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ORIGINAL PAPER

Knowledge and Skill in Motion: Layers of Tibetan Medical Education in India

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Abstract This article examines the transmission of Tibetan medical knowledge in the Himalayan region of Ladakh (India), taking three educational settings as ethnographic ports of entry. Each of these corresponds to a different operating mode in the standardisation of medical knowledge and learning processes, holding profound implications for the way this therapeutic tradition is known, valued, applied and passed on to the next generation. Being at the same time a cause and a consequence of intra-regional variability in Tibetan medicine, the three institutional forms coexist in constant interaction with one another. The authors render this visible by examining the 'taskscapes' that characterize each learning context, that is to say, the specific and interlocking sets of practices and tasks in which a practitioner must be skilled in order to be considered competent. The authors build upon this notion by studying two fields of transmission and practice, relating to medicine production and medical ethics. These domains of enquiry provide a rich grounding from which to examine the transition from enskilment to education, as well as the overlaps between them, and to map out the connections linking different educational forms to social and medical legitimacy in contemporary India.

Keywords Taskscapes · Education · Institutionalisation · Tibetan medicine · Ladakh

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Introduction

The constitution, transmission and transformation of Asian medical knowledge depends on numerous factors, including the institutional structure and social dynamics of the tradition in question and the roles played by the state, markets, population mobility and biomedical science (Adams et al. 2011; Attewell 2007; Craig 2007, 2012; Langford 2002; Lock 1990; Pordié 2008a). Although anthropologists have long insisted that practice is key (Farquhar 1994; Hsu 1999; Samuel 2001), the textual canon of codified Asian medical traditions is still sometimes taken as the fundamental basis of medical knowledge, and the written word the main form in which it is held, transmitted and learned. While this approach has contributed greatly to the understanding of the 'paradigmatic core' (Unschuld 1985) of these traditions, it downplays the essential role of learning environments and pedagogical relations in the practice of knowledge transmission. This article critically examines these positions through the study of three quite different operating modes in the standardisation of Tibetan medical knowledge and learning processes in the Ladakh region of the Indian Himalayas. It shows that master to disciple apprenticeship, a formal medical college and a hybrid school in many ways represent distinct institutional forms, but that their coexistence and interaction socially produces Tibetan medicine and inflects the way knowledge and skill are transmitted, learned, valued and applied in practice.

Various institutional forms lead to various modes of learning, to the multiplication of knowledge forms and the emergence of new registers of social and medical legitimacy. Similarly, educational relations are manifold. They may consist mainly in verbal exchange, or be presented as channels through which authoritative and immutable knowledge flows (de Certeau 1974, p. 109). The written word is deemed to be central, while most educational exchanges are, in practice, oral. Modern educational institutions, in Asian medicine as elsewhere, are a testament to this because teaching within them tends to focus more on how to read or write than how to speak or act. This does not mean that the unspoken is irrelevant, quite the contrary, because the non-verbal, manifested in senses and skills, constantly interacts with language in all knowing processes (Harris 2007).

With this observation in mind, we suggest that medical knowledge cannot solely reside in the abstract theory and guiding principles contained in the textual canon, crucial as these are, but represents 'the entire ensemble of tasks, in their mutual interlocking' (Ingold 1993, p. 158), or the *taskscapes*, in which a practitioner of Tibetan medicine, or *amchi* (*am chi*),[1] must be skilled in order to competently practice Tibetan medicine. This certainly includes the ability to comprehend and apply medical theory in a skilful manner, but also encompasses the physical and intellectual processes involved in diagnosis, in the handling of therapeutic encounters within complex social, moral and economic circumstances and, in certain cases, the sourcing of *materia medica* and making of medicines. Technical

[1] Tibetan terms are first transcribed in Roman characters corresponding to their pronunciation in Ladakh for recurrent terms in this article, and then transliterated between brackets upon their initial occurrence on the basis of the scheme defined in Wylie (1959). Sanskrit terms are preceded by 'Skt'.

practices are always deeply embedded in the 'current of sociality' (Ingold 1993, p. 158) and technical change is never neutral or automatic, but is rather dependent on particular alignments of socio-economic, cultural and political systems, as well as historical moments (Lemonnier 1992, 1993). The taskscapes of Tibetan medical practitioners are constituted differently according to the prevailing socio-economic and political conditions under which they operate and the currents of medical tradition (Scheid 2007) from which they draw, which are significantly reflected in the modality and social dynamics, as well as the 'contents', of their training.

Building upon these foundations, this article enquires as to what is actually transmitted, what is learned, how and why in Tibetan medical education in one small region. More precisely, we ask how different modes of transmission relate to one another, and what roles they play in maintaining continuity and affecting change in contemporary Tibetan medicine. We show how the taskscapes of Ladakhi *amchi* are constantly being reconfigured in relation to broader social and historical change, as well as more focused processes of institutionalisation, standardisation and professionalisation. Medical education appears as a decisive moment in which the knowledge and skill accumulated by one generation becomes visible as it is transmitted to the next, allowing us to see why and how certain technical fields and measures of competence, mastery and legitimacy are marginalised while others are brought increasingly to the centre of medical training.

In spite of its shared body of literature and common theoretical basis, the label 'Tibetan medicine' disguises a wide range of knowledge forms and practices. While this has been acknowledged by social scientists across different parts of the Tibetan cultural area (Adams et al. 2011; Craig 2007, 2012; Pordié 2008a, pp. 4–5), intra-regional variations have received relatively little attention to date. This paper fills some of this space by exploring the plurality of Tibetan medicine *within* Ladakh, taking the three modes of transmission as case studies. As well as considering the main characteristics of each, we focus on two fields: medicine production, or pharmacy,[2] and the ethical foundations of medical practice. We have chosen pharmacy because it is a highly technical field requiring the skilful application of hundreds of individual techniques, and has long been a crucial element of practice (Blaikie 2013). The second focal field of medical ethics is deeply connected to Buddhism, which forms an integral part of the cultural matrix of Tibetan medicine (Meyer 1995; Pordié 2007). We examine the transmission and transformation of such cultural traits as they manifest in ritual knowledge and practice.

Texts, Institutions and Standardisation in Tibet

The standardisation of Tibetan medical knowledge and the institutionalisation of its transmission are prominent processes in the contemporary world, but they are by no means restricted to the modern era. Tibetan medicine has been the subject of successive phases of codification, diffusion and institution formation, which proved

[2] We employ the term 'pharmacy' here as shorthand for the entire process of traditional medicine production rather than to denote biomedically oriented pharmaceutical practice.

crucial to the constitution and development of a distinct 'science of healing', or Sowa Rigpa (*gso ba rig pa*), and an episteme specific to medicine (Gyatso 2004). A handful of influential texts have come to hold a key position, foremost amongst them the *Gyushi* (*rgyud bzhi*, or 'Four Tantras') which was compiled during the twelfth century from diverse oral traditions (Cantwell 1995; Meyer 1981) and codified medical knowledge from elsewhere, primarily India,[3] before being revised and expanded into its current form in the seventeenth century (Blezer et al. 2007; Meyer 1995). Along with several popular commentaries upon it,[4] the *Gyushi* became the foundational theoretical work of Tibetan medicine, the textual basis of medical training, and the symbolic keystone for practitioners across Asia and the world. It is important to note, however, that these texts are not undisputed (Schaeffer 2003, p. 628), and moreover that they alone could not provide a sufficient basis for real-world medical practice. It was with the guidance of an experienced, knowledgeable and skilful teacher that the *Gyushi* was turned from metaphors and lists into the practical skills needed to act effectively in the world. Competence—let alone mastery—came through combining an understanding of the texts with explanation, observation and practice over long periods of time, within specific social ecologies (Craig 2012). The texts thus provided 'a pathway to knowledge' (Ingold 2001) but can by no means be said to have encompassed it. Operational medical knowledge, we argue, exists in cognitive and practical fields, such as diagnosis and pharmacy, as much as in codified theory itself. It also encompasses less obvious, yet important, 'meta-medical' fields such as negotiating healer–patient relationships within complex social, religious and moral frameworks.

