink great quantities of salt butter tea. While viewed as a

beneficial practice in that it helps keep the woman (and developing fetus) warm and strong, and while certainly a source of needed fat and protein, some have argued that this high fat and salt diet may predispose Tibetans to higher than average rates of hypertension. A detailed dietary analysis of pregnant Tibetan women in Dharamsala revealed a diet that was low in calcium, iron, folic acid, and vitamin C intake – all essential nutrients during pregnancy; these combined factors might be one of the reasons for high incidences of hypertension, anemia, weakness, and edema (Wiley 1994; Pathak forthcoming). And yet, at least in the Dharamsala study, women confessed to eating a variety of foods (certain types of meat, eggs, garlic, and some alcoholic drinks) that are traditionally taboo during pregnancy. However, changes in knowledge about what constitutes nutritionally sound prenatal diets – which has occurred throughout the Tibetan cultural world, in part through state and non-governmental health programs – does not necessarily correspond to changes in behavior, for a variety of socioeconomic and cultural reasons (Pathak forthcoming).

Infant feeding practices and child (mal)nutrition among Tibetan communities are also where the cultures of biomedicine and Tibetan culture intersect – and sometimes conflict. According to one study of feeding practices among young Tibetan children living at altitude (Dang et al. 2005), the median duration of breastfeeding was 26 months, and yet most children were introduced to other foods (the ubiquitous butter and barley flour as well as eggs, cow and goat milk, and meat) before they were four months old. According to biomedical “best practices” guidelines for neonatal and infant health, these mixed feeding practices increase a child’s risk of health problems, particularly diarrheal diseases. And yet these supplementary feeding practices not only have overtly cultural roots, but can also be manifestations of maternal malnutrition; if the mother is not producing enough milk, or cannot breast-feed regularly due to labor demands, she will begin to supplement foods at an early age. Malnutrition, micronutrient deficiencies, access to affordable vegetables, and rising food costs in some regions, in addition to an indigenous diet that is chronically short of vitamins A, B12, D, folic acid, and iron can lead to anemia, among other health problems; high rates of stunting, wasting, cretinism, and rickets have also been reported in Tibetan areas (Harris et al. 2001, Dang et al. 2004). In addition to these micro-level challenges, deep valleys, raging rivers, permafrost, limited growing seasons, and high mountain passes are the physical and geographic barriers that have contributed to maternal and child health outcomes in Tibetan communities. Although motorable road networks through *tsampa*-eating territory are becoming more pervasive today, many regions remain inaccessible except by foot or horseback. Winter closes in on many settlements, leaving them cut off from health care and other services for months on end.

Conclusion: “Safe” Birth on the Roof of the World

When trying to make sense of the diverse realities presented thus far – clearly and beautifully articulated practices around pregnancy and childbirth, and yet disturbingly high mortality and morbidity rates – it is important to remember that culturally Tibetan peoples live in some of Earth’s most harsh and extreme

environments. In several respects, the physical environment of the Tibetan Plateau and the northern Himalayan ranges bear directly on how Tibetans have adapted, in biosocial terms, to create, support, and give meaning to life – including pregnancy and childbirth. Research on the impacts of altitude on pregnancy and birth outcomes show that human populations have found ways to adapt to a range of ecological stresses, including hypoxia, the decreased partial pressure of oxygen that occurs at higher elevations (Wiley 2004: 25).⁸ A review of this literature (Yangzom et al. 2008; Niermeyer et al. 1995; Miller et al. 2007; Wiley 2004; Beall 2001) suggests that while Tibetan infants may have better health outcomes than new arrivals to the Tibetan Plateau (such as the children of Han Chinese migrants) the thin air of High Asia does bear on an infant's biology, and perhaps on the challenges to thrive in these environments.

