

Anthropologie

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Tibetan *Materia Medica* in Dispute* Pharmacological Achievements of DAR-MO SMAN-RAMS-PA BLO-BZANG CHOS-GRAGS**

KATHARINA ANNA SABERNIG

Abstract The rapid development of Tibetan medicine in the seventeenth century was the result of political interest and support, the transfer of medical knowledge, and the skills of Tibetan medical thinkers at the time. BLO-BZANG CHOS-GRAGS, often called DAR-MO SMAN-RAMS-PA “doctor from Darmo” for short, played a decisive role in this process and in the establishment of the Medical College on the “Iron Hill” (*lcags po ri*) in Lhasa. Less well known are the pharmacological achievements he conceived or compiled. Associated with the more theoretically oriented medical school of *Zur lugs*, as tradition tells us, BLO-BZANG CHOS-GRAGS stands in a line of transmission with the famous *Zur lugs* proponent ZUR-MKHAR BLO-GROS RGYAL-PO, the author of the *Mes povi zhal lung* commonly translated as *Transmission of the Elders*. This treatise is an important sixteenth-century commentary on the *Rgyud bzhi*, which is the most famous text on Tibetan medicine, also known as the *Four Tantras*. It was the pharmacological section of this commentary, which was criticized by another outstanding Tibetan physician called LHUN-SDINGS RNAM-RGYAL RDO-RJE, a representative of the rival medical school of *Byang lugs*. The orientation of this school is reported to be less theoretical, and rather more practical. It could be that as a direct result of this dispute BLO-BZANG CHOS-GRAGS wrote another text on the relevant chapter of the *Rgyud bzhi*. For this purpose he was assisted by GODARA from an Indian Brahman family and other Indian informants. The paper presented here will give preliminary insight into the historical background of BLO-BZANG CHOS-GRAGS achievements and his impact on further texts. Connections with earlier and later pharmacological writings will be analysed, as well as their differences.

Keywords BLO-BZANG CHOS-GRAGS – Tibetan pharmacology – Tibetan *materia medica* – public dispute – seventeenth century – Datura – Tibet

Tibetische *Materia medica* im Disput.

Die pharmakologischen Errungenschaften von DAR-MO SMAN-RAMS-PA BLO-BZANG CHOS-GRAGS

Zusammenfassung Die rasche Entwicklung der Tibetischen Medizin im siebzehnten Jahrhundert ist ein Ergebnis politischer Förderung, eines Transfers medizinischen Wissens und der Fähigkeit zeitgenössischer medizinischer Denker in Tibet. BLO-BZANG CHOS-GRAGS, des Öfteren auch DAR-MO SMAN-RAMS-PA, „Arzt aus Darmo“ genannt, spielte in diesem Entwicklungsprozess und in der Gründung der Medizinischen Universität am „Eisenhügel“ (*lcags po ri*) in Lhasa eine entscheidende Rolle. Weniger bekannt sind seine von ihm ersonnenen oder kompilierten pharmakologischen Errungenschaften. Assoziiert mit der vermehrt theoretisch ausgerichteten medizinischen Schule *Zur lugs* steht BLO-BZANG CHOS-GRAGS, wie uns die Tradition lehrt, in einer Übertragungslinie mit dem Proponenten der *Zur lugs*, ZUR-MKHAR BLO-GROS RGYAL-PO, dem Autor des *Mes povi zhal lung*, übersetzt mit: *Unterweisung der Ahnen*. Dieses Werk aus dem sechzehnten Jahrhundert ist ein bedeutender Kommentar zum *Rgyud bzhi*, dem unter dem Namen *Vier Tantras* berühmtesten Text zur Tibetischen Medizin. Es war der pharmakologische Teil dieses Kommentars, welcher durch einen anderen prominenten tibetischen Arzt namens LHUN-SDINGS RNAM-RGYAL RDO-RJE, ein Repräsentant der rivalisierenden medizinischen Schule *Byang lugs*, kritisiert wurde. Es wird berichtet, dass diese Schule weniger theoretisch sondern mehr praktisch orientiert war, und möglicherweise schrieb

* This paper is based on a presentation given at the biannual Conference of GAA/DGV (German Anthropological Association/Dt. Ges. für Völkerkunde): “Locations. Anthropology in academy, the work place, and the public sphere/Verortungen. Ethnologie in Wissenschaft, Arbeitswelt und Öffentlichkeit,” here Panel 41 (Convenor: Ekkehard SCHRÖDER) *Die Ethnobotanik in öffentlichen Diskursen um Heilmittel*, which took place in Mainz, October 2–5, 2013, and another presentation entitled *Pharmacological Achievements of DAR-MO SMAN-RAMS-PA BLO-BZANG CHOS-GRAGS*, which was part of the panel *Translating Medical Ideas across Himalayan Communities of Sowa Rigpa Medical Practitioners, Past and Present* within the 3rd ANHS (Annual Himalayan Studies) Conference held at Yale University, New Haven, Connecticut, March 14–16, 2014 (Convenor: Barbara GERKE).

** The transliteration in this paper is the system favoured by Turrell WYLIE but makes use of *v* instead of the apostrophe for the twenty-third letter of the alphabet according to long-standing Chinese standards.

BLO-BZANG CHOS-GRAGS als Folge dieses Disputes einen weiteren Text über das entsprechende Kapitel im *Rgyud bzhi*. Zu diesem Zweck wurde ihm von GODARA aus einer indischen Brahmanen-Familie und andere Informanten aus Indien assistiert. Dieser Artikel liefert vorläufige Einsichten in historische Hintergründe von BLO-BZANG CHOS-GRAGS' Errungenschaften und deren Auswirkungen auf folgende Texte. Dabei werden exemplarisch Verbindungen mit älteren und späteren pharmakologischen Abhandlungen analysiert und deren Unterschiede herausgearbeitet.