Where formerly medical lineages, or *gyudpa* (*rgyud pa*), were the primary institutions governing training and practice, the founding of several influential medical colleges in Tibet from the seventeenth century onwards represented a new mode of transmission and an increasingly normative principle. These colleges became important centres of medical learning and expertise, as well as sources of social legitimacy (Meyer 1997). From the 1970s onwards, the Chinese government then began to develop Tibetan medicine according to new selective principles, integrating it into Chinese biomedicine and encouraging the privatisation of practice and medicine production (Adams and Li 2008; Janes 1995, 1999; Saxer 2013). It is apparent that through these successive phases of standardisation and institutionalisation certain forms of knowledge and practice have taken centre stage while new modes of authority and power have risen to prominence, reconfiguring *amchi* taskscapes in particular ways. However, despite the ascendency of the *Gyushi* and medical colleges, non-institutional transmission and oral traditions have not disappeared, and medical lineages remain important in many rural areas in the present day (Blaikie 2013; Craig 2012; Hofer 2008a, b; Pordié 2007; Schrempf 2007). There have been processes of the kind discussed here at play throughout the tradition's history, with periods in which the homogenisation of medical knowledge

[3] Tibetan medicine had composite influences which stemmed mainly from the Indian, Chinese and Persian, but also Greek medical traditions, as well as from Buddhism.

[4] Composed of versified and often metaphorical writings, the *Gyushi* is difficult to comprehend let alone apply in practice, making recourse to popular commentaries essential in order to explain and clarify the main text.

is readily evident, but this does not appear at any stage to have precluded diversity, regional specificity, interaction and debate (Gyatso 2004; Schaeffer 2003).

Modes of Transmission and Styles of Learning in Ladakh

Tibetan medicine has been practiced in some form for many centuries in Himalayan India, but its historical path and contemporary characteristics differ in important ways from those pertaining to Tibet. These differences are reflected in the legal status of the system and in the social and economic position it occupies, as well as in the way medical knowledge is transmitted and applied. Following a brief historical account of institution formation and standardisation processes in the western Indian Himalayas, we examine three main layers of Tibetan medical education in today's Ladakh, looking at the location, form and duration of the training, the style of learning (Hsu 1999) and the social relationships involved. Particular attention is paid to the technical field of medicine production and to meta-medical realms concerning therapeutic relations, medical ethics and Buddhist practice.

Although precise dates and details are unavailable, it appears that a scholarly form of Tibetan medicine has been practiced in Ladakh from the tenth century onwards (Norboo and Morup 1997, p. 206), and there are today several medical lineages claiming 15 generations of ancestry. Such long-standing lineages tend to be bound to wealthy landed estates, as this provided members with the time and financial security to study and practice medicine, as well as ensuring that valuable texts and equipment could be passed down the line. Copies of the *Gyushi* and the main commentaries were rare and precious until well into the twentieth century. While some were guarded within lineages, they were also sometimes copied by hand and thus diffused by other literate *amchi*, but in many cases were memorised and maintained in oral traditions. These texts appear to have formed the theoretical and symbolic core of Tibetan medicine for several centuries, but have always been taught and applied in combination with oral streams of diverse, localised knowledge held within lineages and broader currents of tradition.

Medical lineage retained a key role as the main channel of transmission and unit of social organisation in Ladakh far longer than it did in Tibet. This is due largely to the relatively recent emergence of medical institutions in India, and to the lack of government pressure to modernise. It has had significant effects on the way medical knowledge is constructed and transmitted, as well as on relationships between different groups of practitioners. The first Tibetan medical college in India, the Men-Tsee-Khang, was founded by Tibetan exiles in Dharamsala in 1961 and became the pre-eminent institute of its kind in the region,[5] and the best-known worldwide (Kloos 2008, 2010; Samuel 2001). The Central Institute of Buddhist Studies (CIBS), based in Ladakh, launched a Tibetan medicine course in 1989,

[5] Two other medical institutes were established in India by Tibetan exiles, namely the Central University of Tibetan Studies near Varanasi (1993) and the Chagpori in Darjeeling (1992).

enabling Ladakhis to study formally without needing to relocate. However, the CIBS relies upon the Men-Tsee-Khang to examine its students and thus to legitimise them, and has taught far fewer students than its Tibetan-run counterparts. Standardised institutional training, certification and professional practice in public or private sectors has become the norm amongst Tibetan exiles in India, but remains the preserve of an elite few in Ladakh and other parts of the Indian Himalayas (Besch 2007), although this situation is now very much in flux.

Many question marks have been raised since the official recognition of Tibetan medicine by the government of India in 2010, as state-led standardisation and mainstreaming pushes issues of curriculum, certification and legitimacy increasingly to the fore (Government of India 2010). Institutional transmission has become the main form of medical training for the latest generation of Ladakhi *amchi* and is increasingly seen as the ideal in social, moral and technical terms. However, the master–disciple mode remains prominent and is intricately connected to the way knowledge and skills are conceived of, even while being increasingly undermined by the emerging *amchi* elite and the Indian state. Furthermore, both the village-based, master to disciple mode of education and its urban institutional educational counterpart are seen as inadequate in certain ways, leaving space for a hybrid form which actively calls upon various streams of knowledge in order to prepare practitioners for rural practice. These multiples frameworks are at once distinct and deeply interconnected, offering the opportunity to assess the impacts of each mode on healers' knowledge, status and legitimacy, and to consider the often uneasy interactions amongst practitioners, as well as between them and the Indian state.

Ladakhi *amchi* conduct their practice according to textual and institutional references established by highly respected authorities, to which they feel bound to adhere. The theoretical core of the tradition was defined in the pre-modern period yet still serves as a major anchor point today, even though many other aspects of the *amchi* taskscape have been radically transformed. Practitioners who depart from the authoritative references see their medical and social power systematically affected, which is a question of moral frameworks because, as Fassin (2000) puts it, these frameworks condition the possibility of medical practice. Institutionalisation tends to relegate 'traditional training' to an inferior level, in particular due to its heterogeneity and the social image of rural backwardness it presents. The *institution rite* (Bourdieu 1982) reveals one of the concealed functions of elite schools, which distinguish graduates from their non-institutional counterparts while ascribing a superior essence to them. In contemporary India, this reflects divisions between Himalayan Indian and exiled Tibetan practitioners, as well as between the rural and urban milieus within Ladakh. However, as we demonstrate below, these are by no means simple dynamics linking stable categories.

Master to Disciple Transmission

Although institutional training is very much in the ascendency in Ladakh, the majority of *amchi* practicing today, including many holding prominent social positions, have been trained through hereditary *gyudpa* lineages, or from master to

disciple outside of kinship ties, which is referred to as *guru shes*.[6] These terms cover a broad spectrum as far as the duration, depth and detail of medical training are concerned, although some general characteristics can be discerned which provide a reasonable starting point for discussion.

Ideally *gyudpa amchi* are trained at least in part by family members, usually their father, grandfather or uncle. However, most receive some, or even all, of their training from people outside their lineage. Prospective *amchi* lacking family lineages must seek out appropriate teachers, often travelling far afield to study with one or more reputed *amchi*.[7] Should the teacher agree to take on the student, which is by no means automatic given the high time commitments and responsibilities involved, the two enter into a mutual, informal arrangement framed by norms, roles and expectations on both sides. Most *amchi* present a single practitioner as their *dge rgan* ('teacher'), which for hereditary lineage *amchi* does not always correspond to family members. It is usually the teacher who has provided the majority of the training, but can also be one with status and renown who has given some kind of shorter term expert guidance and/or initiation. Together these arrangements form the major channels through which currents of Tibetan medical tradition merge and diverge.

The location and structure of training, and the relationship between teacher and student, are important elements in all educative processes (Spindler 2000). As in other pedagogical relationships built on trust (Wulf 2003, p. 31), what is paramount in master–disciple transmission is an extended one-on-one relationship, involving intimacy and social bonding, even dependence. Students usually spend long periods, most often during winter, living in their masters' homes while observing and engaging with many aspects of their daily lives and medical activities. In rural areas, the domestic, medical and religious spheres overlap. Consultations frequently take place in the *amchi* home, as do the production of medicines and the practice of Buddhism. Medicinal plants are gathered together nearby and students often accompany their teachers on longer collection trips. Such intense relationships, often lasting more than 5 years, appear as fundamental to the transmission of many forms of knowledge and skill, as well as ethics and values. In other words, it is this structure that enables learning to take place within a specific taskscape, emergent through the constant interaction between teacher, pupil and the 'total environment' (Marchand 2010) in which they find themselves.

