

The Three Channels in Tibetan Medicine
*With a Translation of Tsultrim Gyaltzen's 'A Clear Explanation
 of the Principal Structure and Location of the Circulatory
 Channels as Illustrated in the Medical Paintings'**

FRANCES GARRETT and VINCANNE ADAMS
 with assistance from
 JAMPA KELSANG, YUMBA and RENCHEN DHONDUP

This article comments on a centuries-old controversy in Tibetan literature: how the complex descriptions of the human circulatory system found in Buddhist tantric contemplative texts can be reconciled with descriptions of the circulatory system in Tibetan medical texts. In the essay translated below (= TG), the eminent twentieth-century Tibetan scholar of religion and medicine Tsultrim Gyaltzen (Tshul khrim rGyal mtshan)¹ addresses this problem with recourse to texts dating back to some of the earliest periods of Tibetan literary history. Tsultrim Gyaltzen's voice thus adds a contemporary flavour to an ancient debate.² In the following introductory words, we will contextualise the translation with a brief overview of Tibetan medical and religious views on the human circulatory system.

The Circulatory System in Tibetan Medical Texts

The circulatory system portrayed in early Tibetan medical literature is

* This project was supported in part by grant T32 AT00052 from the National Center for Complementary and Alternative Therapies (NCCAM), U.S. National Institutes of Health. – The translation for this article was begun by Vincanne Adams with the help of Jampa Kelsang, Yumba and Renchen Dhondup. Their initial draft was brought to completion by Frances Garrett, who also added most of the introductory comments.

¹ This article uses the Extended Wylie transliteration scheme for transliterating Tibetan words. See <<http://www.thdl.org/collections/langling/tibetan-transliteration.html>> for a discussion of Extended Wylie – based on Wylie, the most commonly used transliteration scheme in use today – and other transliterations of Tibetan.

² GYATSO 2004 discusses mediaeval occurrences of debates on this topic.

roughly based on the classical Indian Āyurvedic tradition.³ Āyurvedic medicine describes a network of hundreds of large and small ducts, or channels, variously named *nāḍī*-, *sirā*-/śirā-, *srotas*- or *dhamanī*- in Sanskrit, that transport nutrients, wastes, respiration and other substances throughout the body. These channels connect internal organs and are responsible for digestive and other physiological processes, they permit movement of joints and limbs, and they carry information that allows sense organs to function. The precise enumeration of various types of channels and their functions, however, is a contested topic, and debates among Indian medical scholars concerning the circulatory system are common.⁴

The structure of the circulatory system in medical texts is significantly different than that of the circulatory system described in Indian tantric texts. Unlike in medical texts, tantric physiology begins with a vertical spinal column in which, or along which – this too is debated – are three primary channels. At each of four points along this vertical column, at the throat, heart, navel, and genitals, is a channel nexus or 'wheel' ('*khor lo*; Skt. *cakra*-), and all subsidiary channels of the body are connected to this vertical column. Although over the centuries some Tibetan writers have tried to unite medical and tantric accounts of anatomy and physiology, descriptions of the body in South Asian literature are so numerous and so complex that few differences are fully reconciled.

In Tibetan medical literature of the *Four Tantras*⁵ tradition, descriptions of

³ The maturity of the Tibetan system of pulse analysis, a means of diagnosis not present in Āyurveda until the twelfth century, suggests other influences as well, such as from Chinese traditions or indigenous Tibetan systems. See DUMMER 1994: 79, or SVOBODA/LADE 1999: 142-145.

⁴ Cf. DAS 2003: 553, 560, 584-590. See DASGUPTA 1975: 344-357 for an overview of the circulatory system in classical Āyurveda, followed by a discussion of the same in tantric texts.

⁵ The most important text in the history of Tibetan medicine, the *Gyushi* (rGyud bzhi), considered the principal medical text still today, is known in English as the *Four Tantras* (bDud rtsi snying po yan lag brgyad pa gsang ba man ngag gi rgyud) (edition used: [Lhasa]: Bod ljongs mi dmangs dpe skrun khang 2000). While the origins of this seminal text are debated, it is likely to have been arranged in the definitive form we know today in the eleventh century by the famous Tibetan physician Yuthog Yonten Gonpo (g.Yu thog Yon tan mGon po, 1112-

the human circulatory system focus on the circulatory channels (*rtsa*, equivalent to the channels variously named *nāḍī*-, *sirā*-/śirā-, *srotas*- or *dhamanī*- in Sanskrit). These are sometimes translated into English as 'veins', 'arteries', or 'nerves', although the term *rtsa* in Tibetan is not directly equivalent to any of these. The channels are the basis of the circulatory system of winds, blood, and other energies and fluids that connect all aspects of the body. The contemporary Tibetan medical scholar Thubten Phuntsok explains that in Tibetan medicine channels are classified in several ways (TP: 80). In one taxonomy of channels, there are said to be black channels (*nag rtsa*), also called blood channels, and white channels (*dkar rtsa*), also called water channels. Blood channels are further divided into 'pulsating' channels ('*phar rtsa*) and 'staying' channels (*sdod rtsa*), which are sometimes today translated as 'arteries' and 'veins' respectively. In Tibetan medical texts channels are also classified functionally, in which case there are four types: channels of formation (*chags*), channels of existence (*srid*), connecting ('*brel*) channels, and vitality (*tshe*) channels.

The fourth chapter of the *Explanatory Tantra*, the second book of the *Four Tantras*, presents this fourfold functional division of channels, beginning with three channels of embryonic formation. Called the water or white channel, the blood or black channel, and the wind channel, these three are said to grow outwards from the navel of the embryo. The water or white channel travels along the left side of the body, and the *Four Tantras* tradition states that it forms the

1203), probably following several centuries of development. This text spawned the composition of a large number of commentarial works over the centuries. The *Four Tantras* consist of one hundred and fifty six chapters arranged in four books: the *Root Tantra* (*rTsa rgyud*); the *Explanatory Tantra* (*bShad rgyud*), with a description of the human body and general information about the causes of disease and the principles of therapeutics; the *Secret Oral Tantra* (*Man ngag rgyud*), containing specific instructions and methods of diagnosis; and the *Concluding Tantra* (*Phyi ma rgyud*), containing specific information about various types of treatments. Page numbers from the Lhasa 2000 edition (= FT) are cited in this article. Portions of the *Root Tantra* and the *Explanatory Tantra* are available in English translation in CLARK 1995. Other portions of the *Four Tantras* on topics such as nosology, etiology and pharmacology, have been selectively translated as well, as for example in the works of R.E. Emmerick.

brain; its functions and activities are thus primarily focused in the upper part of the torso and head. The blood or black channel is said to travel along the right side of the body and is related to liver function, as well as with the emotion of anger and the bile humour; its activities are thus concentrated in the central part of the torso. The third channel of formation is associated with the emotions of desire and attachment and the region of the sexual organs, as well as with the activities of the winds.⁶ Although the issue is contested, some religious and medical scholars, including Lodro Gyalpo (Zur mkhar bLo gros rGyal po, 1509-1579), Desi Sangye Gyatso (sDe srid Sangs rgyas rGya mtsho, 1653-1703 or 1705), and the 20th-century scholar Tsultrim Gyaltzen, identify these three channels in the *Four Tantras* as the three channels of tantric physiology, as we will discuss below.

The second of the fourfold functional division of channels, the existence channels, are themselves of four types and are responsible for sensory engagement with the external world, emotional feelings and nourishment of the bodily constituents. Thubten Phunstok explains that in the *Four Tantras* tradition, once the channels of formation have been completely produced in the embryo, the existence channels develop in four locations in the body and branch out into hundreds of surrounding auxiliary channels. Situated in the brain, the first existence channel is responsible for the function of the sense organs. The second existence channel, in the heart region, is the basis of memory, conceptual-ity and awareness of the ego. The third channel is located at the navel and in this tradition is considered responsible for the embryonic body's growth. The fourth channel, in the area of the genitals, is referred to as the source of one's family lineage.⁷ Although the *Four Tantras* do not use the term 'wheel' ('*khor lo*) in this context, Tsultrim Gyaltzen explains that the four existence channels and their surrounding auxiliary channels described in the *Explanatory Tantra* are the four wheels referred to in Buddhist tantric systems (TG: 84).