Schlagwörter BLO-BZANG CHOS-GRAGS – Tibetische Pharmakologie – tibetische *Materia medica* – Öffentliche Debatte – 17tes Jahrhundert – Datura – Tibet

Résumé in French, see p. 174

Introduction

BLO-BZANG CHOS-GRAGS (1638–1710?) was born in Darmo, a locality south-east of Lhasa. The scientific community has not, until now, examined the circumstances that motivated this remarkable physician to develop his elaborate pharmacopoeia, nor his findings. To examine his work and history it is necessary to elaborate on the general and medical zeitgeist at the eve of modernity in Lhasa in the seventeenth century.

BLO-BZANG CHOS-GRAGS can be introduced as an important medical player within the inner circle of the political elite in Tibet, represented by the Gelugpa school (sometimes called Yellow Hat school, *dge lugs pa* = “those of virtuous manner”). He was educated at different locations by various teachers, among others at Drepung Monastery (*vbras spungs dgon pa*), and later became a medical instructor at two small medical schools at one of the towers of the Potala Palace (more about his education and lines of transmission: TAUBE 1981; BYAMS-PA VPHRIN-LAS 2000 314f.; SABERNIG 2012: 360–364). As we learned from Janet GYATSO, this talented physician had already performed a public dissection in around 1670 (GYATSO 2011: 311). From 1675–1677 an Indian physician named MANAHA (also: MANAHO, RMA-NA-HO) residing in Yorpo (*g.yor po?*) was invited to Lhasa. He was a specialist in ophthalmology and BLO-BZANG CHOS-GRAGS studied under him on the treatment of eye problems (cf. SCHAEFFER 2011: 296). As a result of this training in eye surgery, BLO-BZANG CHOS-GRAGS was able to save the sight of the Fifth Dalai Lama BLO-BZANG RGYA-MTSHO (1617–1682), and he became one of his personal physicians. Before he studied under MANAHA he had been in close contact with another Indian scholar named GODARA who “was born in a pure Brahman family in the west Indian region of Maharashtra”

(SCHAEFFER 2011: 296). It was mainly through this contact with GODARA and other Indian informants, that BLO-BZANG CHOS-GRAGS was able to compose the pharmacological treatise (cf. *ibid*), which is the main focus of this paper. It describes *The Effect of Medicines of the Twentieth Chapter of the Bshad rgyud* (BLO-BZANG CHOS-GRAGS 2007: *Bshad pavi rgyud kyi levu nyi shu pa sman gyi nus pa bstan pavi tshig gi don gyi vgre ba mes povi dgongs rgyan*). He was a productive author, compiler and editor of various books and a skilled teacher and practitioner. He must have been aware of the fragile condition of the Fifth Dalai Lama's health and the importance of having a sovereign leader for this just recently unified state. It was the first reunification since the collapse of the royal period in the ninth century. The challenge of being the personal physician to the Fifth Dalai Lama culminated in a very delicate situation. It is well known that the death of the Fifth Dalai Lama was concealed for thirteen years for political reasons but it is less known how his personal physician dealt with the situation and the extent to which he was involved in the secret. Even Kurtis SCHAEFFER, who published articles on the Fifth Dalai Lama, his death and medical scholarship does not mention the impact on BLO-BZANG CHOS-GRAGS (SCHAEFFER 2003, 2005, 2006, 2011). The task of running the state had been entrusted to Regent SANGS-RGYAS RGYA-MTSHO (1653-1705), three years before the death of the Fifth Dalai Lama (1682). The Regent continued to pursue his interest in medicine, which began in early childhood, and he completed his work and compilations on Tibetan medicine during and after the time of his regency. In his autobiography he remembered the strong bond, which connected the Fifth Dalai Lama and BLO-BZANG CHOS-GRAGS (KILTY 2010: 333). The skilled physician is regarded as one of the Regent's

mentors in terms of medical education (TAUBE 1981: 73) although it appears that their relationship was not without friction. In 1697 the successor of the Fifth Dalai Lama, the Sixth Dalai Lama TSHANGS-DBYANGS RGYA-MTSHO (1682–1707) was enthroned. One year before the enthronement of the thirteen-year old Sixth Dalai Lama the medical college at the “Iron Hill” (*lags po ri*) was established just opposite to the Potala Palace, and BLO-BZANG CHOS-GRAGS became instructor of this prestigious Institution.

Characteristic of his written work

Generally speaking his work is characterised by a strong tendency to give a clear structure to otherwise uniform information. Theoretical information is presented via useful didactic devices and practical application, for example he dissected the human corpus to find the anatomical structures described in the classical treatises. In a text called *Unfolded Trees of the Explanatory Tantra* (BLO-BZANG CHOS-GRAGS 2005: *Bshad rgyud kyi sdong vgrems legs bshad gser gyi thur ma*) he explained the second part of the *Four Tantras* called *Bshad rgyud* with the help of tree metaphors resulting in a very useful mnemonic device for aspiring physicians. I was able to demonstrate that this text forms the basis of the murals in the Medical College at Labrang Monastery. He formulated theoretical concepts of pathology and pharmacology in great detail, which cannot be found in any of the major commentaries (for different aspects see: SABERNIG 2011, 2012, 2013, 2014a, b). Numbers and measurements accompany anatomical descriptions in his texts and his theoretical concepts on compounding medicine show a logical consistency in the development of Tibetan pharmacological concepts. Interestingly in his work on *Unfolded Trees of the Explanatory Tantra* the *materia medica* of the twentieth chapter of the *Explanatory Tantra* is almost completely omitted. The respective mural at Labrang Monastery does not show the structure given in his texts. It includes neither the structure of the text that the mural is based on, nor of *The Effect of Medicines of the Twentieth Chapter of the Bshad rgyud*. The reason for this exception might be found in the later history of Labrang Monastery but also potentially in the pharmacological achievements of BLO-BZANG CHOS-GRAGS and the following developments of Tibetan *materia medica* (for more details see SA-

BERNIG 2012: 375). In any case, the overall impact of BLO-BZANG CHOS-GRAGS’ text on pharmacopoeias that came afterwards is not yet clear and it remains open which parts of his work must be regarded as compilations of older texts and which are the result of his own achievements. There is no doubt that the merits of this remarkable character concerning the explanation and development of Tibetan medical knowledge cannot be valued highly enough.