The first phase of master–disciple training consists in the guided memorisation of the *Gyushi*. Studying it to any great depth requires a good grasp of literary Tibetan, but many Ladakhi practitioners are unable to properly comprehend the texts, especially in rural areas, which opens them up to criticism by their institutionally trained counterparts. The recitation of the *Gyushi* often consists in the repetition of the master's words which are learned by rote with the help of metaphor and numerous mnemonic tools contained in the text (Millard 2002). The *amchi*

[6] Master to disciple transmission is called *guru-shes* in Ladakh, which appears most likely a contraction of the Sanskrit terms *guru* and *śiṣya* (master and disciple).

[7] Most study within Ladakh, but some travelled to Himachal Pradesh and the older generation to Tibet in search of good teachers. These options are limited by the domestic situation, agricultural commitments and wealth of the student.

recognise passages by dint of repetition,[8] but will not necessarily be able to comprehend an unknown text. However, although considered fundamental from both theoretical and symbolic perspectives, we contend that the *Gyushi* and its commentaries cannot be accurately said to *contain* an operational body of medical knowledge in its entirety. Instead they open a pathway that can *lead* to varying degrees of proficiency. A functional medical system is vastly more complex than its textual canon, residing in fields of social and technical practice. Training involves above all practical aspects of the medicine and knowledge is orally transmitted[9] and learned through direct observation, experience and experimentation, resembling what Gananath Obeyesekere (1992) has described for Ayurveda as 'samyogic experimentation'.

Beyond the *Gyushi*, major channels of transmission and markers of identity and legitimacy in Tibetan medicine are known as *wang lung tit*[10] and *mang nags* (*man ngags*). A senior Ladakhi *amchi* explained these terms thus:

> *Wang* means to empower. It is never given by the *amchi* teacher, only by a Rinpoche.[11] *Lung* means the initiation that passes from generation to generation. […] It is an unbroken continuation from Sangye Smanla [Buddha Master of Remedies]. You can get *lung* from many people. For example, more than 30 *amchi* received the initiation from Trogawa Rinpoche, but they may also have received it from others […] *Tit* means practical instruction – the master instructs the disciple by showing and explaining […] *Mang nags* means the oral transmission of knowledge from the master to the student, but it is not given to any *amchi* – it is only through the lineage. It should be based on the texts, but it is also adapted from them to become a special set of practices. It should be based on the masters that came before him; it is continuous, accumulated knowledge, not only his own experience: it is continuation of the *gyudpa* line.

Wang lung tit sum thus incorporates empowerment, initiation and practical instruction within a distinct medical lineage.[12] The first two may be obtained through ceremonies during which a group of *amchi* receive initiation and/or empowerment from a lineage holder and recognised master. These ceremonies are essentially religious in content and are much concerned with ethical conduct and adherence to Buddhist principles, with initiates making a set of *nyam len* (vows) to this effect. Those participating see themselves as directly receiving the original teachings of the Buddha Master of Remedies (Sangye Smanla, *Sangs rgyas sman bla*, Skt. *Bhaiṣajyaguru*) according to the principle of unbroken, successive transmission. Ladakhi *amchi* are of one accord in

[8] Repetition is also fundamental in the process of memorising religious texts, as in the Gelug-pa (*dge-lugs-pa*) monastic tradition. In this context, the memory is essentially oral mnemonics (sound and rhythmic recitation environment) and non-visual (Dreyfus 2003, pp. 86, 94).

[9] This is a reflection of practical teaching in the Tibetan world, which seems to have always been based on oral transmission rather than on texts (Meyer 1995, p. 116).

[10] *Dbang lung khrid gsum* (*gsum* denoting the number three).

[11] Rinpoche (*rin po che*) is a title of respect reserved for *tulku* (*sprul sku*), Tibetan Buddhist masters who are thought to reincarnate deliberately and with perfect mastery for the benefit of other beings.

[12] See Kloos (2010, p. 88) and Schrempf (2007, p. 103) for further details.

attributing the origin of their medicine to the teachings of Sangye Smanla, whom they view as an emanation of the historical Buddha Śākyamuni (Pordié 2007), as a senior *amchi* explained:

> It was Sangye Smanla who in the beginning handed down this knowledge: it came from his mouth. Since then, it is transmitted in this way: by word of mouth. An *amchi* can know medicine but he must receive the teachings orally to be fully initiated. The initiation is given by a lama[13] or a Rinpoche, who reads the medical texts aloud. The initiation enhances the powers of the *amchi*. As the initiation proceeds, one must listen attentively and keep Smanla in mind.

Such ceremonies represent an important phase in the medical and spiritual life of those *amchi* able to attend them, a *rite de passage* (van Gennep 1981 [1909]) marking entry into a group of initiated *amchi*. Buddhism thus intervenes in the medical life and ethos of the *amchi*.[14] This initiation provides a clear ethical and moral framework for medical practice, underpinned by solemn vows. Ideally this encourages compassion, mindfulness and diligence, while enabling the *amchi* to conduct other rituals, such as the *sman drup* (*sman sgrub*), the aim of which is to empower medicines and improve one's healing abilities while attending to higher tantric aims (Blaikie 2013; Cech 1987; Garrett 2009; Pordié 2008b). Those who have been collectively initiated often maintain a sense of affinity with one another, as one *amchi* explained: *'Lung* is like a strong door. It is difficult to enter and it keeps others out, but once you are inside you are connected to those who are also inside and you will never leave'.

The third dimension, *tit*, is the gradual process of explanation and praxis that takes place during medical apprenticeships. It includes the teacher's own interpretation of the texts as well as the teaching of many skills and techniques which are not well covered in the books, notably concerning *materia medica,* pharmacy and clinical decision making. The direct oral transmission of accumulated knowledge within a lineage, or *mang nags*, is a form of secret knowledge even more firmly rooted in individual *gyudpa*. Similarly the term *lag len*, which is often translated as 'practice', denotes a body of skill accumulated throughout one's training and subsequent experience, particularly relating to pharmacy, which one generally does not share with those outside one's lineage. Through these latter channels, variations of medical theory and idiosyncrasies of practice come to endure (or to be lost) through the merging and differentiation of currents of tradition. Together with the oral transmission and explanation of the theoretical information contained in the texts, these are crucial means for the transmission of Tibetan medicine as a cultural, social, economic and moral system, as well as a theoretical framework and set of practical techniques within it.

[13] Lama (*bla ma*) is an honorific title for initiated Tibetan Buddhist monks, notably those who are learned, accomplished and/or senior.

[14] These ceremonies directly involve the *amchi*, but are not exclusive to them. Initiations to the Buddha Master of Remedies are one of the many possible initiations for the lay population and members of the Buddhist clergy (Garett 2009; Pordié 2007).

Spending extended periods living in or visiting the teacher's house presents disciples with numerous opportunities to observe patients being treated, to note diagnostic procedures and treatments given, as well as to witness the handling of morally inflected social, economic and medical relationships with patients. Disciples also provide labour for their masters, collecting plants and minerals, helping to clean, detoxify, prepare, weigh and grind medicines, all of which contributes immeasurably to the development of competence and confidence in these often complex and awkward techniques. The most widely used formulary texts are vague, or indeed silent, as to the many hundreds of techniques involved (Blaikie 2013; Cardi 2005). With only the books to guide them, inexperienced practitioners would be unable to prepare even the simplest medicines, which resonate with Tim Ingold's critique of Sperber's (1996) comparison of knowledge and culture to a recipe book:

> The information in the recipe book is not, in itself, knowledge. Rather, it opens up a path to knowledge, thanks to its location within a taskscape that is already partially familiar by virtue of previous experience […] It is in this sense that all knowledge is founded in skill. Just as my knowledge of the landscape is gained by walking through it, following various signposted routes, so my knowledge of the taskscape comes from following the several recipes in the book. This is not knowledge that has been communicated to me; it is knowledge I have built up for myself by following the same paths as my predecessors and under their direction (Ingold 2001, pp. 137–138).

Medicine preparation requires skills that cannot be easily translated into abstract representations and thus simply taught using texts. Learning practically alongside an experienced practitioner for long periods is what enables the accumulation of such directly experienced knowledge, embodied in an ensemble of tasks.

Beyond these clearly theoretical and technical fields, master–disciple instruction encompasses numerous meta-medical fields in which competence is crucial to the actual practice of medicine. These include nebulous skills such as how to handle patients, negotiate the economics of therapeutic interactions or deal with raw material traders. Its heterogeneity notwithstanding, the master to disciple mode educates the *amchi* in a broad way, preparing them for a taskscape of small-scale and localised practice, close social relationships, collecting and trading in raw materials, making medicines and prescribing them outside formal medical structures or regulatory frameworks.