The two connecting channels are referred to as white and black, or water

⁶ The *Explanatory Tantra* discussion of the circulatory channels begins at FT: 22; for the translation see CLARK 1995: 56-58.

⁷ TP: 83-85 summarises the *Four Tantras* presentation.

and blood, channels. In the adult, hundreds of subsidiary channels branch off from these two main connecting channels, interlinking the limbs and organs throughout the entire body. As in the Āyurvedic tradition, Tibetan medical texts debate the precise pathways of these hundreds of channels. The black connecting channels are said to be filled exclusively with blood and, passing through the liver, are involved in the sustenance and development of the seven bodily constituents⁸; a subset of these are the channels used in blood-letting. The main white channel, also travelling from the brain to the coccyx bone, is white in colour. It and its branch channels, sometimes glossed as 'ligaments', 'tendons' or 'nerves', are responsible for many of the functions also attributed to the existence channels, such as regulating emotions, enabling physical movement, and allowing speech and mental functions. The sixteenth-century medical scholar Lodro Gyalpo associates the white existence channel with the tantric solitary channel (*rkyang ma*) running vertically along the left side of the body, and the black existence channel with the tantric flavour channel (*ro ma*) running along the right side of the body.⁹

The *Explanatory Tantra* states that there are three types of vitality channel: one type that works throughout the entire body, a second type that accompanies respiration, and a third that also pervades the entire body as a sort of 'life force'.¹⁰ Thubten Phunstok explains that in the tradition of LG, the vitality channels are not 'real' (*dngos*) channels; rather, they refer to forces within the body that maintain life (TP: 101). Human life in this tradition is by definition dependent upon the continuation of three physiological functions: the 'radi-

⁸ A physiological system derived from Indian Āyurveda, the seven bodily constituents (*lus zungs*, Skt. *dhātu-*) in Tibetan medicine are the nutritive essence (*dwangs ma*), blood (*khrag*), flesh (*sha*), fat (*tshil*), bone (*rus pa*), marrow (*rkang*) and the reproductive fluids (*khu ba*).

⁹ Cited in TP: 108f. on the basis of Lodro Gyalpo's *Transmission of the Elders* (LG): 165. LG is the most famous medical work of the Zurlug (Zur lugs) school, or Southern Tradition, of Tibetan medicine, and is still widely used by medical students today. This sophisticated commentary on the *Four Tantras* addresses medical knowledge and philosophical debates from a variety of schools of Tibetan medical and religious thought, using Tibetan sources dating back to the eleventh century and translated Indian sources as well.

¹⁰ FT: 23; CLARK 1995: 58.

ance' (*gzi mdangs*) of the body caused by the metabolised essence of the reproductive substance; the movement of the breath; and the digestive fire of the body (TP: 102). When these functions are discontinued, death results. The vitality channels therefore refer to the activity of these three functions in sustaining life.

Pervading the entire body, the first of the three vitality channels is the body's digestive fire (*me drod*), which separates and refines the essential nutrients and wastes during the digestive process, thereby maintaining the function of all the bodily constituents that ultimately produce the body's radiant sentience.

The second vitality channel is the 'innate wisdom' (*ye shes*) wind that accompanies respiration. The innate wisdom wind is distinguished from the karmic (*las*) wind; the *Transmission of the Elders* explains that the karmic winds are those breaths that move in and out of the nostrils regularly, whereas the innate wisdom wind is the special type of wind that is only controlled through advanced yogic manipulations (TP: 103). If the totality of the innate wisdom wind is incorrectly circulated through the respiratory system, a person may become severely ill or die; for this reason these yogic practices are considered dangerous and are restricted to advanced contemplatives.

The third type of vitality channel is the body's 'life force' (*bla*), which is physiologically defined as the distilled essence of the body's reproductive substance, the refined substance that results from the total metabolic system that creates each of the bodily constituents. This life force is said to migrate throughout the body along a predictable track over the duration of a month, although the precise course of this track differs according to the various tantras, medical texts and astrological texts in which this subject is discussed in detail.

Another important channel described in the *Four Tantras* tradition is the life channel (*srog rtsa*). This channel is not named in the *Explanatory Tantra*'s fourfold functional division of channels, enumerated in that book's fourth chapter, described above, but it is mentioned in the context of embryology, in the *Explanatory Tantra*'s second chapter. That chapter states that the life channel develops from the navel during the sixth week of gestation. The identification of this life channel in relation to the other circulatory channels operative in adult physiology was, and still is, hotly contested among medical

and religious scholars. Some medical scholars claimed that this life channel corresponds to the black blood channel;¹¹ still others claimed it was the white channel or the spine itself.¹² Describing Lodro Gyalpo's position on this issue, Tsultrim Gyaltzen posits that the life channel that initiates embryonic growth is to be identified as the central channel (*dbus ma*) of the tantric traditions; these scholars state that the two terms are thus synonymous for the same circulatory function.

The Circulatory Channels in Tibetan Buddhist Traditions

The definition and enumeration of the circulatory channels is clearly a matter of controversy in medical and religious texts from the origins of these literary and scholastic disciplines in Tibet to the present date. Descriptive explication of the human psychosomatic body is certainly one of the most complex and heavily theorised topics in Buddhist medical and religious scholasticism. In the twelfth century, the Sakya master Drapa Gyaltzen (Grags pa rGyal mtshan, 1147-1216) wrote that it is vitally important for religious practitioners to know about the body because the body is the basis for meditation practice. He cites the *Samputi* tantra to say that, '[Even if you know all] the rituals of the 84,000 divisions of the *dharma*, without knowing the nature of the body none of those [teachings] would have any effect.'¹³ Attempting contemplative practices without a clear understanding of the body, Drapa Gyaltzen continues, is like trying to milk an animal by tugging at its horns.

In Tibetan tantric contemplative systems, the basis of human physiology is the subtle architecture of channels, winds and quintessential essences (*rtsa*, *rlung* and *thig le*) and the four, five or six channel nexuses or wheels (*'khor lo*).¹⁴ While tantric systems vary to some degree, in general the locations and

¹¹ TG: 85 attributes this position to the medical scholar Tashi Bum (bKra shis 'Bum), a student of Situ Panchen (Si tu Pan chen), who wrote a commentary on the *Four Tantras*.

¹² LG: 132 does not identify these scholars by name.

¹³ Grags pa rGyal mtshan: *rGyud kyi mngon par rtogs pa rin po che'i ljon shing* (in: CW, vol. 3, 60a-b).

¹⁴ In a system of physiology derived from Indian tantric texts, the term *rtsa* is equivalent

functions of the three channels are agreed upon. The central channel (*dbu ma*, Skt. *sūṣumṇā*-) runs through the centre of the wheels from the genitals to the crown of the head. Control over the entry of the winds into the central channel and their maintenance within that channel, which is ordinarily empty, is the objective of many of the most advanced tantric contemplative practices.

Running vertically through the centre of the body to the left and right of the central channel are the solitary channel (*rkyang ma*, Skt. *pīṅgalā*-) and the flavour channel (*ro ma*, Skt. *iḍā*-) respectively. The white-coloured solitary channel, along the left, is said to face downward, and the red-coloured flavour channel, on the right, is said to face upward. The upper tips of these two channels connect at the nostrils, and it is through these channels that ordinary respiration travels. The bottom ends of these two channels approach the lower tip of the central channel, but ordinarily they do not enter the central channel; it is the aim of many advanced tantric practices to cause the ends of the right and left channels to touch the central channel so that the respiration may enter the central channel during the course of contemplative practice. The lower tips of the right and left channels are also associated with expelling waste matter from the body: in men and women of good health, urine emerges from the solitary channel and, for women, menstrual blood from the flavour channel. The central channel is similarly associated with the release of reproductive fluids (TP: 107).