The 17th century: a period of reunification

“When the name Lhasa is spoken, even in this age of global communication, interest is aroused, eyes light up or become dreamy” (POMMARET 2003: ix). Lhasa is regarded as the capital of the Dalai Lamas and in the seventeenth century the Fifth Dalai Lama was the central figure in the process of political unification of various Tibetan principalities after a period of war and struggle for power. In the case of Tibetan medicine the seventeenth century was extraordinarily fruitful. After a long-lasting rivalry among different medical schools, didactic materials in form of elaborated thangkas were created, better known as *Tibetan Medical Paintings* (e.g. PARFIONOVITCH *et al.* 1996) and the famous medial college at Iron Hill was established. This development in the scope of medicine appears to be a typical result of the political unification, and in the case of Tibetan medicine this period is even known as “the golden century” (MEYER 2003: 99). Diverging opinions of rival schools of interpretations where merged forming the basis of the so-called “birth of classical orthodoxy” which is of decisive importance in the “canonisation and institutionalisation of Tibetan medical traditions” (cf. “The six Temporal Foci”, in BLEZER *et al.* 2007: 430f). These differences of rival schools have been analysed in more detail by various authors and will not be elaborated on in this paper (e.g. TAUBE 1981; BOLSOKHOEVA 1993; GERKE and BOLSOKHOEVA 1999a; SCHAEFFER 2003, 2011; ZHABON 2003; CZAJA 2006a, 2006b, 2007; BLEZER *et al.* 2007: 431, 434; HOFER 2007, 2012; WANG LEI 1994; KILTY 2010). TAUBE analysed and translated the treatise *Thob yig* of Jaya Pandita from Mongolia (1642–1708), also known by his Tibetan name BLO-BZANG VPHRIN-LAS. His work already revealed important information, but most of the later publications are based on historical accounts with autobiographical aspects introduced by the Regent himself

(SANGS-RGYAS RGYA-MTSHO 1973 [1703]). Known under its Tibetan short name *Khog vbugs* its full length has been translated by KILTY (2010), entitled *Mirror of Beryl: a Historical Introduction to Tibetan Medicine* by Desi Sangye Gyatso. Sometimes it is also referred to by its English title *Interior Analysis of Medicine* (e.g. HOFER 2012: 37). HOFER'S work considers not only this historical source but is also based on ethnographic fieldwork and oral history. In brief, the seventeenth century was a period of unification, which eased the struggle for power and merged diverging opinions, allowing fruitful developments in the field of Tibetan medicine.

Pharmacological chapters in the *Rgyud bzhi*

Although smaller texts existed, the most important treatise on Tibetan *materia medica* before the establishment of Tibetan Medical College at the Iron Hill was the *Rgyud bzhi* with its commentaries. All of its four parts contain pharmacological aspects, but the second part, the *Explanatory Tantra* (*bshad rgyud*), comprises three theoretical chapters focussed solely on preclinical pharmacology. The first part, called *Root Tantra* (*rtsa rgyud*), mentions the most important drugs in a perfunctory way. The third part, the *Instructional Tantra*, gives clinical instructions for the application of medicines in the treatment of certain diseases and the fourth part called *Subsequent Tantra* (*phyi ma rgyud*), provides various practical aspects of compounded medicines. In a nutshell, the three chapters in the *Explanatory Tantra* explain different pharmacodynamic concepts: chapter nineteen elaborates on the basic concept of Tibetan pharmacology, i.e. the six tastes (*ro drug*). Chapter twenty introduces further characteristics of a medicinal substance such as the seventeen qualities (*yon tan*), which form a rather complex theory of the consistency of a substance, which is important for compounding remedies. Another similar allegoric concept is *nus pa* to explain the efficacy of tastes in connection with some pharmaceutical potency (The term *nus pa* is sometimes used in this specific meaning; in other contexts it subsumes the three pharmacodynamic branches *ro*, *nus pa* and *ngo bo* (e.g. the name of the chapter is *smam gyi nus pa* including also taste and character of an ingredient). The major part of the chapter (around ninety percent, which makes sixty percent of the three pharmacological chapters together in terms of verses) intro-

duces individual substances with regards to their therapeutic character (*ngo bo*, cf. SABERNIG 2011). In this part more than 380 medicinal substances, divided in eight different biological categories such as precious stones, herbal medicines or medicines from different animal parts are listed. The indication of each substance is given individually in the form of symptoms or syndromes and it is clearly this section, which is in the focus of BLO-BZANG CHOS-GRAGS' (2007) text on *materia medica*. The therapeutic character of a substance is described clearly, as are the problems a certain substance can be used to treat. For example to cure bone fracture (*rus chag*), pus (*rnag*), diarrhoea (*vkhru ba*) or syndromes such as heat in liver (*mchin tshad*), cold of stomach and spleen (*pho mcher grang ba*), or wind of heart (*snying rlung*). It is a more or less allopathic concept although we should not forget that the Tibetan indication of a medical plant cannot be transferred directly into biomedical terminology (cf. CZAJA 2013).

Chapter twenty-one gives an introduction into the composition of multicomponent remedies. Different groups of ingredients, which share the same therapeutic effect against certain problems such as diarrhoea, lung diseases or to eliminate "heat" are classified. Additionally, the combination of different tastes against certain imbalances forms the basis for compounding medicines. In regards to compounding medicines BLO-BZANG CHOS-GRAGS contributed some interesting details in his *Unfolded Trees of the Explanatory Tantra*, which will be discussed at the end of this paper.