Once disciples are judged by their masters to be knowledgeable enough to practice by themselves, they ideally undergo a traditional examination known as *tsa tit* (*dmar khrid*). The young *amchi* must recite parts of the *Gyushi* in front of senior practitioners and assembled villagers,[15] diagnose the disorders of several genuine patients, and recognise a selection of *materia medica*. This public *rite de passage* cements the social and medical legitimacy of the newly trained practitioner, while

[15] This type of recitation in front of other students or villagers was also practiced in ancient Tibet (Meyer 1995, pp. 117–118). The only example in the literature on Ladakh we found before writing this text simply states that: "[Over three hundred people] assembled to watch, (…), Tsewang Namgyal, undergo a stringent examination to become an *amchi*" (Norberg-Hodge 1992, p. 59).

signifying their teacher's authorisation and satisfaction that the novice is now an operational *amchi*, with the basic capacities required to be able to make accurate diagnoses, produce medicines and deal with diverse diseases, trauma injuries, maternity issues and the like. The *tsa tit* does not always mark the end of master–disciple relationships, however, as many disciples return to ask for advice, gain further training, or trade in *materia medica* throughout their lives. This mode of learning favours continuing interaction and thus reinforces social bonds and knowledge flows between master and disciple.

Education at the Central Institute of Buddhist Studies

A number of prominent Ladakhi *amchi* trained at the Men-Tsee-Khang during the 1970s and 1980s, or under renowned Tibetan masters outside the college. They brought back with them new ideas for the organisation of medical education and practice, but it was not until 1989 that the region was able to offer institutional training itself. The Central Institute of Buddhist Studies (CIBS), situated near Leh, became the only Indian-run establishment granting diplomas of the highest institutional degree in Tibetan medicine, the *kachupa*.[16] From the beginning, however, it was under the technical supervision of the Men-Tsee-Khang, which provided the curriculum and examinations, and indeed several of the teachers in the early years. The CIBS began taking on small batches of Ladakhi and Tibetan refugee students every 6 years, but only those with the required educational standards (twelfth class) and the financial resources to cover the considerable costs. These requirements automatically discounted large numbers of young people from rural areas and poorer backgrounds, who were unable to complete their schooling and whose families could not afford 6 years of lost labour and potential income. Coupled with the almost total lack of governmental support for this medicine, which persisted until 2010, these restrictions kept CIBS student intake fairly low, with just 14 graduates over 24 years (Central Council of Tibetan Medicine 2014). Nevertheless, the course has contributed to a significant shift in the way medical knowledge is conceived of, transmitted and learned in the region, and in the way practitioners are judged, valued and deployed. In this section, we consider the main characteristics of this mode and show how it educates students in particular ways, preparing them for a specific social and technical niche but without entirely losing touch with other ways of learning, knowing and healing.

The CIBS course comprises 5 years of classroom-based theoretical training followed by 1 year of practical placement, interspersed with annual summer camps for medicinal plant identification. This timeline in itself tells us much about the

[16] Along with Men-Tsee-Khang and the Central University of Tibetan Studies, the CIBS confers on students the *kachupa* (*dka' bcu pa*) diploma, officialised in English by the Bachelor of Tibetan Medicine and Surgery (BTMS). Two higher diplomas can then be conferred by the Men-Tsee-Khang alone. An *amchi* with the *kachupa* diploma can present as a candidate for the *smanrampa* (*sman rams pa*, an abridged form of *sman pa 'bum rams pa*) on condition that he or she has 10 years of experience and a certain number of publications in the medical domain. After 20 years of experience, an *amchi* may then claim the *smanrampa chewa* (*sman rams pa che ba*) according to the same principle (knowledge, practice and publications), which clearly values the experiential and practical dimensions of knowledge as well as the abstract and theoretical.

priorities and objectives which structure this mode of education, with a clear division between theory, observation and practice, and with greater stress on the former than the latter two. Subsequent analysis reveals several sharp contrasts of this kind which mark the institutes break with former conventions, as well as some important continuities with *gyudpa* instruction.

When we asked a group of CIBS students why they had embarked on the institutional path, several mentioned the social recognition and possibilities for future employment that such an education confers. Comments concerning the exercise of 'science' (*rig gnas*)[17] and compassion were also mentioned, but few students stressed the latter, focusing instead on what distinguishes them from the rest of the community and draws them closer to the emerging social élite. In response to the same question, most apprentices interviewed in the villages stated that their main reason was compassion for living beings,[18] while the technical and social dimensions were rarely mentioned. Certain differences of emphasis and intention are therefore pronounced from the outset, with institutional students tending to put forward a qualitative objective—medical techniques or the reputation of the institute—and the village-based students justifying their studies with reference to Buddhist motivations.

Among the clearest departures from master to disciple transmission at the CIBS is the replacement of long-term, one-on-one relationships with fixed periods of formal group study, and the shifting of training from the domestic space to the classroom setting. Whereas master to disciple instruction normally involves some degree of choice from both parties (Donden and Wallace 2000), institutional training imposes a teacher (or several) on the students, and vice versa, thus altering personal, pedagogical and spiritual relations. Classes are small, with fewer than eight students in each batch, but they are obligatory and always take place at set times and in one group. A single professor is responsible for teaching the 5-year theoretical course in its entirety, and thus the core texts are to some extent interpreted, taught and explained in a way that synthesizes the various currents of tradition with which they have interfaced along their own pathway to medical knowledge. The current teacher is a Ladakhi man who holds a diploma from the Men-Tsee-Khang. In the main, he strives to reproduce the type of instruction he received there and agrees almost entirely with the curriculum provided by this institution. The student–teacher relationship for him strictly concerns the technical and medical dimensions, and although he expresses a deep sense of connection to 15 generations of Ladakhi *amchi* ancestors, he largely separates this from his modern profession. Mirroring his own educational experience, the relationships he builds

[17] "Field of knowledge" would perhaps be a more accurate translation of *rig gnas*. Nevertheless, several CIBS students made explicit references to the general, universal and scientific character of their medicine in its own terms, implicitly placing it on a level with other fields of contemporary systematic knowledge, such as biomedicine. See Adams (2001) for a discussion of the use of the term *science* as a means to depoliticize Tibetan medicine in China.

[18] We also examined the initial motivations of rural *amchi* at the beginning of their studies. Of 47 *amchi* interviewed, 40 (i.e., 85 %) responded foremost that they entered this path out of compassion, while other responses included following in the family line, the absence of *amchi* in their native village, the serious illness or death of a loved one, or *karma*.

with his students at CIBS are for a limited period and of a self-consciously technical and professional nature, rather than the open-ended, deeply personal and moral connections that bind *gyudpa* lineages together. In this way, a new balance has been formed between teachers and students at CIBS, which is perhaps closer to that found in Indian universities than to *gyudpa* streams of transmission.

The *Gyushi* and its major commentaries are the central focus of theoretical training and examination at the CIBS, and they are taught largely separately from medical practice itself. For the first 5 years, there is little observation of everyday clinical practice, little time spent collecting raw materials or making medicines, and limited space for meta-medical dimensions such as the ethical, ritual and social. The processes of *tit* and *mang nags* outlined above are notably transformed in the institutional setting, which we could present as a focusing of the education in particular ways, linked to the modernist, individualist and standardising orientation of contemporary Indian and Ladakhi societies. As suggested above, the medical texts open a pathway to particular kinds of knowledge. However, if they are not accompanied by long periods of observation, explanation and praxis, formerly integral elements of medical culture tend to be devalued, poorly understood, and thus potentially lost. In fact, the final year of the CIBS course is the only period in which students are immersed in primarily practical fields. They tend to be placed in large modern-styled clinics, such as those of the Men-Tsee-Khang, and thus to work alongside several other institutionally trained *amchi*. In this setting, observation and praxis appear to focus upon managing a clinic, improving diagnostic abilities, applying medical theory to real-world cases, and prescribing the correct medicines. Such a taskscape does not require the collection of raw materials, the making of medicines or the negotiation of patient relations within complex moral economies, so these skills are further neglected in favour of a more specialised form of large-scale clinical practice.