Many volumes of text in Indian and Tibetan literature are occupied by discussion of the three channels, their functions, their relationship to other aspects of the body psychologically and physiologically, and the techniques for controlling their functions during meditative practice. Nonetheless, in the dialogue between medical and religious traditions over the centuries, the existence of these three channels is questioned. Lodro Gyalpo cites an unidentified

to terms for 'channels' variously named *nāḍī*-, *sirā*-/śirā-, *srotas*- or *dhamanī*- in Sanskrit, *rlung* in general is equivalent to the terms for 'winds', *prāṇa*- or *vāyu*- in Sanskrit, and *thig le*, often translated into English as 'drops' but here translated as 'quintessential essences', is equivalent to the Sanskrit *bindu*-, *tilaka*- or *śukra*-. Different traditions of Tibetan Buddhist tantra have different ways of describing these physiological substances and functions, a complex topic that extends beyond the scope of this article.

Vajrayāna scholar to assert that the tantric presentation of three channels is a trope developed to enhance contemplative practice, and that in fact the three channels do not exist in the body (LG: 132). Summarising Lodro Gyalpo's argument, Tsultrim Gyaltzen asks how a transformative effect could possibly occur as a result of completing such tantric practices if the three channels did not even exist in the body (TG: 88). Other unidentified scholars claimed that if these three channels really existed, they ought to be clearly visible in a cadaver. Again Tsultrim Gyaltzen points out that many elements of the body, such as aspects of the bodily constituents or forces of illness, are invisible, and yet their effects prove their existence (TG: 89).

The Reality of these Controversies Today

These very debates echoed still in the seminar rooms of the International Academic Conference on Tibetan Medicine held in Lhasa in 2000. Scholars questioned their ability to "prove" the material existence of channels that have no apparent physical correlate in anatomical dissection, and physicians wondered whether Tibetan medicine should simply abandon discussion of such channels, since they have no obvious bearing on physical outcomes of medical interventions. Within the halls of Lhasa's Tibetan medical college and premier clinical institution, *Mentsikhang* (*sMan rtsis khang*), there is a growing tension between those scholars who remain committed to explications of Tibetan medicine that require acceptance of the three channels, and those who do not.

Many of these controversies have heightened importance today as *Mentsikhang* and Medical College scholars attempt to modernise their medical traditions by borrowing from and entering into dialogue with Western medicine. Curious about the medical writings addressing the contested topic of the circulatory system at present, the authors of this article made inquiries with Tibetan scholars in Lhasa. When the renowned medical historian and former director of Lhasa's *Mentsikhang*, Jampa Trinlay, was asked about the status of controversies over the three channels in Tibetan medicine, he commented that the debate has been resolved, conclusively, by the famous medical scholar Tsultrim Gyaltzen. He directed us to Dr. Gyaltzen's skillfully expressed and beautifully written scholarly article, translated below, appearing in a Tibetan vol-

ume of essays on medical research published in the late 1990s. Tsultrim Gyaltzen, one of the twentieth century's greatest Buddhist scholars of the Sakya school, also a distinguished scholar of medicine and highly regarded physician on staff at the *Mentsikhang*, passed away in Lhasa in 2001.

Tsultrim Gyaltzen divides his article, 'A Clear Explanation of the Principal Structure and Location of the Circulatory Channels as Illustrated in the Medical Paintings', (= TG) into three main sections. First, he briefly refers his readers to the paintings themselves. Second, the bulk of the article is devoted to a discussion of how the medical and tantric traditions explain the presence of the three channels in the human body. Finally, he addresses some additional scholastic debates about the role of the channels in the medical and tantric traditions. He relies heavily throughout the article on the views of Lodro Gyalpo, repeating many of the sixteenth-century scholar's arguments and citing many of the same scriptures.

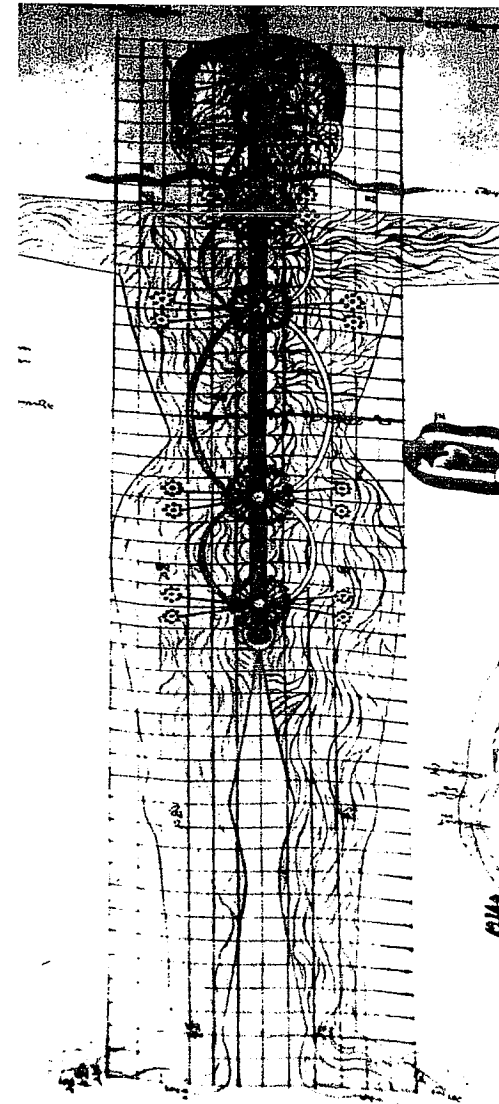
Tsultrim Gyaltzen's position is that the medical tradition and the tantric tradition are ultimately in agreement on the existence of the three channels in the human body. Because medical texts address most centrally the healing of illness, however, the topic of the three channels is therefore only alluded to in the medical tradition, and it is within tantric texts, which teach meditation practices that are explicitly involved with the subtle body, that the three channels are explained at length. Tsultrim Gyaltzen insists, contrary to alternative opinions, that the presentation of the body found in tantric texts describes the ultimately true condition of the body, and that the Tibetan medical texts are in full agreement with that presentation.

The Circulatory System in Tibetan Medical Paintings

TG begins as an explication of the traditional Tibetan anatomical medical paintings. This famous series of eighty medical paintings (*smān thang*) was commissioned by Desi Sangye Gyatso, the prolific regent of the Fifth Dalai Lama, founder of the *Chakpori* (*ICags po ri*) medical college in Lhasa, and author of the *Blue Beryl* (= SG), completed in 1688, a *Four Tantras* commentary that is very similar, and even at times identical, to LG. This series of medical paintings has been beautifully published with English annotations in DOR-

JE/MEYER 1992. There are a number of anatomical and physiological paintings in this collection. Paintings seven and eight include front and back views detailing gross skeletal anatomy; paintings nine, ten and eleven portray front and back views of the circulatory system. The twelfth painting depicts the locations and movements of the vitality channels (*tshe'i rtsa*).

As an example of what such depictions look like, on the following page an image from a thangka hanging in the Medical History Museum of the Factory of Tibetan Medicines, Nyangre Road, Lhasa, is reproduced; it depicts channels in the body. Unfortunately, the coloured original can only be reproduced here in black and white, with grey shades. A more detailed version of this image can be seen in AVEDON/MEYER/BOLSOKHOEVA/GERASIMOVA/BRADLEY 1998: 84.