Tibetan *materia medica* in dispute

The seventeenth century dispute over Tibetan *materia medica* was in large part shaped by two figures. The sixteenth century commentary to the twentieth chapter of the *Explanatory Tantra*, the *Mes povi zhal lung* by BLO-GROS RGYAL-PO (1509–1579), who was a proponent of the *Zur lugs* school and an outstanding intellectual of the time, was opposed by a representative of the rival medical school of *Byang lugs*, LHUN-SDINGS RNAM-RGYAL RDO-RJE. He criticized the respective section in the commentary. This conflict, mentioned in the historical account and autobiography of the Regent SANGS-RGYAS RGYA-MTSHO (KILTY 2010: 289, 328, 345), must have been considered an affront because it is said that LHUN-SDINGS RNAM-

RGYAL RDO-RJE announced his opinion at a public memorial pillar (MEYER 1996: 6). The *Khog vbugs* reveals he even ignored a request from the Fifth Dalai Lama to give teachings to local residents on anatomical questions and the tree metaphor (KILTY 2010: 289). Nevertheless the rebellious scholar won the favour of the Regent, although we know neither very much about the specific details of his life nor the exact terms of the pamphlet he announced on the pillar. The pamphlet is mentioned in the *Khog vbugs* as the *Great Adornment of the Stone Pillar* (*rdo ring rgyan mchog*, as translated by KILTY 2010: 328, 607). LHUN-SDINGS RNAM-RGYAL RDO-RJE must have been much older than BLO-BZANG CHOS-GRAGS or the even younger Regent SANGS-RGYAS RGYA-MTSHO because it is assumed that he was born at the end of the sixteenth century (cf. HOFER 2012). One of the reasons why information about his life is somehow lost in the mists of history might be the oral tradition of *Byang lugs*, in contrary to the *Zur lugs* which was not only famous for developing theoretical aspects but also for its tradition of writing commentaries (cf. ZHABON 2003: 477, HOFER 2012: 111). The *Mes povi zhal lung* is the major work of the *Zur lugs*, commenced by BLO-GROS RGYAL-PO and completed by BLO-BZANG CHOS-GRAGS. Even the founder of this school ZUR-MKHAR MNYAM-NYID RDO-RJE (1439–1475 [www.tbrc.org accessed 22.07.2014]), wrote another famous commentary to the *Rgyud bzhi* called *Bye ba ring bsrel* but *materia medica* is of minor importance. To announce major medical questions in public was nothing new in the history of Tibetan medicine. BLO-GROS RGYAL-PO had taken a similar measure after he had composed the *Mes povi zhal lung* (cf. CZAJA 2007: 351) and his public letter was answered by MI-PHAM DGE-LEGS RNAM-RGYAL (1618–1685), another proponent of the *Zur lugs* (cf. CZAJA 2008). SANGS-RGYAS RGYA-MTSHO's preference for the exalted LHUN-SDINGS RNAM-RGYAL RDO-RJE may have been political motivated. There was a discussion at the time on the origins of the *Rgyud bzhi*, namely whether it originated as the words of Buddha or if it was the work of a Tibetan scholar who wrote it in the style of a Sutra. As CZAJA described in detail, when ZUR-MKHAR BLO-GROS RGYAL-PO became older he was in favour of the thesis that it was the work of a Tibetan scholar (CZAJA 2006), which was not the opinion of the Regent. Moreover, according to his autobiography, SANGS-RGYAS RGYA-MTSHO had the

impression that DAR-MO SMAN-RAMS-PA (BLO BZANG CHOS GRAGS) and another physician had a superficial understanding of the texts and of how to identify plants. In contrast, RNAM-RGYAL RDO-RJE was able to clear up his questions and convince him with his knowledge on anatomy or the layout of the “medical tree” (cf. MEYER 1996: 7, KILTY 2010: 333). Although SANGS-RGYAS RGYA-MTSHO wrote *Khog vbugs* just two years before his death and he must have been aware of the achievements of DAR-MO SMAN-RAMS-PA BLO-BZANG CHOS-GRAGS, he did not mention them. This is remarkable because judging from the available texts written by this exceptional physician, his contribution to anatomy, pharmacology and the layout of the “medical tree” marked new steps for the development of Tibetan medicine. SANGS-RGYAS RGYA-MTSHO's *Khog vbugs* is an important contribution in illustrating the atmosphere of the time but some of the presented facts leave questions about whether there is evidence to support them. I suggest it should be regarded more as an allegorical offering than historical in consideration of its political context.

BLO-BZANG CHOS-GRAGS' text and later pharmacological writings

It is not clear whether BLO-BZANG CHOS-GRAGS' text on *The Effect of Medicines of the Twentieth Chapter of the Bshad rgyud* was a reaction to the critical evaluation by the Regent or if he was stimulated by the public announcement of LHUN-SDINGS RNAM-RGYAL RDO-RJE. There is no evidence that BLO-BZANG CHOS-GRAGS had the opportunity to discuss the criticised aspects with him. A remark in SANGS-RGYAS RGYA-MTSHO's autobiography suggests that there were no significant response to the pamphlet, therefore the Regent himself would have given his opinion in another text (KILTY 2010: 345, 598). Unfortunately this text is not available but the question arises why *The Effect of Medicines of the Twentieth Chapter of the Bshad rgyud* is not mentioned in the autobiography.

SCHAEFFER has discovered that BLO-BZANG CHOS-GRAGS was assisted in writing his pharmacopoeia by Indian informants such as GODARA. He informs us: “Godara was born in a pure Brahmin family in the west-Indian region of Maharashtra.” In 1664 the scholar of Sanskrit grammar, DAR LOTSAWA (DAR LO TSWA BA), who worked at the Potala during the

1660s and 1670s, employed GODARA to receive teachings from BLO-BZANG CHOS-GRAGS. GODARA became one of his assistant informants (cf. SCHAEFFER 2011: 295f).