It is notable that the overarching educational template of the *Gyushi* has not thus far been replaced by a specialised thematic curriculum based on the biomedical model of anatomy, physiology, pathology and so on. Indeed, biomedical theories and categories play a very limited role in the curriculum at CIBS and feature barely at all in the discourse and practice of teachers and students, in stark contrast to the Tibetan areas of China (Craig 2007; Janes 1999, 2001) and other Indian systems of medicine (Langford 2002). However, much is in play following Tibetan medicine's formal recognition and there are signs that such shifts may be imminent. standardisation of the curriculum is taking centre stage as the government strives to harmonise Tibetan medicine structurally with the other systems of medicine already recognised nationally (Government of India 2010, p. 18). Power, if not authority, is thus shifting away from the Tibetan-run institutions towards Indian state structures, creating a degree of tension between exiled Tibetans, Himalayan Indians and branches of the Indian government (Kloos 2013). The younger generation of Ladakhi *amchi* are beginning to recognise the great opportunities opening up for them, and this inevitably influences what they are taught and how they learn.

There are many ways in which the mode of transmission at the CIBS corresponds to the aspirations of nascent professionals and the interests of the state, and thus

reflects the taskscape for which the students are being prepared. Both professor and students are engaged full-time in their educational activities, which tallies with the fact that most institutionally trained practitioners end up working on a full-time basis in either public or private sectors. This stands in contrast to village-based instruction, which combines medical training with daily farming and domestic activities. The intensity of study and the imposed assiduity of the formal institution, together with the fact that the students are all literate and have achieved 12 years of school education, are often used to promote this mode of education and its adherence to the professional profile of today's practitioners. In the mainstream of Ladakhi modernity, the college appears as the most favoured educational form. Simply belonging to an institution confers to both students and their professors a raised social status and an immediate form of renown, which is a prized social value across the Tibetan cultural area.[19]

Also in contrast to *gyudpa* modes, the discourse noted at the CIBS underscores a certain detachment from the religious. Although several monks and nuns are among the graduates, and most students we spoke to acknowledge the importance of Buddhism in their practice, they all seem to accept that it lies outside the framework of their formal studies. In contrast to the Men-Tsee-Khang and Chagpori colleges, where they retain an integral role, ritual aspects are taken but little into account in lessons and there are no classes dedicated to Buddhist instruction, precisely because of their perceived non-medical character. As elsewhere (Adams et al. 2011; Craig 2012), teachers are inclined to give their practice a more 'scientific' profile by suppressing what does not correspond to their imagined modernity, although this is not the consequence of politically motivated repression as it is in Tibetan areas of China. The clear bipartition between medicine and Buddhism is a modern delineation, which is relatively straightforward in the institutional milieu in Ladakh, with students solely responsible for their relation to the learning of Buddhist practice and ritual. Buddhism thus becomes an individualised domain, separated from formal instruction and the teacher–student relationship, although this is not to imply that the students are any more or less engaged with Buddhism outside of the classroom than their *gyud pa* counterparts. This delineation, however, reflects a form of political authority which has far reaching implications in the way we understand 'medicine' and 'medical knowledge'. A certain idea of medicine is imposed which disembeds it from many of the registers, including Buddhism, in which Tibetan medicine classically unfolds (Pordié 2008b, 2014). In order to avoid 'the creation of ideal types which oppose religiously-inclined lineage-based instruction and more secular institutional learning' (Craig 2007, pp. 145–146), therefore, we must be clear that the educational environment is but one among many factors influencing Buddhist activity, and that these categories are far from mutually exclusive in practice.

It is also notable that several complex fields of knowledge-practice concerning, for example, *materia medica* and medicine production are, like Buddhist practice and ritual, largely absent from formal CIBS training. A good example of this arose during one of the annual 15-day summer camps focused on the identification and

[19] See Sagant (1990) for another Himalayan example.

collection of medicinal plants in the field. At no point did the teacher mention the *mantra* which should ideally be recited during the collection of plants[20] and which are considered important by *gyudpa amchi*. Furthermore, although the students do learn to identify a large number of medicinal plants during the summer camps, they do not also learn how to dry, prepare, store, detoxify or use them to make medicines, which effectively disconnects the knowledge of raw materials from the practice of pharmacy and thus the entire process of healing.

Examinations are another feature which distinguishes medical education at the CIBS from master–disciple instruction, as are the kinds of authority and status which accompany exam success. The public *rite de passage* and personal authorisation of the disciple by their master at *tsa tit* ceremonies contrasts sharply with the impersonal, private and formal mode of examination at the CIBS. The final round of CIBS examinations actually takes place at the Men-Tsee-Khang in Dharamsala, underscoring its continued authority,[21] and they result in lists of ranked final scores. Such methods of testing and comparing levels of knowledge are central to the modern educational paradigm and have been in use for a long time by medical colleges in Tibet and Tibetan exile. In Ladakh, however, they represent a relatively recent shifting of measures of competence away from lineage, demonstrable ability and skilful practice towards the achievement of standardised, quantifiable targets, focused tightly on texts and abstract knowledge. Certification is granted by an institutional entity backed by the Indian state, which carries considerable social and legal significance in today's India. It is sufficient for most graduates to find employment in professional settings, within a taskscape for which they consider themselves reasonably well prepared. Graduates may not be skilful in medicine preparation, but they will most likely work in public or private fee-for-service clinics with centralised supply systems, with no need to make medicines. Their training is focused on the retention and comprehension of the canonical texts, on making accurate diagnoses, and on being able to arrive at the best possible prescriptions. In this configuration examinations may well be more comprehensive, rigorous and representative of Ladakhi modernity than *tsa tit*, but they do not carry the same cultural and personal weight. Institutional training at the CIBS educates and qualifies students for professional work as specialised physicians in modern clinic settings. The broad spectrum of *gyudpa* instruction is not directly reflected in the examination, residing rather in the entirety of the training and its hands-on nature, which correspond well to a process of ongoing enskilment.

Whereas *gyudpa* disciples often maintain close relationships with their masters, our interviews with CIBS graduates revealed little contact with teachers once the diploma had been granted. However, roughly a third of the students are from *gyudpa* families and are thus exposed to non-institutionalised forms of knowledge and meta-medical information to varying degrees. Furthermore, several graduates have established long-term, informal relationships with one or more senior *amchi*,

[20] See Pordié (2007) for examples of mantra recited during plant collection.

[21] Although the Men-Tsee-Khang maintains its authority over the CIBS through designing the curriculum and granting the diplomas, it is interesting to note that there is actually quite a strong emphasis on Buddhism within this institution (Kloos 2010), which has not been carried over to the CIBS.

enabling ongoing exchanges of knowledge, materials and experiences. In seeking out for themselves social and practical elements which were absent from their formal training, these students both underscore and confound the distinction it apparently confers.

The Dusrapa School

In 1998, a coalition of Ladakhi and international non-governmental organisations launched a project to provide formal Tibetan medical education in a different way, and to a slightly different group of people, to the CIBS and other colleges. The aim was to enable students hailing from rural areas to achieve a high standard of medical education and a socially legitimate form of certification, while preparing them for effective practice in their native villages. As in Nepal, students

> …who have remained in their home villages or within a cultural and educational context that provides a solid foundation for the study of *gso ba rig pa* – and who might feel more inclined to serve their home communities upon completion of their training as *amchi* – often occupy a marginal place within the [national] educational system, with no recourse to official state certification, let alone medical licencing. Yet students who have left their mountain homes in search of a more 'modern' education are often unable to meet the basic criteria of Tibetan literacy to study *gso ba rig pa* upon graduation from secondary school (Craig 2007, p. 133).

The Dusrapa School was conceived as a remedy to this situation and a hybrid methodology was devised, based upon the provision of classroom-based theoretical training and examination to the standard known as *dusrapa* (*bsdus ra ba*), which is slightly lower than the *kachupa* taught at the CIBS. This was coupled with the learning of practical skills, and designed to run alongside, rather than in place of, master–disciple instruction. The students were mostly selected from remote areas with poor access to health services, so the entry requirements were less stringent than at CIBS (tenth instead of twelfth class) to counteract the lack of educational opportunities many face in the villages. The course was also fully subsidised, including accommodation and food, which opened it up to students from poorer backgrounds.

By 2014 a total of 25 students, in three batches, have graduated with the *dusrapa* diploma. Their course follows a similar overall structure to the CIBS, with a long period of theoretical instruction based on the foundational texts, annual summer camps dedicated to medicinal plant identification, and a practical apprenticeship at the end. However, beneath these shared features lie several important differences in the mode of instruction, the foci of the training and the social relationships it generates and sustains. In this section, we show how this *amchi* school both borrows and diverges from the other two modes to create a hybrid learning environment in which the curriculum, form of transmission and approach to learning reflect the social and technical circumstances within which the students are expected to operate.