A Clear Explanation of the Principal Structure and Location of the Circulatory Channels as Illustrated in the Medical Paintings

TSULTRIM GYALTSEN

Increase, decrease and disturbance of the humours, involving the natural elements, are external illnesses;
 Disharmony of the bodily elements (*kham*s), involving the channels, quintessential essences and winds, are internal illnesses;
 Illusory cognitions, involving the three poisons, are secret illnesses.
 I pay homage to the Medicine King, whose activities dispel all [these illnesses] without exception.¹⁵

Throughout the ages, many commentaries have been written on the *Four Tantras*, which is the principle text of the multitudinous scriptures of the Tibetan science of healing and the oral teachings of the Medicine Buddha, of Yuthog, and of an ocean-like assembly of sages. In particular, Miwang Pandita Sangye Gyatso gathered the best parts of the early commentaries and, skillfully drawing out the thoughts of Zurkhar [Lodro Gyalpo] on the earlier and later [commentaries], he wrote the commentary *Blue Beryl* [= SG]. In addition, he established the eighty medical paintings (*smān thang*) – an illustrated display of the phases of the basis [of illness, that is, the body], the symptoms [of illness], and the [methods of] healing, and a diagrammatic display of all the Accomplished Ones.¹⁶ From among those, in order to identify the basis – where does illness enter [into the body]? – and the object – how is it treated? – according to the *Explanatory Tantra*'s teaching about the natural condition¹⁷

¹⁵ In the first line of this introductory verse, '*phel zad 'khrugs*' is a threefold expression in Tibetan medicine that refers to the increase ('*phel*'), decrease (*zad*), and disturbance ('*khrugs*') of humours in the body, which causes illness. This topic is discussed in the eleventh chapter of the *Explanatory Tantra*.

¹⁶ The medical paintings are ornamentally framed with images of Buddhas important to the medical tradition and with images of legendary and historical figures that played significant roles in the transmission of medical texts.

¹⁷ We translate *gnas lugs* here as 'natural condition' – although it could also be 'basic condition', 'natural state', 'mode of abiding', etc. – rather than as 'anatomy', as is used by Barry Clark and other translators of medical texts, because the latter term has a historical meaning

of the body achieved [in a human birth], I will explain a bit about the natural condition of the circulatory channels. Here there are three [topics]: an introduction to the meaning of the illustrations, how these relate to scholastic theories, and a clarification of misconceptions therein.

One: The Meaning of the Illustrations

We can understand this from the clear explanations labelling the illustrations of the eleventh and twelfth medical paintings.

Two: Relating the Paintings to Scholastic Theory

Such illustrations are themselves the means by which scholars explained the meaning of the tantras in detail. Thus, because it is the case that having channels and wheels *is* the condition of the actual body, the presentation of the three channels and four wheels is explained in the medical tantras as well. If I were actually to explain all the terminology and theories – such as the names [of the channels], the *uma* (*dbu ma*)¹⁸ and so forth, and the activities that generate innate wisdom (*ye shes*), and so on – for which the Vajrayāna traditions (*gsang sngags*) are well known, however, [then my presentation] would be confused with that of the highest tantras of Vajrayāna.

In general, then, all samsāric manifestations emerge from the channels, quintessential essences and winds within [the body], and the medical tantras and Vajrayāna tantra classes agree on the gross nature of the channels, winds, and quintessential essences of the body. The medical texts, which primarily explain the treatment of illnesses that emerge in the bodily elements via the increase, decrease and disturbance [of the humours], and the therapies that instigate physical health, are the ordinary sciences (*rig gnas*). [84]¹⁹ Therefore, because these [medical teachings] are *not* the teachings of the great secret path in

specific to Western medicine.

¹⁸ The central channel.

¹⁹ Page numbers for the Tibetan text are inserted in square brackets, representing the beginning of a new page in the Tibetan original.

which realisation is generated in the mind through having penetrated the key points of the body, [nothing is explained in the medical texts] other than that which is relevant to the healing of disease. The channels and so on – as that with which realisation is generated about the path, such as the way of bringing those [channels, winds and quintessential essences] to the path by utilising them skillfully, mantra, samādhi, the clairvoyance of knowing others' minds, and the appearance of exalted bodies and pure lands; and about the fruit²⁰ – are not necessary to explain here [in full, in the context of medicine], although they *are* referred to indirectly [in the medical texts]. The manner of formation and the functions that are explained in the Vajrayāna are *ultimately* the natural condition of the body. If [the nature of the body] were explained in the context of medicine in a way that *disagreed* with that [tantric presentation], this would be as irrational as classifying the features of an ox without [mentioning] its black dewlap. As Sakya Pandita²¹ says:

When explaining the natural condition

Or classifying the features [of the body],

If you were to present it such that it were not the *real* condition,

How could you satisfy the scholars?

It would also be unreasonable [to offer a medical account of the body that disagrees with the tantras, because if the medical and tantric traditions were to disagree], there would be a contradictory relationship within the Tibetan scholastic traditions.²²

²⁰ In the traditional Buddhist threefold categorisation of basis, path, and fruit (*gzhi, lam, 'bras bu*), the subtle body is considered here to be the basis. The author is referring to a series of tantric practices that involve manipulation of the substances and energies of the subtle body.

²¹ Sakya Pandita (Sa skya Pan di ta kun dga' rgyal mtshan, 1182-1251), one of the five great Sakya forefathers, was a prolific Tibetan scholar with a large corpus that includes several medical texts. We were unable to locate the source text for this citation.

²² Tsultrim Gyaltzen explains here that because both the Buddhist tantras and the medical texts fall within the main Tibetan "sciences", therefore they cannot state contradictory positions. This is expressed as further evidence for why the medical and religious texts must be fundamentally in agreement.

The two mighty scholars, Jang and Zur,²³ explained this [issue] in a preliminary way, and their successors, such as Miwang Pandita²⁴ and Darma Menrampa,²⁵ established it as their own system and wrote commentaries that analysed its subtleties. In particular, Mipham Rinpoche,²⁶ an actualisation of Mañjuśrī, in a commentary on the difficult points of the *Explanatory Tantra* negated the position of those who say that there are no channels and wheels in the body, and that it is illogical to include channels and wheels in the context of medicine. [Mipham] held to the theories of his own system, that of Zurkhar [Lodro Gyalpo] and his later successors. Having written this special explanation in which the manner of teaching the formation, abiding, and functions of the channel and wheels was established textually by the evidence of scriptures and reasoning, all the scholars who understood the rationale accepted it without argument.

Now, if you wonder where and how this [topic] is referred to in the [medical] texts, [it is as follows]. [The *Explanatory Tantra*] states: 'In the sixth [week of embryogenesis or gestation], the life (*srog*) channel is formed in dependence upon the navel.'²⁷ It is also stated [in the *Explanatory Tantra*]: 'There are three channels of formation that extend from the navel.'²⁸ Therefore, three channels *are* referred to [in the medical texts, and these are] the central channel (*dbu ma*) and so on. That which is called the 'life channel'

²³ Jangpa Namgyal Draksang (Byang pa rNam rgyal Grags bzang, 1395-1475) and Zurkar Nyamnyid Dorje (Zur mkhar mNyam nyid rDo rje, 1439-1475), the two founders of the so-called Northern and Southern schools of Tibetan medicine.

²⁴ Desi Sangye Gyatso. Praise of his name has been recently banned in Lhasa, so the author is referring to him obliquely as the 'Administrator-Scholar'

²⁵ Darma Menrampa (Dar mo sMan rams pa blo bzang chos grags, 1638-1710), a medical scholar and the physician of the Fifth Dalai Lama.

²⁶ Jamgon Ju Mipham Gyatso ('Jam rñgon 'Ju Mi pham rGya mtsho, 1846-1912), a famous religious thinker of the nonsectarian movement who has also written widely on medicine.

²⁷ FT: 18; CLARK 1995: 50.

²⁸ FT: 22; CLARK 1995: 56.