The result of this assistance and apparent exchange of medical knowledge across the Himalayas is the text, which is in the focus of this paper. Historically this text stands between the pharmacological sections of the two major commentaries to the *Four Tantras*: the sixteenth century commentary *Mes povi zhal lung* or the *Transmission of the Elders* and the *Vaidūrya sngon po*, better known by the name *Blue Beryl*. The latter is said to have been edited by the Regent himself and according to TAUBE (1981: 73) it was BLO-BZANG CHOS-GRAGS who supported SANGS-RGYAS RGYA-MTSHO in compiling it in 1687/88. At that time it was not uncommon for the purported author was not the actual author. Gene SMITH gives another example: The biographies of G.YU-THOG YON-TAN MGON-PO the older and the younger was attributed to SANGS-RGYAS RGYA-MTSHO and later assigned correctly to BLO-BZANG CHOS-GRAGS (SMITH 2001: 827, 331). The famous commentary is based on a variety of sources (cf. CZAJA 2007: 363f), finally it was accompanied by the probably most valuable treasure of Tibetan medical depictions: *Illustrations to the Blue Beryl* also called *Tibetan Medical Paintings* in form of almost eighty paintings. Although the painted thangkhas do not reflect the text of the *Blue Beryl* or the *Four Tantras* in every detail, in the case of the *materia medica* the paintings depict the particular substances quite accurately. It is well known that it was SANGS-RGYAS RGYA-MTSHO's intention that all the details of medical ingredients would be painted realistically with the help of informants living in the regions where the plants were found (MEYER 1996: 7). Compared with the illustrated *materia medica* of chapter twenty, chapter nineteen and twenty-one are not depicted as accurately and exhaustively.

Maybe due to political instability after the violent death of the Regent and the short lifespan of the Sixth Dalai Lama the development of medical achievements at the newly established medical college at Iron Hill experienced a period of stagnation. New developments in Tibetan medicine took place only in the field of Tibetan pharmacology. The most important text is the ground-breaking eighteenth-century pharmacopoeia called *Shel gong shel phreng* by BSTAN-VDZIN PHUN-TSHOGS (1673–1743) who

resided near Derge (*Sde dge*). The text, composed in the 1720s, is sometimes translated as *Stainless Crystal Garland* (HOFER 2014b) and consists of two parts, a short introduction called *Shel gong*, which includes passages of the *Explanatory Tantra* in a slightly different sequence and sometimes includes new aspects, and a second one called *Shel phreng*, an autocomentarial part giving more detailed explanations. While the translation of the latter term, *shel phreng*, as “crystal garland” or “crystal rosary” does not pose any problem, the rendering of *shel gong* as “stainless” is doubtful. The THL online dictionary (<http://dictionary.thlib.org>) tells us that the meaning of the term is “crystal ball” (or “crystal globe” or “lump”). Likewise, the Tibetan-Chinese Dictionary (BGT: 2859) translates *shel gong* as 晶球 *jingqiu* “crystal globe”. It is interesting to note that JÄSCHKE mentions *shel sgong* “globe of glass” referring to MI-LA-RAS-PA (JÄSCHKE 2003: 562, under *shel*), which is also found in GOLDSTEIN's dictionary as “marbles, glass ball” (GOLDSTEIN 2001: 1102). However, both JÄSCHKE and GOLDSTEIN spell the second element *sgong*, not *gong*. It seems, then, that the element *gong* should rather be linked to *sgo nga* or *hya sgong* “egg” as well as *sgong ba* “to make round”. The orthography *shel gong* instead of *shel sgong* (as JÄSCHKE, and GOLDSTEIN have it) is probably due to the portmanteau process of word formation resulting, in the spelling *shel gong*, in an elision of superscript *s* in the second element. In any case, the title of the work *Shel gong Shel phreng* should be understood as *Crystal Globe [and] Crystal Rosary*. This perfectly fits the fact that the treatise is divided into a short and compact part (the “globe”) and a long elaborated pharmacopoeia (the “rosary”).

To the eight biological categories of the twentieth chapter a ninth group including different forms of salt is added and the substances are classified in further subgroups. One learns clearly which part of a plant or substance should be used and against which problems they are indicated (more on the classification within the *Shel gong shel phreng* see KLETTER & KRIECHBAUM 2001: 11; HOFER 2014b: 227). Closely associated with this treatise is the elaborately illustrated Tibeto-Mongolian *materia medica* of VJAM-DPAL RDO-RJE (1971; 18th century?), which also refers to other sources. Although his work written in Tibetan with amendments in Chinese, Manchu and Mongolian is quite famous (e. g. SMITH 1971: 2; GERKE: 2002: 37; HOFER 2014: 230f)

we know little about his life. “One suspects he was a student of Jigs-med-nam-mkha” (1768–1821) [...] He was certainly a product of the Ayurvedic tradition propagated among the Mongols by the great Sum-pa Mkhān-po Ye-shes-dpal-'byor (1704–1788)” (SMITH 1971: 2). SUM-PA MKHAN-PO YE-SHES-DPAL-VBYOR, born in Amdo, played an important role in the tradition of the Gelugpa, leaving an enormous literary legacy covering a broad spectrum of subjects, e. g. historical, astronomical, mathematical or medical issues as well as an autobiography which was completed by his students. His work is available in a reproduction by LOKESH CHANDRA (SUM-PA MKHAN-PO YE-SHES-DPAL-VBYOR 1979a; for more on his work, see DE JONG 1967). His work on Tibetan *materia medica*, shortly called *Shel dkar me long* (SUM-PA MKHAN-PO YE-SHES-DPAL-VBYOR 1979b) is obviously influenced by the *Shel gong shel phreng* in terms of the classification of certain groups and was one source of the illustrated Tibeto-Mongolian *materia medica* of VJAM-DPAL RDO-RJE, but compared with the *Shel gong shel phreng* it is less comprehensive and does not show any further pharmacological development. In his foreword to VJAM-DPAL RDO-RJE'S *materia medica* Gene SMITH (1971: 2) named some other sources mentioned in the colophon such as different parts of the *Rgyud bzhi* and its commentaries. As GERKE (2002: 37) already remarked, the colophon implies two surprising inaccuracies: First, according to the colophon the author of the *Mes povi zhal lung* would be ZUR-MKHAR-PA MNYAM-NYID RDO-RJE. This famous physician has contributed another important commentary, the *Bye ba ring bsrel* but he did not author the *Mes povi zhal lung*. The second inaccuracy is the name DAR-MO SMAN-RAMS-PA DKON-MCHOG CHOS-GRAGS. GERKE identified this name as BLO-BZANG CHOS-GRAGS whose pharmacological achievements are discussed in this paper. I endorse her hypothesis, although another scholar existed called RNAM-GLING PAN-CHEN DKON-MCHOG CHOS-GRAGS (1646–1718) who was a student of the Fifth Dalai Lama and is supposed to have edited and carved the block print of the *Mes povi zhal lung* in 1679 (cf. www.tbrc.org; accessed 25.07.2014). I checked quite a few random samples of VJAM-DPAL RDO-RJE'S *materia medica* to find some clarifying references regarding who DAR-MO SMAN-RAMS-PA DKON-MCHOG CHOS-GRAGS actually was, but I found neither DKON-MCHOG, BLO-BZANG nor DAR-MO SMAN-RAMS-PA. Most of the quotations referred