In terms of location and social dynamics, the *dusrapa* training shares many features with both the CIBS and master–disciple instruction, yet it differs from them in several subtle but important ways. It is notable, for example, that the intake for Dusrapa and CIBS courses is roughly balanced in terms of gender. Female *amchi* were rare but not unheard of in former times,[22] so the much higher ratio reflects shifting attitudes at a societal level, as well as growing interest in Tibetan medicine and greater opportunities to pursue it among young Ladakhi women. Roughly half of the *dusrapa* students are from *amchi* families or were already under instruction by unrelated senior practitioners at the start of their formal training, which is only slightly higher than the college course. However, because the CIBS is a state educational institution its teaching is spread across the academic year, making it very difficult for students from remote areas to return to their homes for any length of time. In a conscious attempt to reduce disruption to the student's livelihoods and ongoing apprenticeships, the *dusrapa* course is compressed into 6 months of intensive residential instruction during winter. This enables students to return to their villages, help their families with agriculture and continue to learn from their *gyudpa amchi* teachers during the summer.

The first phase of the *dusrapa* course comprises 3 years of largely theoretical instruction, which is given by one principle teacher in a classroom setting. The format is in many ways similar to the CIBS, although the intensity of the *dusrapa* training and its residential hostel setting expand the fields in which transmission occurs, while bringing different interpersonal dynamics into play. The *dusrapa* teacher spends long periods of time at the hostel in addition to the set lesson times, eating with the students, sharing their domestic space and everyday lives. Evenings and lunch periods offer students frequent opportunities for asking questions and receiving individual guidance on technical or meta-medical matters. This echoes the close bonds that commonly grow up during *gyudpa* instruction, and contrasts with the clearer boundaries between educational and personal realms in the college environment. Many of the *dusrapa* students also spend time informally observing their teacher at her own clinic or assisting her to make medicines. In doing so they pick up all kinds of information and try out many practical techniques outside the official curriculum, in a way that is again more reminiscent of *gyudpa* transmission than college education.

The first 3 years of the *dusrapa* course are classroom based, focusing largely on the *Gyushi* and its major commentaries. Tibetan language and grammar are also taught, because a good standard is required in order to properly comprehend the texts, but due to the local politics of language many Ladakhis lack proficiency in the written form of their mother tongue, let alone the classical Tibetan in which the texts are written. There are two rounds of written and oral examinations each year which take a very similar form to the CIBS course, focusing largely on the ability to recall the core texts and apply them to hypothetical circumstances. Rote learning and recitation are crucial here and it is remarkable that *dusrapa* and CIBS students refer to the same texts and employ the same rhythms, mnemonics and other memorisation techniques as generations of *gyudpa amchi* before them. This

[22] A Ladakh-wide survey of 93 *amchi* we conducted in 1998 found only 8 female *amchi*.

demonstrates strong continuity with older ways of constructing, transmitting and accessing abstract medical theory. One crucial difference is that the effectiveness of these techniques are here tested through formal examinations with ranked scores, the quantifiable achievement of standard targets. It is notable, however, that some *dusrapa amchi* also undergo the *tsa tit* examination, as we observed in Zanskar in 2007, thereby being publicly assessed and authorised in both rational-legal and traditional modes, as a Weberian categorisation would have it.

As suggested above, understanding the canonical texts represents an important pathway to medical knowledge, but is not the only one. In addition to the main body of text-led instruction, the *dusrapa* curriculum incorporates numerous short courses on practical topics, each led by a local expert in that specific field. Several of the invited teachers have been institutionally trained, but the majority are *gyudpa amchi* chosen for their experience in the fields of pulse diagnosis, bone-setting, bloodletting, hydrotherapy and astrology, to name but a few. These practical sessions are interspersed with theoretical instruction throughout the course, and continue long after the students graduate in the form of regular 'refresher training'. Although delivered over short periods, in a group setting, and calling upon the accumulated experience of multiple individuals rather than one, these hands-on sessions mirror the way *gyudpa* teachers introduce specialised knowledge and skills to their disciples on a piecemeal basis throughout an apprenticeship.

Buddhism also constitutes an integral element of the *dusrapa* training, in contrast to its absence at the CIBS. Every school day begins with a group prayer session or the recitation of mantras, and there are regular talks and practical sessions on Buddhist philosophy, meditation and ritual practice. The recitation of mantras is also encouraged during medicinal plant collection at the summer camps, whereas it is left up to individuals at the CIBS. The prominence of Buddhist ritual and philosophical elements in this mode of medical education owes something to the personal positions of those designing and running the training, but also to the continued importance it holds in medical practice in the village context, which is something that was widely remarked upon and welcomed by the students.

The *dusrapa* students spend the final year of their training as apprentices to senior practitioners. Among these are several respected institutional graduates, but also many renowned *gyudpa amchi* and a few who call upon both modes. All of them have decades of experience practicing on a small to medium scale, and almost all make their own medicines. The apprenticeship represents a crucial period for the students to immerse themselves in the many skills and techniques required to actually practice Tibetan medicine. Similarly to CIBS students they focus on general clinical practice, diagnostic techniques and prescription, but they also study *materia medica* collection and pharmacy. Although the students lodge separately to their masters, they observe and work alongside them in ways familiar to *gyudpa amchi*, albeit for a fixed and shorter period. This contrasts with most CIBS and Men-Tsee-Khang students, who are placed in larger clinics alongside other institutionally trained *amchi* and focus on becoming specialised, textually guided physicians.

Although the *dusrapa* training does not involve initiation into a lineage or the establishment of any formal ties between those involved, several of the *dusrapa* graduates have built close relationships with their teacher, and with one another,

which persist long after their training has finished. We know of at least five who visit their former teacher frequently to ask for advice, exchange raw materials and buy medicines, much as *gyudpa* disciples do, although in this case relations are mediated through a combination of good wishes and mutual need rather than the more clearly defined roles which bind lineage holders. More so than among CIBS alumni, a good number of graduates also maintain close connections with one another, building horizontal networks through which collective identity is expressed, assistance is provided, and knowledge and *materia medica* flow. These informal, ongoing relationships span generations and institutional forms, growing in part from the Dusrapa School's ethos of continuity between modes of transmission, and in another part from the pragmatic day-to-day requirements of the rural *amchi* taskscape.

Interaction Between Layers

The graduation ceremony for the first 17 *dusrapa amchi* took place in 2004, involving over 100 practitioners and visiting guests. Brief sketches of a handful of participants at this event serve to introduce the networks and interactions which connect the different layers of education presented above, as well as some points of divergence. While receiving their diplomas, most of the *dusrapa* graduates saw in the crowd their *gyudpa amchi* fathers, grandfathers, uncles or unrelated teachers, from whom they had received some training. They also saw several other *amchi, gyudpa* and institutionally trained, who had taught them during their formal studies or had become mentors. Alongside the students on the stage were the presidents of the two local associations running the Dusrapa School, both members of well-known Ladakhi lineages. One was trained at the Men-Tsee-Khang before becoming the Tibetan medicine professor at the CIBS, and the other a CIBS graduate who today holds an influential government position. Also present was the *dusrapa* teacher, who has no family lineage. However, she graduated from CIBS before taking up a long apprenticeship under her former professor at this institution, a senior Ladakhi *amchi* trained at Men-Tsee-Khang. As well as leading the *dusrapa* training and maintaining relationships with many of her former pupils, this woman also took on a full-time apprentice of her own, while continuing to learn herself from a network of senior practitioners. Completing the scene at the graduation ceremony was the 'Chief Amchi' appointed by the Leh District Health Department to represent Tibetan medicine and oversee its provision on behalf of the state. He has neither family lineage nor institutional qualifications, having been trained entirely by an unrelated master, but is nevertheless a highly respected and influential figure. He is in frequent contact with a large network of practitioners from different backgrounds and with differing styles of practice, and was instrumental in the founding of the Dusrapa School.

In certain ways, this event highlighted the separation between the three modes of transmission in today's Ladakh. Each represents a different level of official and social status, and they open up (or close off) particular professional opportunities and practice forms. Together, they reflect the differing conditions and priorities between the urban centre and the rural periphery. Much writing on Asian medical

knowledge underscores the opposition between dominant, standardised and certified forms and heterogeneous, unofficial and subaltern medical realms. However, we suggest that the medical knowledge accumulated by the individuals assembled at the *dusrapa* ceremony, and the dynamics connecting them—and indeed all *amchi*—to one another make little sense if viewed from within a rigid separation between the modes of transmission, or as stages in a teleological progression.