(*srog pa rtsa*) is the central channel, and it is the basis that connects the white and black life channels – the two channels, the [right side] flavour (*ro ma*) and the [left side] solitary (*rkyang ma*). According to [the following scriptural] citation [from the *Four Tantras*], the four wheels are indicated [in the medical texts as well].²⁹

There are four types of great channels of existence (*srid pa*): the channel that causes the sense organs to apprehend their objects, located in the brain and surrounded by 500 tiny existence channels; the channel that causes clarity of the faculty of memory, located at the heart and surrounded by 500 tiny existence channels; the channel that causes the aggregates of the body to grow, located at the navel and surrounded by 500 tiny existence channels; and the channel that causes the family lineage to grow, located at the sexual organs and surrounded by 500 existence channels. These channels run straight up and down, holding together all the [various aspects] of the body.

Because the scholars previously mentioned have surveyed this topic in a mostly unified way in the scriptural and commentarial works, here, because it would be tedious to describe so many texts, I will [continue to] hold the *Explanatory Tantra* as the basis of discussion in these notes. [85] In order to better understand the citation from the aforementioned text, [the *Explanatory Tantra*, which states:] ‘In the sixth [week of embryogenesis], the life channel is formed in dependence upon the navel’, I will offer some additional information using eloquent commentarial accounts that also present [teachings on this topic]. In tantra classes such as the *Kālacakra*, [the transmigrating consciousness] entry into the womb is taught according to the model of the ten incarnations of Viṣṇu, whereas here [in the medical texts], the functions of the winds and so forth are taught according to the Bodhisattva collections.³⁰ Alternatively, [embryogenesis is sometimes presented in the tantras] in three stages: the

²⁹ FT: 22; CLARK 1995: 57.

³⁰ In this case ‘Bodhisattva collections’ (*Byang chub sems dpa’i sde snod*) refers to Mahāyāna texts in general, being contrasted here to tantric texts. In particular, the Bodhisattvas Mañjuśrī, Avalokiteśvara and Tārā are said to have authored medical texts; see RABGAY 1981.

fish, tortoise, and pig stages.³¹ With regards to that, some scholars, such as Trabum³², claim that the life channel is the black blood channel, and that the description of the central channel and so forth in the Vajrayāna tantra classes are *not* actually presented here [in the medical texts]. While the presentation of topics such as the central, flavour, and solitary channels have not been taught *in detail* according to the tantra classes, they *are* indicated indirectly [in the medical texts]. The [medical texts] are not like the treatises of the non-Buddhists, which contain *no* doctrine in which the very subtle key points of tantra are realised, but in fact, the [medical texts] are special oral teachings of the Vidyādhara of emptiness, the sages, and the Medicine Buddha, and [the topic of the circulatory system] is a topic that is taught just exactly like the [topic of the] body as established by those [great masters]. [The medical teachings] are not a *new* contemplative tradition in which there is no [spiritual] progress via the central, flavour, and solitary channels, nor any existence of those in the body, because, [to the contrary,] it is due to penetrating these important points – the channels, winds and quintessential essences that naturally exist in the Vajra body – that there is realisation, spontaneous and naturally emergent.

We may clarify this by taking up the later Zurkhar’s³³ own system, [as follows]. Our subject is the [*Four Tantras*]’ statement that the life channel emer-

³¹ Some Indian and Tibetan tantric texts, such as the *Guhyasamāja* and *Kālacakra* tantras, and the many exegetical systems that grew around these tantras in Tibet, describe the development of the embryo in either three or ten stages. In the three-stage scheme, the embryo grows through a ‘fish’ stage, a ‘tortoise’ stage, and a ‘pig’ stage, each period comprising roughly a trimester of foetal development. In the ten-stage scheme, gestation is divided into ten month-long gestational periods named for the ten incarnations of Viṣṇu, the first two of which are the fish and the tortoise. Although these Indian tantric sources were available to Tibetan authors as they began to compose their own embryologies, interestingly there was little consistency across Tibetan literature when describing the stages of foetal development. Thus the three- or ten-stage schemes are but two of several methods for documenting gestation in Tibet. See GARRETT 2005.

³² Trabum (bKra ‘bum; dates unknown) was a medical scholar and author of a commentary to the *Four Tantras*, and a student of Situ Panchen.

³³ The ‘later Zurkhar’ refers to Zurkhar Lodro Gyalpo. At this point the author moves into the stylised form of Tibetan prose used in philosophical debate texts.

ges from the navel. The life channel is the central channel [for three reasons]: because it is the basis of the *a*-[syllable]-possessing life wind, because it is the life-tree³⁴ of the four or six wheels, and because it is the first of all the channels that are formed.

The first reason is proven by the *Avalokiteśvara Commentary*,³⁵ which states: 'Life (*srog*) is the kusuma (*ku su ma*) and it is called either "very empty" or "very pleasing".' It also asserts: 'Initially the basis of the formation of the body is the central channel together with the life wind.'

The second reason is proven by the *Samvarodaya* (*sDom 'byung*) and other tantras, which explain: 'It is located at the centre of all the channel-wheels, and it generates everything.' This claim is made because [the central channel] is said to be at the centre of the six wheels, 'running twelve finger-lengths in the middle and bending at the genitals and crown of the head.' It is also said that 'it travels through the middle of the lotus flower of the heart, it is empty like water and flowers, and it is a *ham*-syllable hanging face down.' The auto-commentary to the *Inner Meaning*³⁶ states: 'The basis of the life wind that generates the body is the central channel and so forth, and the basis of the consciousness (*kun gzhi'i rnam shes*) is the great life wind that exists in the cen-

³⁴ The life-tree (*srog shing*), or life pillar, is placed as an axis at the centre of a stūpa or a statue.

³⁵ *sPyan bzigs 'grel pa*. This text, commonly cited by the main early commentators of the *Four Tantras*, such as Lodro Gyalpo, may be a commentary on the *Kālacakra*, but we have not identified it. Its reference to *ku su ma*, generally understood to refer to saffron, is unclear.

³⁶ The Kagyu author Rangchung Dorje (Rang byung rDo rje, 1284-1339) wrote an auto-commentary to his *Profound Inner Meaning* (*Zab mo nang don*), the *Zab mo nang gi don gsal bar byed pa'i 'grel pa*, publication data unknown. The *Profound Inner Meaning* (= PM), a text on yogic physiology and practice, is a commonly cited source in the important sixteenth-century *Four Tantras* commentary by Lodro Gyalpo. A source for fourteenth-century Tibetan views on the tantric body, this text contains twelve chapters, including topics such as the conception and formation of the body; explanations of the locations, functions, and movements of the channels, winds, and quintessential essences; the relationship of these to the consciousness; the link between the inner body and the external world; and the use of the subtle body features in contemplative practice. It is cited here from a xylographic print (1970?) from blocks preserved at Rum btegs (Rumtek) Karma chos sgar in Sikkim.

tral channel.' In this context the *Kālacakra* states: 'Above is Rāhu, below is the universe eater, and the root of all the winds is based on that.'³⁷

The third reason is proven by the *Samputi*, which states: 'It is located at the centre of the crown of the head, at the wheel, as an *e*-syllable. It is also located at the heart and throat, as a *bam*-syllable.'³⁸

These names are assigned to the life channel [86] because it is the basis of the life wind and it is the channel that generates, sustains and dissolves the body. As it is said also by Saraha³⁹: 'There is no doubt that when the winds and the respiration enter the great life channel, ordinary consciousness automatically stops.' Additional names include 'avadhūti' (*a wa dhu ti*), 'kusuma' (*ku su ma*), 'kundarma' (*kun 'dar ma*), 'subtle form' (*phra ba'i gzugs*), 'life channel' (*srog pa'i rtsa*), 'uma' (*dbu ma*), 'internal wood' (*nang gi shing gcig*), 'life thread' (*srog gi skud pa*), 'great path' (*lam po che*), 'downward-reaching great conch' (*mar snar dung can ma*), and 'upward-reaching Rāhu' (*yar snar sgra gcan*).