to the *Shel gong shel phreng*, or shortly *Shel phreng* followed by the *Vaidūrya sngon po* and different parts of the *Rgyud bzhi*. References to the *Mes povi zhal lung* exist, but can be found less frequently.

HOFER mentions yet another illustrated manuscript from the Tucci Collection in Rome, which covers thirty folios including 180 plants, instruments and different deities (HOFER 2014: 243). According to her, Alessandro BOESI is analysing this manuscript of unknown age and origin. He has suggested it might have been a local pharmacopoeia composed in Southern Tibet, because of the names of synonyms. Unfortunately I have not had the chance to see this manuscript to check if there might be any connection to BLO-BZANG CHOS-GRAGS' text, which also includes names of plants growing at the southern side of the Himalayas.

In the *Explanatory Tantra* and its commentaries three of the eight groups “medicines from a tree” (*shing sman*) “mucilaginous medicines” (*rtsi sman*) and “liquid medicines” (*thang sman*; for discussion on the proper translation see of these terms see: SABERNIG 2012: 374f) are not classified separately but treated as one group. All mentioned printed pharmacopoeia since the eighteenth century list the respective pharmacological groups accurately including subgroups. BLO-BZANG CHOS-GRAGS did not obviously classify the substances of these groups as well but we find some other hints of categorisation. To find out more about the relevance for following works on Tibetan *materia medica* let us take a look on BLO-BZANG CHOS-GRAGS' text.

Each ingredient is explained in two ways: the first one explains the “general meaning” (*spyi don*) and the second one the “literal sense” (*tshig don*). This divided explanatory approach can be found rudimentarily in the older *Mes povi zhal lung*. The much shorter “literal sense” follows the sequence and content of the *Explanatory Tantra* and adds taste (*ro*) and effect (*nus pa*) to the definition of each single substance. The more comprehensive “general meaning” describes ingredients in a detailed pharmacognostic manner. The “general meaning” of precious metals and costly stones follows a yet unknown sequence. Ingredients of all other groups follow the sequence of the *Explanatory Tantra*. In many cases subspecies are introduced, the text divides into various parts of the plant and gives information on the shape of roots or leaves, the colour of flowers or fruits and further indications are

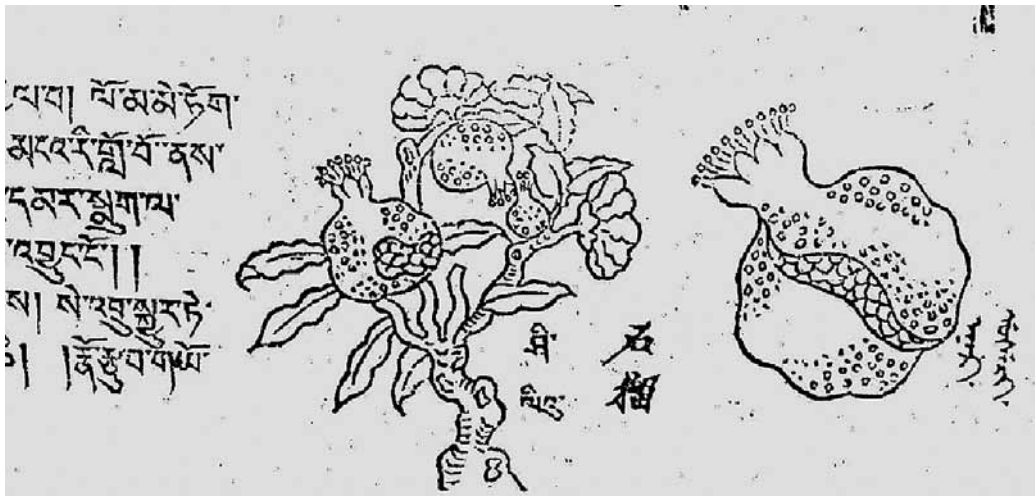
given. Other medicinal ingredients, often of Indian or Nepalese origin, are addressed according to their categories. The well-structured amendment on the qualities of a substance given in the “literal sense” is helpful indeed and cannot be found in the root text and its commentaries but has been adopted into the *Shel phreng* in some but not in all cases.

Pharmacognostic examples: pomegranate, thorn-apple and henbane

Two examples should give an impression on the quality of BLO-BZANG CHOS-GRAGS *materia medica*. I selected two different substances which have both generally attracted researchers in the field of cultural history and ethnopharmacology: *se vbru*, uniformly identified as pomegranate or the fruit of *Punica granatum* L. and a pair of substances used in Tibetan medicine as a vermicide: *thang phrom*, a substance which is associated with psycho-active drugs like thorn-apple and *lang thang rtse*, commonly translated as henbane.