Alongside these realities of place, many cultural differences, fraught political histories (including occupation, state neglect, and exile), and socioeconomic divides further contribute to experiences of pregnancy and childbirth for Tibetans, on both sides of the Himalayan range and across the Plateau. The rise since the 1960s of biomedically-oriented public health care programs across the greater Tibetan Plateau region, as well as family planning campaigns, associated demographic and fertility transitions, and the less tangible yet no less powerful transitions around ideologies of development and modernization – as well as experiences of prolonged exile – also directly impact reproductive health care infrastructure, services, and ideologies (Childs et al. 2005; Childs 2008; Goldstein 1981; Goldstein and Beall 1991; Chertow 2008; Heydon forthcoming; Pathak forthcoming). Furthermore, the increasing shifts toward cash-based economies as well as increasing prices of basic commodities (food, fuel, etc.) in many Tibetan areas bears on what types of recourse Tibetan families have to care for women and children, either in the midst of the drama of a prolonged labor or during the routine of making an evening meal. In the TAR today, for example, 85% of Tibetans live in rural areas. Today, many Tibetans continue to earn a living, at least in part, through subsistence-based farming and herding activities. Yet many contemporary Tibetans from Ladakh to Lhasa, from Derge to Dalhoosie, also labor for cash – as truck drivers, tourist porters and guides, civil servants, teachers, NGO-workers, sex workers, etc. For some individuals, this means jobs that take them away from home communities for extended or episodic periods of time. While these shifts in family patterns do not bear directly on birth outcomes, they do bear on the shifting nature of family in Tibetan communities and, in many instances, to the perpetuation or decline of cultural knowledge and practice around pregnancy and childbirth.

And so, those of us who engage these stories, social histories, and statistics are faced with a series of challenges: How might we work *with* and honor Tibetan cultural practices without viewing “culture” itself as something that is monolithic, predestined or unchanging? How might we reconcile the social and economic assumptions driving conventional, biomedically oriented maternal and child health interventions with the need to be attuned to specific Tibetan realities? How might we acknowledge – and perhaps work to change – the structural inequalities underlying the bare fact that so many Tibetan women and children die in and around the time of birth?

Notes

1. Specifically, the chapter draws on the two years (2002–2004) I spent working as a medical anthropologist and a research coordinator on an NIH/NICHD and Gates Foundation-funded research program focused on maternal and neonatal health outcomes in Lhasa Prefecture, and in my capacity as an advisor to OneHEART, an American non-governmental organization (NGO) whose mission is to “save the lives of Tibetan women and children, one birth at a time” (www.onehearttibet.org). On a personal note, I also became pregnant during my second year of fieldwork in the TAR, and stayed on in Lhasa until the end of my second trimester. Although my own experiences as a pregnant woman in Tibet do not feature in this article, the perspective it afforded me bears on how I have come to understand and articulate the mixture of gratitude and anxiety with which my Tibetan interlocutors have described their own experiences of pregnancy and birth.
2. This is a pseudonym.
3. In his article “Tibetan Superstitions Regarding Childbirth,” Norbu Chompel makes note of many different kinds and sources of *theep*, as well as its most common “cure” – namely different ritual ablutions and incense purification rituals (*bsangs*).
4. There are a number of different categories of such nefarious spirits or demons that can harm a child. See Nebesky-Wijkowitz 1956 for a detailed discussion of these different categories of harmful agents. This issue of fear of strangers and spirits is documented in Adams et al. (2005a).
5. Birth Asphyxia, also called intrauterine hypoxia, is a cause of perinatal death. It is a nonspecific symptom of any late toxemia of pregnancy. Before delivery, symptoms may include abnormal fetal heart rate and/or an increased acid level in a baby’s blood. At birth, symptoms may include bluish or pale skin color, low heart rate, weak APGAR scores, including gasping and weak breathing (UCSF Children’s Hospital, http://www.ucsfhealth.org/childrens/medical_services/critical/asphyxia/conditions/asphyxia/signs.html).
6. Some put this number as high as 85–90%.
7. It is worth noting that this shift in perception around the “safety” of hospital births, away from home births, is a relatively recent phenomenon in many Western countries, dating to the early 1960s (Marland et al. 1997).
8. Specifically, the relationship between birth weight and hypoxia has been explored and debated, with respect to what effect, if any, hypoxic conditions have on delivery of essential nutrients to the fetus and overall fetal development. See Beall (1981), Grahn and Kratchman (1963), Haas (1980), Moore (2003), Yip (1987) for more information.

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