Now, to comment on the [*Four Tantras*] statement that in the twenty-fifth [week of embryogenesis] the movement of winds occurs:⁴⁰ every one of those

³⁷ In Hindu mythology Rāhu (sGra gcan) is known as a demon who tried to capture the sun and moon but was subdued, whereupon he became one of the planets; he is thus held responsible for eclipses. The 'universe eater' (*dus me*) is said to be one of three types of fire in Hindu mythology: fire for cooking; 'horse face fire' for evaporation; and the 'time fire' (*dus me*) that can burn the entire universe. The precise meaning of this citation is obscure, although it seems to refer at least generally to a moon-like element existing at the top of the central channel, in the area of the head, and a fire-like element existing at the bottom of the channel, in the area of the genitals. 'Moon' and 'fire' often refer to the male and female reproductive substance; cf. DAS 1992: 412, but also DAS 1992: 407 and DAS 2003: 521ff.

³⁸ *Samputi* is the *Samputanāmamahātāntra*, identified as Toh. 381 in U1 1934, and also as No. 26 in the Peking edition of the *Kangyur* (bKa' 'gyur).

³⁹ Saraha is one of the great Indian *mahāsiddhas* and a master in the *mahāmudrā* lineage. This citation does not come from the *Do ha mdzod kyi glu*, Saraha's best known work in Tibetan, and we have not identified the source text.

⁴⁰ This is a paraphrase of a verse from the *Explanatory Tantra* that explains when in gestation the respiration first begins to travel through the nostrils. FT: 19; CLARK 1995: 51.

winds merely branches out from the life wind. The channels generated throughout the entire body emerge from only the central or life channel. The *Sampuṭi* states: 'From the very limits of the feet to the crown of the head, from one to the other, a [connecting] thread occurs.' It is also said: 'The fact that the life wind emerges from the consciousness-element is something that must be known.'

[The *Explanatory Tantra*] explains that: 'There are three channels of formation that extend from the navel.'⁴¹ As for the channels that produce the body, the navel wheel emits three separate tips. From among those, the channel in which water circulates, or the moon channel, proceeds along the left side of the body and gathers at the heart, throat, and crown of the head wheels. Expressed alternatively, this is the white channel, which, as it travels outwards, is the basis of the formation of the brain. The brain is the substantial cause (*nyer len*) and cooperative condition (*lhan cig byed rkyen*) of both ignorance and the phlegm humour. This is why it feels as if ignorance is located in the brain, and it also seems like dullness, heaviness, cloudiness and so forth emerge predominantly from the head. Phlegm is produced from ignorance, and therefore it is established that the causes, conditions, and results [of phlegm illnesses] reside in the upper part of the body.

The channel in which blood circulates, or the fire-element (*me kham*s) channel, is transmitted along the right side of the body. It joins the channel that carries the nutritive essences (*dwangs ma*) at the great region of the liver in the middle of the body, and branching into two, it goes to the thirteenth vertebra; based on that, the black life channel and its branches develop. Blood is the substantial cause and cooperative condition of both hatred and the bile humour, and hatred occurs in dependence upon the black life channel and blood. Because bile is produced from hatred, the middle of the body is the location of its cause, condition and effect. Thus, when hatred is suddenly generated, it feels as if it has been stirred up and emitted from the middle of the body. That ac-

⁴¹ FT: 22; CLARK 1995: 56. The following three paragraphs are closely borrowed from sections of the *Transmission of the Elders's* commentary on the *Explanatory Tantra's* verses on the channels of formation (LG: 145-184).

tual red channel that touches the middle is gathered at the centres of the wheels of the heart, the throat, and the crown of the head, and it is that which branches out throughout the body.

The channel in which wind circulates, or the wisdom-element (*ye shes kyi kham*) channel, goes directly straight up in the middle of the body. One end precisely touches the previous [right and left channels] at the bottom of the navel. From that, the secret place in which the bliss-element flows is formed. The wind [humour] is located in the lower part of the body and the quintessential essences are the substantial cause and cooperative condition of both desire-attachment ('*dod chags*) and the wind [humour]. For that reason, desire-attachment is based on the quintessential essences, [87] because the wind [humour] is produced from that desire-attachment. The causes, conditions, and effects [of wind diseases] are all located in the lower part of the body, and so, when desire-attachment is suddenly generated, it feels as if it has been stirred up and emitted from the lower part of the body.

So, the brain is the substantial cause of ignorance and phlegm, blood is the substantial cause of bile and hatred, and the quintessential essences are the substantial cause of desire-attachment and the wind [humour]. Therefore, the causes are the three afflictions, the conditions are the brain, blood and the quintessential essences, and the effects are the three humours; they are respectively located in the upper, middle and lower parts of the body. This explanation of the central channel and so forth is correct according to the system of Mati (Ma ti).⁴²

Aside from this, another way of teaching the flavour and solitary channels is as presented in the commentary, which states: 'it moves through association with the breath.'⁴³ The karmic winds are the breaths that constantly move in the nostrils via the pathways of the flavour and solitary channels.⁴⁴ The innate

⁴² This refers to the system of Zurkhar Lodro Gyalpo.

⁴³ The following explanation is directly modelled after LG's commentary on the *Explanatory Tantra* discussion of the life channels (LG: 145-184).

⁴⁴ Ordinary, or karmic (*las*), breath, or wind, is being contrasted to exalted, or innate wisdom (*ye shes*), breath.

wisdom winds travel through the central channel pathway. [These latter winds] divide into two, one of which produces the power of the life wind, and the other of which circulates by mixing with the karmic wind. When yogins hold that very wisdom wind, possessing the nature of life (*srog*), within [the central channel] by means of the 'vase' contemplative practice (*bum can sbyor*), immortality results.⁴⁵ Ordinary people, however, exhale the wisdom wind. One's lifespan is shortened when [the breath] flows outside continuously. It is said that if one were to circulate 21,600 [breaths] per day, one would die after that. This is explained in the *Profound Inner Meaning* as follows:

The explanation of the external circulation [of the breath is as follows]:

From among all the openings of the sense organs and body hairs,

The two great channels travel through the nostrils,

Which are the special openings through which breath circulates.

On the right is the sun, the winds of the poisons, and

On the left is the moon, nectar.

These are the nature of 'means and wisdom' (*shes rab*).⁴⁶

The 10,462 and one half winds each day [through each nostril]

Are known as the winds of the sun and moon.

The 675 winds that move through the central channel between those two are
[known as the]

Winds of Rāhu, the sky, wisdom (*ye shes*), and

The heart of non-duality.⁴⁷

⁴⁵ The 'vase', 'jar' or 'pot' contemplative practice is a tantric practice in which the winds are gathered into the centre of the body such that one's abdomen is like a 'pot' or container for those winds. The related 'vase initiation' (Skt. *kalasābhiṣeka*-), aimed at cleansing the channels, is a tantric ritual involving consecration and empowerment of a series of vases containing various substances. See SNELLGROVE 1987, 1: 223-227.

⁴⁶ The phrase 'means and wisdom' refers to the Mahāyāna Buddhist integrated approach to practice that joins 'skill in means' or 'skill in liberative technique' (Skt. *upāya*-), which is the efficacious expression of compassionate activity toward sentient beings, with 'wisdom' (Skt. *prajñā*-), which is the realisation of the true nature of all phenomena as empty of inherent existence.

⁴⁷ This citation is found in the fourth chapter of PM: 11b.1-11b.3.