Pomegranate or *se vbru* is an important ingredient in Tibetan medicine. Practically in terms of being frequently a part of formulas for multicomponent pills and theoretically as pomegranate is one of the medicinal substances described in the first chapter of the *Rgyud bzhi* as a substance which must be available in the mythical medical city of

Lta na sdug. The first chapter defines geographic, architectonic, religious, practical and biological circumstances, such as the availability of pomegranate, which are necessary to practice medicine in a perfect way (cf. SABERNIG 2014b). In the twentieth chapter of the *Explanatory Tantra* pomegranate is thought to cure stomach diseases completely, increase digestive heat and decrease (overcome) *bad kan* and cold (*se vbru pho bavi nad rnam ma lus sel, me drod skyed cing bad kan grang nad vjoms* [G.YU THOG YON TAN MGON PO 1992: 68/16]). The *Mes povi zhal lung* provides some additional information expressed rather cryptically such as that it would be an “enemy of liver diseases” (*mchin nad kyi dgra*; BLO-GROS RGYAL-PO 2005: 706/20–707/1). This information has not been adopted by BLO-BZANG CHOS-GRAGS and the *Vaidūrya sngon po*, but can be detected again in the *Shel gong shel phreng* and in the *materia medica* by VJAM-DPAL RDO-RJE (1971: 95). Not only in the case of pomegranate BLO-BZANG CHOS-GRAGS contributes a modernised explanation which is based on the *Rgyud bzhi* and provides additional pharmacognostic description with regards to botanical features and pharmacological value: Later treatises, have incorporated various phrases of BLO-BZANG CHOS-GRAGS’ text. For example: BLO-BZANG CHOS-GRAGS describes the parts of the pomegranate tree like this: “The pomegranate is a heating tree.



Pomegranate (*se vbru*): illustrated blockprint of VJAM PAL RDO RJES Tibetan materia medica including amendments in Chinese, Manchu and Mongolian (new edition: 1971: 95).

The stems wind up like an umbrella, have round, small leaves and a very beautiful white flower, the fruits have the form of a gourd and the interior is replete with seeds (*se vbru zhes bya drod kyi shing/sdong po gdugs kyi tshul du vkhyil/lo ma sgor mo chung ba ste/me tog dkar po rab tu mdzes/vbras bu ku bavi dbyibs dang vdra/nang ni vbras bus rab tu gang* [BLO-BZANG CHOS-GRAGS 2007: 90/20–23]). With the exception of the description of the fruit the same wording is used in the *Vaidūrya sngon po* and *Shel gong shel phreng* (SANGS-RGYAS RGYA-MTSHO 2005: 423/6–424/3, BSTAN VDZIN PHUN TSHOGS 1994: 212/5–22). In the *Shel gong shel phreng* the fruit is described similarly but the red colour of the fruits is added. Another aspect is BLO-BZANG CHOS-GRAGS amendment on the “efficacy:” hot, sharp, rough, moveable, dry and light (*nus pa tsha rno rtsub g.yo snum skam yang ba dang ldan pa*, 2007: 122/3–5), cannot be found in the *Vaidūrya sngon po*, but has been incorporated in exact sequence into the *Shel phreng* as well in VJAM-DPAL RDO-RJE’S *materia medica* (1971: 95).

In the last-mentioned treatise the text accompanying the illustration of pomegranate (*se vbru*) refers to the *Mes povi zhal lung*, but also incorporates phrases of BLO-BZANG CHOS-GRAGS’ text, the *Vaidūrya sngon po* and the *Shel gong shel phreng* are not mentioned. The text is generally reduced in comparison to its sources but its carved illustrations show details of the branches, leaves, flowers, fruits and seeds of the respective substances (yet the second part of the publication shows a blockprint without any text (cf. VJAM-DPAL RDO-RJE 1971: 95, second part: page 6).

Let’s have a look on the two psychoactive drugs thorn-apple (*thang phrom*) and henbane (*lang thang tse*) used in Tibetan medicine as a vermicide. The *Rgyud bzhi* only mentions their anthelmintic property (*thang phrom lang thang tse yis srin nad sel*; G.YU THOG YON TAN MGON PO 1992: 71/14). In the *Mes povi zhal lung* (BLO-GROS RGYAL-PO 2005: 716/12–14) we do not find many more details but we learn that different species exist. BLO-BZANG CHOS-GRAGS (2007: 141/24–142/21) describes the two substances separately, divides them into further species, gives again a detailed pharmacognostic description and we learn that the Tibetan name *thang phrom* has a synonym: *D[h]a tu ra*. The name is derived from Sanskrit: *dhattūra* which is also behind the scientific name of thorn-apple: *Datura stramo-*

nium L. The plant became known in Europe via the Portuguese in the sixteenth century and contains alkaloids (*hyoscyamin, atropin, scopolamin*), which are known for their antispasmodic, analgesic and psychoactive effect (maybe it was the antispasmodic effect of thorn-apple which made Tibetan physicians use it against worms causing cramps in the intestines). With the exception of SUM-PA MKHAN-PO YE-SHES-DPAL-VBYOR’S text, the name *D[h]a tu ra* has been adopted by all following Tibetan pharmacopoeia I examined (SANGS-RGYAS RGYA-MTSHO 2005: 465/2–466/1, BSTAN VDZIN PHUN TSHOGS 1994: 268/7–269/2, VJAM-DPAL RDO-RJE 1971: 137 second part: page 9]). BLO-BZANG CHOS-GRAGS’ hint that the fruit is somehow similar to another substance of mythological (and psycho-active) meaning, *so ma ra dza*, most frequently translated as *Cannabis sativa* L. or some other similar plant, can only be found in the *Vaidūrya sngon po* and VJAM-DPAL RDO-RJE’S *materia medica*. The situation is different in the case of *lang thang rtse*. Some of BLO-BZANG CHOS-GRAGS’ remarks on henbane can be found in parts in the *Vaidūrya sngon po* but not in the later pharmacopoeia where it is described in detail but differently.