Whether they are institutionally trained or not, the *amchi* of Ladakh share a similar epistemological universe that eases fruitful interaction and permits dialogues of many kinds, including abstract discussion of medical theory but also discussion on clinical practice and exchange of medicinal materials. This we noted on many occasions over the course of the last 15 years, especially during the regular *amchi* seminars organised in the capital city of Leh. Although often vertically structured, with the *amchi* elite (institutional or not) addressing their non-elite, often village-based fellows, these events are made to foster interaction and exchange.

While the three educational modes presented here are oriented towards preparing *amchi* for a particular form of medical practice, and thus reflect associated taskscapes, we contend that individuals learn how to be *amchi* continuously and in multiple fields at once, both within and between the various layers of education. All have been influenced by processes of standardisation to some degree, but they still exist in constant interaction. What we must now establish is why and how *amchi* strongly associated with one or another mode of transmission interact with representatives of the other modes, and what effects this has upon Tibetan medical knowledge as an emergent entity and a discursive construct.

With few exceptions, CIBS graduates have set up private urban clinics or found work in NGOs and government posts, while a minority has emigrated to practice elsewhere in India or overseas. Their élite status and formal qualifications make them attractive in both private and public realms. However, it is notable of the 17 *amchi* employed by the government to work in rural clinics under the National Rural Health Mission (NRHM) since 2009 are counted 6 CIBS graduates and 11 *dusrapa amchi*. Developments which were unthinkable a few years ago have seen the products of both these modes legitimated by the state, as professionals being paid proper salaries, albeit at a lower rate than their biomedical counterparts. While this is entirely in accordance with the taskscape for which CIBS graduates have been prepared, *dusrapa* students trained for small-scale rural conditions must now adapt to practicing in public health facilities, alongside—but entirely separate from—biomedical doctors, and using medicines made centrally at an approved pharmacy. Many of these *amchi* had already spent long periods practicing on their own prior to incorporation into the NRHM, and most continue to practice privately in addition to their state-funded work, either from their homes or from purpose-built clinics. Under these conditions, while CIBS graduates tend to pay high prices for commercially produced drugs, most *dusrapa amchi* make their own medicines. This enables higher profit margins and the provision of medicines at subsidised rates, or without charge, to needy patients, which links to key notions of compassion and altruism in Buddhist philosophy and medical ethics. Many NRHM *amchi* also maintain close relations with senior practitioners, which give them access to medicines at subsidised rates or in exchange for medicinal plants.

Despite the undoubted primacy of college education in the professional sphere, senior *gyudpa amchi* remain highly respected and involved in the social and institutional reproduction of the tradition. Although few from the younger generation learn solely within the traditional stream, we know a few who still do study only from masters. Some of these go on to become highly successful, showing that the popular wish for, and value assigned to, certification is not universal or without rejoinders. Connections between senior and junior *amchi* remain strong in many ways, although this is increasingly breaking down as a result of institutional transmission, the mass production of medicines and the more general individualisation of Ladakh society. Many CIBS and *dusrapa* students are also *gyudpa*, however, and both family and apprenticeship-based lineages remain important, even to avowedly modernist *amchi*. They are indeed crucial in certain contexts, such as *smandrup* and *wang lung*, which are still considered central by almost every *amchi* (Blaikie 2013). Concerned largely with ethical and moral conduct, religious and social identity, *wang lung* and *smandrup* lie outside of any formal curriculum or examination, and far from the interests of the state, biomedical science or market-driven modernisation. Norms surrounding practice are transformed as they are passed on, fluctuating in relation to changes in the entire system, for example as new modes of legitimacy emerge, or as the social roles, responsibilities and moral economies through which practitioners relate to their patients are transformed (Besch 2007). These are important dimensions in the transmission of medical culture, which are not part of any official curriculum or specific body of theory.

A living tradition, as Scheid points out (2007, p. 10) is one where there is debate and argument. As elsewhere, Tibetan medical practitioners in Ladakh experience tensions, differences of opinion and criticism in several directions. While these disagreements largely reflect the social and economic positioning of the *amchi* concerned, they often bear on the nature of their education. Institutionally trained *amchi* generally express a sense of superiority and paternalistic tolerance of their rural counterparts. Although they are school educated and formally trained, however, institutional *amchi* are criticised in turn by their *gyudpa* counterparts for what is seen as a lack of frontline clinical experience, a poor knowledge of pharmacy and a lack of Buddhist awareness:

> These youngsters who have studied in institutions act as if knowledge of the *Gyushi* was sufficient for them to become skilful *amchi*. Theoretical knowledge alone is not sufficient to be considered even a proficient *amchi*: experience is the key. *Amchi* must spend many years perfecting many kinds of practical knowledge, studying under masters and building their own experience through experimentation. How can the young *amchi* practice without doing all of this? They are just checking the pulse and giving pills – they do not know how to make medicines, they don't have to keep up interdependent connections with their patients: this way is not good for Sowa Rigpa or for the patients.

The technical and moral critique between the elite Ladakhis and their traditional counterparts is also mirrored by the way the exile Tibetans (in Ladakh and elsewhere) view Ladakhi *amchi*. The Ladakhis claim to have preserved a tradition

that the exiles have lost, characterised by the existence of *gyudpa* and non-institutional educational modalities which preserve a broad and skill-based approach to Tibetan medicine. However, for the Tibetans, *gyudpa* is largely a thing of the past and high standards of knowledge and clinical skill arise entirely through high quality formal education, dedicated and ongoing textual study, and the honing of a specialised form of clinical practice.

In both case, some *amchi* consider themselves to be explicitly superior to the 'others', showing not only a form of dominance in the medical field, but also their propensity to control and channel the way knowledge should be gained and applied (Crook 1996). Social relations of therapy and moral, as well as technical, evaluations of a 'good practitioner' vary across different taskscapes. Institutional students can sometimes end up squeezed from both sides, lacking abilities and lineage, technical skills and social legitimacy (Craig 2007, 2008). Indeed, Ladakhi *amchi* are today in a liminal space, between several modes of training and forms of legitimacy. Liminal spaces demand hybrid forms of learning, knowing and doing medicine, the flexibility to negotiate quite diverse social spaces and relationships, such as the NRHM *amchi* are being forced to do. The Dusrapa School does not have the monopoly on hybridity, however, as we have shown how followers of each of the other modes are also in constant motion between these registers and layers.

The *dusrapa* teacher is a firm advocate of the hybrid approach, but sees no simple or even desirable progression from lineage transmission towards standardised education, or from 'traditional' to 'professional' modes of practice. She worries about the practical skills of her former students, but also about the very dimensions that are the focus of our study: their ethical conduct and their ability to prepare efficacious medicines. These were brought into sharp focus during 2009, when *dusrapa* graduates began to be recruited for the 'mainstreaming' of Tibetan medicine into Ladakh's public health system:

> NRHM is very good for the *amchi,* but if it is not well organised and does not have proper rules, it will just become like the allopathic [biomedical] system: the *amchi* will work for two or three months and then run away[23] […] They think they are getting free medicine, a good salary, so they don't have to study or work hard anymore. They don't have to make medicines either – they are just sitting there. This is not good for the system or the patients. Private *amchi* have more responsibilities – if they don't work hard, if they are not skilful, they get no money. They have to be sincere and they have to give a good service to the people, or patients stop coming and they have to close the clinic, which is very shameful. Government workers, who cares: you can be lazy and still the salary comes!

This warning reflects familiar ethical and practical critiques amongst certain senior *amchi*, directed both at biomedicine and at the mainstreaming of Tibetan medicine. State enfranchisement is universally welcomed, but is seen to encourage

[23] This remark refers to the high levels of absenteeism which plague rural health services in Ladakh. Many public health workers attend remote postings sporadically, making service coverage look much better on paper than it does on the ground.

indolence and complacency, lapses in sincerity and bad ethical conduct. Such things remain grave errors in the eyes of most *amchi.* Private practitioners in town and village alike must build and maintain medical power largely through popularity, which demands sincere service according to locally inflected norms and values, and within a moral economic framework. There is a widespread perception among *amchi* of all sides that institutional education does not favour the development of these individual qualities.