The *Vajra Essence* commentary⁴⁸ also states: 'When the life wind enters the central channel for the period of a day and a night, disease will disappear. If the life wind is held [within the central channel] for fifteen days, a pure land (*mkha' spyod*) [contemplative state] is conferred. If the life wind is held at the heart for a month, the yogin will attain immortality.' The tantras also claim: 'Having held it equally at the top, bottom and middle, all the body will be filled by the winds. In seven days, death will be taken away.' And, it is said in the *Kālacakra*: 'The sun and the moon are blocked, and they proceed equally and unequally; fire will enter into the central channel; by both the life wind and the downward elimination wind, the sun travels [into the central channel], as a result of which one deceives death ('*chi blu*') in an untimely way.'⁴⁹

In this context, the *Transmission of the Elders* and *Blue Beryl* are in agreement: the way the central channel forms up to and including the navel is presented in this way in the second chapter of the previously mentioned [text, the *Four Tantras*]. In addition, the citation, 'three channels of formation radiate out from the navel', indicates the solitary and flavour channels and the central channel up to below the navel. [88] The channel that produces phlegm and so forth is the [left side] solitary channel, in which the water-element moves; the channel that causes the production of bile and so forth is the [right side] flavour channel, in which the fire-element moves; and the channel that produces wind and so forth is that part of the central channel that goes up to the bottom of the navel and is the channel that contains the wind-element. The central channel touches the two lower ends of the right and left channels; the theories of the *Kālacakra* refer to this as three points of the channels at both the top and bottom of the navel. The primeval Buddha [text, the *Profound Inner Meaning*], explains:

The three tips [facing] downwards,
And likewise also the three tips [facing] up,
Exist as the middle of the Rāhu tip,
The right tip of the sun,

⁴⁸ We have been unable to identify to which text named *rDo rje snying* this citation refers.

⁴⁹ This citation is found in chapter four of the *Kālacakra* root text.

And the left tip of the moon.
 From the right, left and middle lower ends,
 [Which are respectively those of] the winds of water, fire, and space,⁵⁰
 Move faeces, urine, and reproductive fluids.
 Channels that are like fastened shackles
 Are the three pathways of existence and elimination.⁵¹

Finally, according to the great commentarial teachings that were revealed [by Mipham], all channels are summarised as a collection of three types: wind channels, blood channels and water channels. Moreover, it is reasonable to say that it is exclusively the case that all wind channels radiate out from the central channel, all blood channels radiate out from the [right side] flavour channel, and all water channels radiate out from the [left side] solitary channel.

If it is explained other than this, that is, if one makes a claim that goes against the theories of the subtle meaning of the tantras that explains the natural condition of the body's channels, then a thesis that invalidates the scriptures would be established. Therefore it is best to abandon personal arrogance and follow the experts.

Three: Clarification of Misconceptions

Some writers claim that because the presentation of the channels and wheels is taught in the higher tantra classes such as the highest yoga tantra class (*bla na med pa'i rgyud*), it cannot be associated with medical texts. To the contrary it is quite suitable to do so because, for example, it is similar to instances when the power of medicines conquer illness in the non-Buddhist Vedic scriptures, the Vinaya scriptures, sūtras such as the *Golden Light*,⁵² the

⁵⁰ In the Rumtek edition of PM, this line of the verse says *chu dang me dang nam mkha' rgyu*, whereas here the text says *chu dang me dang nam mkha' rlung*.

⁵¹ In the Rumtek edition of PM, this line of the verse says *srog dang thur sel lam gsum nyid*, whereas here the text says *srid dang thur sel lam gsum nyid*. This citation is found in the third chapter of PM: 6a.6-6b.2.

⁵² The *Golden Light* (gSer 'od) referred to here is a sūtra found in the Tibetan *Kangyur* (bKa' 'gyur), known in Sanskrit most commonly as the *Suvarṇaprabhāsa(ottam)asūtra*; see SS. This sūtra contains a chapter on medicine. The entire text is translated in EMMERICK 1996.

Primeval Buddha [text, the *Kālacakra*], and tantras such as the *Cakrasaṃvara*. The explanation of how the body's actual structure is formed is systematised in the sūtras, tantras and the sciences, and all these presentations are the same. Moreover, when the issue is set forth as an object of logical establishment, manifestly it is not disproved by perceptual cognition; secretly, it is not disproved by inferential cognition; and very secretly, it is not disproved by scriptural cognition. Therefore it can be said that it is correctly proven.

Some writers claim that the channels and wheels that are explained in the tantra classes do not exist other than in meditation.⁵³ If they did *not* exist fully in the body, which is the Vajra basis for a secret *mantra* [practitioner], however, then what would be the transformed effect finally, after the contemplative has [completed the practice of] piercing the key points [of the body, if there were no channels originally]? This manner of objection is [89] quite unreasonable, because, as Sakya Pandita says: 'Those who make claims such as that the channel knots do not exist, are those who do not understand the theories of the tantra classes; they[, that is, the channels,] are very important.'

Some writers claim that according to the medical tantras' explanation of how the channels and wheels develop, they must not exist in the ordinary person's body. If they did, they ought to appear in a corpse, but since they do not, they should not be presented in the [texts of the medical] sciences. Although it is true that we cannot see them with our ordinary eyes, however, it cannot be proven that they do not exist just for that [reason]. If that were the case, it could be said that many other things in our bodies do not exist, like tiny insects, and illnesses, and aspects of the bodily constituents and wastes. Indeed, things that we previously could not see are visible [today] in reliance upon chemicals and scientific machines and so forth. There are countless objects of knowledge that cannot be understood by apprehending them [using the ordinary senses or new technologies], such as the very subtle secrets of the channels, winds and quintessential essences. It is therefore like the famous Dhar-

⁵³ Zurkhar Lodro Gyalpo addresses this same objection in LG: 132, with much the same conclusion. Tsultrim Gyaltzen's line of discussion in this section is closely modelled after this argument in LG.

makīrti said: 'It is not the case that things do not exist because we do not see them.' The channel structure itself is merely a proliferation of all channels of the body from the flavour, solitary and central channels; from among the many channels [of the body, those three] are the roots, and they are the main channels that cause the generation, growth and abiding of the body, above and below. As one takes to heart the way this expansion occurs, it is drawn like a map, and so as soon as it is experienced just like this, there is no need to see it. In addition, about the central channel the tantras declare: 'Because the central channel is the channel of wisdom (*ye shes*), it pervades all channels.' The *Tantra of the Union*⁵⁴ states: 'A channel lies along the centre, with the capacity for clarity or obscurity [depending on the abilities of the observer], indivisible and extremely tiny.' The *Mahāyoga (rNal 'byor chen po)* tantra identifies it as 'the finest of the fine, supremely excellent'. For this reason it is said that ordinary people cannot see [the channels].

The proofs that have been established here are described in brief, and they should be expanded upon elsewhere.

For whomever is suffering bodily pain,
What else is there than medicine, the most excellent protective friend?
For this reason beings uphold, preserve and spread this science,
Making efforts for the benefit of others.

The science of medicine, the excellent essence of the ocean of the Buddha's
word and the commentarial treatises,
The jewel that is the lord of the Nāgas, sages and Vidyādhara,
(The victorious wish-fulfilling lord, the glorious *Four Tantras*), was
Offered to this land by that supreme guide, Yuthog.

Pray by this excellent tradition,

⁵⁴ This text's title is here simply rendered as *Kha sbyor*. LG quotes this same citation, calling the text, *kun tu Kha sbyor*. There are also a tantra known as *Kha sbyor* with the full title *rNal 'byor ma bzhi'i kha sbyor gyi rgyud ces bya ba*, No. 24 in the Peking canon; a text, '*Phrul 'khor nyi zla kha sbyor gyi rtsa 'grel*', by Vairocana (Pe cin: Mi rigs dpe skrun khang 1993); the *Kha sbyor brtag pa bcu'i don bshad pa* by Kun dga' snying po (1092-1158), published in the *Sa skya'i gsung 'bum* (ed. rDo rje Rin chen and Nor bu Kun 'grub, Lan kru'u: Kan su'u mi rigs dpe skrun khang 1994), vol. 1: 454-476. We have not identified the source of this citation.