However, there are many practitioners of Tibetan medicine who are pushing hard for further standardisation and increased institutional rigour (Central Council of Tibetan Medicine 2008; Tso 2010). Standards and institutions are not only imposed by external parties such as the state, or the object of political and economic processes—*amchi* exercise agency, self-consciously strive for balance between their perceived tradition and changing circumstances, simultaneously defending and reconstructing tradition (Craig 2012). Those pushing hardest in this direction in Ladakh are the *amchi* élite, who hold government positions or run *amchi* associations, represent Tibetan medicine to the outside world and articulate with government discourses and individuals (Blaikie 2011; Pordié 2013). However, technical and social distancing from 'traditional' and largely rural counterparts conceals the many links that exist between layers of medical education in the region.

What we find particularly significant is the way that power is being brought to bear upon how skilful practitioners are to be judged and validated, and the influence these debates have upon the way medical knowledge is conceived, structured and shaped. This includes the decline of once essential features in *amchi* taskscapes such as medicine production, skilful negotiation of doctor–patient relationships and Buddhist practice.

Conclusion: From Enskilment to Education

Our exploration of Tibetan medical transmission has traced the evolving dynamics between coexisting but unequal forms of knowledge in a particular socio-political setting and historical moment. The three layers of education we have outlined here are in many ways separate and in some ways incommensurate, but are at the same time deeply interrelated. The form of medical knowledge and methods of its transmission are being shaped increasingly by the concerns of the modernist state and the local elite with standardisation, specialisation and the preparation of professional clinical practitioners. What we have observed corresponds to a shift away from enskilment, which is central to master to disciple channels and involves a form of 'learning through doing', and towards education, as represented by institutional learning. Each mode of instruction presents a taskscape for which students must be taught and trained in particular ways, while other dimensions are not deemed necessary, let alone decisive, for medical competency. Currents of continuity and transformation flow through and between each of the layers, following circuits and networks that cross all kinds of apparent boundaries.

The notion of 'currents of tradition' resonates strongly here, focusing as it does on the enduring threads of continuity and connection through which essential

elements of medical tradition are galvanised, transmitted and transformed. Currents of tradition are conceived as 'groups of practitioners whose members are related to each other by personal association, actual or fictive kinship ties, retrospective histories (…) and who share ideas, techniques, geographical proximity, stylistic similarities, aesthetic preferences, or any combination of these' (Scheid 2007, pp. 12–13). Inherently fluid, currents allow for the incorporation of different influences, for members to occupy central or more peripheral spaces. They are constantly blending and dividing, reconfiguring themselves internally and being shaped from the outside. Through them continuity is maintained, disjuncture and contradiction expressed, change negotiated and innovations introduced, incorporated, adapted or rejected, and models in which distinct modes of learning, knowing and applying medical knowledge somehow entirely replace those that came before appear increasingly unsatisfactory. The various modes of learning and taskscapes studied in this article show the continuities as well as the ruptures between each of them, in a way that provides both innovation and tension as these modes are layered upon one another. Ways of teaching and styles of learning and practicing build upon one another and as tightly interwoven elements of the medical system as a whole.

To understand how this works in practice, we broadly positioned ourselves in the growing space of convergence between cognitivists, phenomenologists and practice theorists in their 'thinking about knowing', where 'there is mutual recognition that knowledge-making is a dynamic process arising directly from the indissoluble relations that exist between minds, bodies, and environment' (Marchand 2010, p. S2). Our focus on the dynamic, practical and experiential dimensions of medical knowledge has led us to reject models which posit learning to be limited to a single well-defined field and to consist in the 'transmission of representations' (Sperber 1996). Instead, Tibetan medical knowledge and education in Ladakh make better sense when seen as an ongoing 'guided rediscovery', which is emergent in fields of (more or less) skilful practice:

> In the passage of human generations, each one contributes to the knowledge-ability of the next not by handing down a corpus of disembodied, context-free information, but by setting up, through their activities, the environmental contexts within which successors develop their own embodied skills of perception and action (Ingold 2001, p. 142).

Master to disciple medical education comprises all aspects of the engagement between the novice and their total environment: minds, bodies and materials, codified knowledge, oral streams and embodied *habitus*, complex social relations, political and economic structures and processes and so on. The *Gyushi* and major commentaries open a pathway to Tibetan medical knowledge and are certainly essential to practical competence, but they are not the knowledge itself, as this is emergent in fields of practice. It is clear in *gyudpa* stream that what is being transmitted and learned is a cultural system, not fixed, always modulating, but nonetheless a complex body of many kinds of knowledge. It is an attempt to prepare the *amchi* for all that the taskscape of small-scale rural practice entails. This is technical, in terms of abstract theory, concrete clinical action and medicine production, but also social in terms of roles and relationships, ethical conduct and

ritual practices. This takes place through explicit instruction and implicit enculturation, personal relationships or again dynamics of lineage and succession.

The institutional milieu is heavily conditioned by Indian, and indeed transnational, notions of modernity, shaped by logics of capitalism and the exigencies of the state, yet it is still the transmission of medical culture, albeit one adapted to very different external conditions and internal dynamics. The institutional separation of the many fields of competence and the specialisation of medical knowledge suits the preparation of professional physicians, but is inadequate for the training of competent practitioners in terms of pharmacy, social and ethical behaviour. The *dusrapa* course sits between these two, calling upon elements of both in order to prepare *amchi* for either taskscape, or as the current reality demands, frequent movement between the two. Education does not stop with formal instruction in any of these modes—it is a continuous process of engagement between people and learning environments.

The local variation and adaptability of technical knowledge shaped by practice and experience, embedded in pluralistic and non-totalising social frameworks is increasingly being replaced by the formalised, systematic and replicable models of scientific knowledge (Scott 1998). This model tends to be closely linked to the fabric of power in today's world. In Ladakh, social power is held by the minority of formally educated practitioners and is concentrated in urban areas, showing congruence between social power and styles of learning. There is a re-ordering of knowledge and power in which the institutionalisation of training play a key role. The differences between rural practitioners and their urban counterparts have widened considerably in the region. The first are presented as the guardians of tradition and the latter embody a form of social success. Driven by the powerful forces of the modernist state and capitalist market, the institutional, 'successful' educational model works to homogenise, simplify and standardise marginal knowledge forms, rendering them universally comprehensible and more readily controllable. However, paying close attention to adaptation and local responses to national policies and global processes, we saw in this text that the newly dominant mode has not displaced the former modes, but builds upon them and interacts with them in numerous ways. The changes, however, are not so much of a structural nature but correspond rather to adjustments, for the traditionally dominant groups continue to exercise their influence with a different mode of legitimation and a very pragmatic social orientation.

Once at the core of transmission and of *amchi* practice, pharmacy has been firmly pushed to the margins. This is appropriate for those who are being mainstreamed into the public health system, with no need to make their own medicines. But for many others in today's Ladakh making one's own medicine remains crucial for reasons of economics (it is cheaper to make one's own), but also for the perceived clinical benefits of knowing the precise constituents and combinations in each medicine, the lack of trust in industrial medicines, as well as the sense of continuity and the completeness of knowledge (Blaikie 2013). Similarly, ethical conduct and the role of Buddhism in medical practice are being reformulated, their components understood and assembled differently depending on the taskscapes that characterise the various layers of education. On the one hand, social expectation of qualifications and certification that are rising amongst élite and urban practitioners lead to a moral as well as a technical critique of unqualified practitioners, who are portrayed as

ignorant of the texts and unable to provide a wide array of powerful and effective drugs. This has moral inflexions, given that curing patients is ultimately a spiritual as well as practical imperative of the *amchi* and relies primarily upon medicines. On the other hand, rural and senior *amchi* are apt to criticise junior and institutionally trained *amchi* for their lack of practical skill or clinical experience.

More generally, this paper underscored the necessity to bring together in the analysis what actually *makes* medicine if we are not only to understand the 'ways of knowing' in Tibetan medicine but also to reflect on the category of medicine itself: theoretical and abstract medical knowledge, Buddhism, social relations, embodied practice, humans, medicinal materials and their environments, all form Tibetan medicine (Adams et al. 2011; Craig 2012) and all are essential components of the learning process. Missing this would mean ending up with a definition of medicine that would be constrained 'by the bracketing forces of medicine itself—conceptualized across time as a naturally delimited system dealing with illness and disease—as against a history of health that encompasses much more' (Alter 2005, pp. 15–16). The study of the relations and associations that make learning and knowing possible for each educational setting give a fair idea of the many fields in which medical practice deploys itself. The changing taskscapes of Tibetan medicine in Ladakh therefore shed light on the reconfiguration of the category of medicine and on its modern delineation. As we have attempted to show, new ideas of what medicine is—and what it should be—are increasingly visible in state-led, market-driven and performance-based institutional settings.

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