Displayed at the tip of the victory banner of faith, without confusion.
Those fortunate ones who satisfy the welfare, happiness, and desires of themselves and others
Practise the glorious [*Four Tantras*].

Although you are born as the inheritor of such an excellent jewel,
When you turn the mind toward mere stones,
Verbally refuting [the medical tradition], citing hundreds of faults,
Why make vows to these lineage holders?

The land of snows shines radiantly as the holder of merit.
The science of medicine is a river, and the great compendium of tantras is the ocean;
The analysis of difficult issues is invoked by the winds –
Observe the play of movement of the waves in their eloquent explanations.

Those who are mistaken do not consider the Buddhas and Bodhisattvas to be genuine,
And they thereby establish that which is not deluded to be deluded.
Do not entrust yourself to such people!
Maintain accordingly the medical scriptures and the thought of the Medicine King.

Bibliography and Abbreviations

- AVEDON, John F.; MEYER, Fernand; BOLSOKHOEVA, N.D.; GERASIMOVA, K.M.; BRADLEY, Tamdin Sither 1998: *The Buddha's Art of Healing. Tibetan Paintings Rediscovered*. New York: Rizzoli Publications.
- CLARK, Barry 1995: *The Quintessence Tantras of Tibetan Medicine*. Ithaca, NY: Snow Lion Publications.
- CW = *The Complete Works of the Great Masters of the Sa skya Sect of the Tibetan Buddhism*. Compiled by Bsod Nams Rgya Mtsho. Tokyo: The Toyo Bunko 1968-1969. Bibliotheca Tibetica 1.
- DAS, Rahul Peter 1992: 'Problematic Aspects of the Sexual Rituals of the Bauls of Bengal', *Journal of the American Oriental Society* 112,3: 388-432.
- 2003: *The Origin of the Life of a Human Being. Conception and the Female According to Ancient Indian Medical and Sexological Literature*. Delhi: Motilal Banarsidass. Indian Medical Tradition 6.
- DASGUPTA, Surendranath 1975: *A History of Indian Philosophy*. Volume 2. Delhi: Motilal Banarsidass.

- DORJE, Gyurme; MEYER, Fernand (ed.) 1992: *Tibetan Medical Paintings. Illustrations to the Blue Beryl Treatise of Sangye Gyamtso (1653-1705)*. 2 vols. New York: Harry N. Abrams 1992.
- DUMMER, Tom 1988: *Tibetan Medicine and Other Holistic Health Care Systems*. New Delhi: Paljor Publications 1994.
- EMMERICK, R.E. 1996: *The Sūtra of Golden Light. Being a Translation of the Suvarṇabhāṣotamasūtra*. 3rd (revised) edition. Oxford: The Pali Text Society 1996.
- FT: Lhasa 2000 edition of the *Four Tantras*; see note 5.
- GARRETT, Frances 2005: 'Ordering Human Growth in Tibetan Medical and Religious Embryologies', in: Elizabeth Lane Furdell (ed.), *Textual Healing. Essays on Medieval and Early Modern Medicine*. Leiden: Brill, pp. 32-52.
- GYATSO, Janet 2004: 'The Authority of Empiricism and the Empiricism of Authority: Medicine and Buddhism in Tibet on the Eve of Modernity', *Comparative Studies of South Asia, Africa and the Middle East* 24,2: 83-96.
- LG = Lodro Gyalpo (Zur mkhar bLos gros rGyal po): *rGyud bzhi'i 'grel pa mes po'i shal lung*. Lhasa: Khrung go'i pod kyi shes rig dpe skrun khang 1991.
- PM = *Profound Inner Meaning*; see note 36.
- RABGAY, Lobsang 1981: 'The Origin and Growth of Medicine in Tibet', *Tibetan Medicine* 3: 10f.
- SG = Desi Sangye Gyatso (sDe srid Sangs rgyas rGya mtsho): *gSo ba rig pa'i bstan bcos sman bla'i dgongs rgyan rgyud bzhi'i gsal byed baidur sngon po'i malli ka zhes bya ba bzhugs so*. Dharamsala: Tibetan Medical & Astro Institute 1994.
- SNELGROVE, David 1987: *Indo-Tibetan Buddhism. Indian Buddhists and their Tibetan Successors*. Boston: Shambala.
- SS = 'Phags pa Gser 'od dam pa mdo sde'i dba'i po'i rgyal po zhes bya ba theg pa chen po'i mdo. *The Suvarṇabhāṣotamasūtreन्द्रarāja-nāma-mahāyānasūtra in its Tibetan Translation by Paṇḍita Jinamitra, Śīlendrabodhi, and the Locchava Bande Ye-śes-sde*. Reproduced from a print from Zur-ma'i Rdo Dgon-pa Thub-bstan-'phel-rgyas-chos-glin prepared by Ras-sprul Karma-mkhyen-rab-phun-tshogs. Bir, H.P.: D. Tsondu Senghe 1984.
- SVOBODA, Robert; LADE, Arnie 1999: *Chinese Medicine and Ayurveda*. Delhi: Motilal Banarsidass 1999.
- TG = Tsultrim Gyaltsen (Tshul khrim rGyal mtshan): 'sMan thang las 'brel pa rtsa yi gnas lugs kyi dpe ris skor gsal bar bshad pa', in: *Krung go'i mtho rim bod sman shib 'jug bgro gleng 'dzin grwa'i rtsom yig gces bsdus*. [Lhasa]: Bod rang skyong ljongs sman rtsis khang n.d. (probably in the late 1990's), pp. 83-91.
- TP = Thubten Phuntsok (Thub bstan Phun tshogs): *Gso bya lus kyi nram bshad*. Pe cin: Mi rigs dpe skrun khang 1999.
- UI, Hakuju (ed.) 1934: *A Complete Catalogue of The Tibetan Buddhist Canons (Bkaḥ.-hgyur and Bstan-hgyur)*. Sendai: Tōhoku Imperial University.

Sound and the Musician's Body*

MAKOTO KITADA

As mentioned in KITADA 2003, the musicological work *Saṅgītaratnākara* (= SR) of Śārngadeva treats human anatomy in its section 1,2 (*Piṇḍotpattiprakaraṇa*). It explains the anatomical process of vocal production in the human body in verses 3-10ab of section 1,3 (*Nādashānaśrutisvarajātikuladaivatarṣicchandorasaprakaraṇa*). According to these verses, sound/voice (*nāda*-) arises through the following process: the abdominal fire drives the vital wind upwards; the vital wind strikes the twenty-two tubes (*nāḍi*-) which, radiating from the heart, stretch obliquely or horizontally within the rib cage;¹ through this, the twenty-two microtones, of which the octave consists, are produced. In this presentation the human body seems to be compared to a string instrument, or *vinā*- (harp²). The striking of the tubes by the vital wind corresponds to the plucking of the catgut strings of a harp by the fingers of a musician.³

Thus, the twenty-two microtones constituting the octave are explained as being a result of the human organism. The dramaturgical work *Bhāvaprakāśana*, which also contains passages on musical theory, even considers vocal manifestation to be a result of metabolism, in associating these microtones with the twenty-two vessels (*sirā*-) carrying the seven body elements (*dhātu*-) arising in the transformative process of metabolism.

By mentioning abdominal fire, vital wind and tubes radiating from the

* I express my thanks to Ms. Kazuyo Sakaki (Hokkaido) and Mr. John Perkins (Halle) for their significant suggestions on this article.

¹ SR 1,3,8cd-9:

hr̥dy ūrdhvanāḍisaṃlagnā nāḍyo dvāviṃsatir matāḥ (8cd)
tiraścyas tāsu tāvatyaḥ śrutayo mārutāhateḥ
uccaccataratāyuktāḥ prabhavanty uttarottaram (9)

² The term *vinā*- can denote various kinds of instruments. In the SR presentation referred to here, a bow-shaped harp is dealt with.

³ For further information, see LATH 1978: 197-203.