In explaining the “literal sense” (*tshig don*), BLO-BZANG CHOS-GRAGS lists the taste, “qualities” and effects of the substance. In the case of thorn-apple the taste is sharp, the “qualities” are rough, dry, moveable, hot as well as “oily” and the effect is to cure infestations of worms (*thang phrom ro tsha zhing nus pa rtsub skam g.yo tsha snum pa dang ldan pas srin gyi nad sel ba*, 2007: 175/2–3). The taste of henbane is astringent and sharp, the “qualities” are oily, warm, dull, rough and the effect is to cure infestations of worms (*lang thang rtse ro bska tsha dang ldan zhing nus pa snum dro rtul rtsub dang ldan pas srin gyi nad sel ba*, 2007: 175/4–5). Surprisingly this contribution cannot be found in any of the other pharmacological treatises surveyed here.

The Effect of Medicines of the Twentieth Chapter of the Bshad rgyud is not the only text where BLO-BZANG CHOS-GRAGS elaborates on tastes and “qualities”. In fact in this work he omits the introductory and more theoretical explanation of the chapter. Concerning this passage in his text on *Unfolded Trees of the Explanatory Tantra* he goes far beyond the respective chapter of the *Explanatory Tantra*. (BLO BZANG CHOS GRAGS 2005: 84/12–85/20). The seventeen pharmaceutical qualities are related to the twenty essential characteristics of the three *nyes*

pa followed by an explanation on how to overcome these characteristics with the help of the qualities (the three *nyes pa* form the major concept on pathology in Tibetan medicine. The term *nyes pa* is commonly translated in medical literature as a Tibetan form of humoral pathology but it should be noted that this translation is under discussion, as well as the translation of the humours themselves: *rlung*—wind, *mkhris pa*—bile, and *bad kan*—phlegm). His writing appears as a refined version of the *Mes povi zhal lung* including quotations from an older but unnamed commentary (*tvi kva*) which had already been cited in the *Mes povi zhal lung* (see: BLO-BZANG RGYAL-PO 2005: 686/20–22, 687/1–3, 4–6). In the *Vaidūrya sngon po* the quotations cannot be found any more and the phrasing is similar to BLO-BZANG CHOS-GRAGS' writing in terms of content but the sentences are more sophisticated (see SANGS-RGYAS RGYA-MTSHO 2005: 394/4–395/4).

BLO-BZANG CHOS-GRAGS' achievements in compounding medicines

BLO-BZANG CHOS-GRAGS' explanation of the complex connection between the taste and effect of substances in compounded medicines is another achievement described in chapter twenty-one of his *Unfolded Trees of the Explanatory Tantra* (an introductory guide to the following, including an image of an unfolded tree depicting this topic has been published in SABERNIG 2014a: 223f). In this text BLO-BZANG CHOS-GRAGS does not dwell on different groups of ingredients defined in terms of the problems they treat, instead he simply mentions the existence of these groups. It is not clear why he does not go into depth with regard to the groups, possibly because the ingredients are not only listed but even accurately depicted on two thangkas accompanying the Blue Beryl (for more details on his treatise in comparison with the *thangkas*: see SABERNIG 2013; however, he also compiled another text on different kinds of medicines mentioned in the third and fourth part of the Four Tantras: BLO-BZANG CHOS-GRAGS 2005b). The second part of the chapter, explaining the combination of different tastes, is divided in two sections which are very short in the *Explanatory Tantra*: in the first place we find all possible combinations of taste in general and in the second place we find specific combinations of tastes or qualities, to cure certain imbalances described as

the seventy-four major dyscrasias of combined increase and decrease (*vphel zad bdun cu rtsa bzhi*). In contrast to the *Explanatory Tantra*, BLO-BZANG CHOS-GRAGS lists each possible combination of tastes individually, but it is not his own achievement, the combinations of tastes are already listed in detail in the older *Mes povi zhal lung* (BLO-GROS RGYAL-PO 2005: 733/19–735/6.) as well as in the younger *Vaidūrya sngon po* (SANGS-RGYAS RGYA-MTSHO 2005: 550/3–552/3).

His instructions on the second section, the pharmacological treatments of the seventy-four dyscrasias are more remarkable although it is not clear if he just compiled them or if really composed the text. For example MI-PHAM DGE-LEGS RNAM-RGYAL also wrote a text explaining the taste and effect of medicine (*smam gyi ro nus*, cf. MI-PHAM DGE-LEGS RNAM-RGYAL 2005; CZAJA 2008: 76; KILTY 2010: 328, 609). Although my examination of his text is just preliminary, I may conclude that in terms of length and content it can be compared with BLO-BZANG CHOS-GRAGS shorter contribution on the “general meaning” in his commentary to the *materia medica*, but the two texts differ in many cases. However, the major imbalances of the three *nyes pa* are listed in the twelfth chapter of the *Explanatory Tantra*, the chapter of classification of diseases (*nad kyi dbye ba*). In the context of pharmacology the *Explanatory Tantra* just mentions the existence of the seventy-four imbalances in form of a single verse (G.YU-THOG YON-TAN MGON-PO 1992: 77/13). BLO-BZANG CHOS-GRAGS' detailed suggestions for the pharmacological treatment of each of the seventy-four major imbalances cannot be found in full in either commentary. What we learn in this section is a logical combination of three medical theories: the concept of advanced Tibetan humoral pathology is combined with the six tastes and in less complex cases with the seventeen qualities. The instructions form the basis of a multicomponent remedy or substitute to certain ingredients within a pre-existing formula. The following examples should highlight the manner of his statements:

The eighteen imbalances are caused by a disturbance of a single humour in different intensities. For example: “Increased *rlung* should be overcome by salty taste and oily, heavy and warm qualities” (*rlung vphel ba ro lan tshwa ba nus pa snum lci dro bas vjoms pa*). “Very increased *rlung* should be overcome by sour taste and oily, heavy, hot and

stable qualities” (*rlung rab vphel ro skyur ba nus pa snum lci tsha brtan gyis vjoms pa*). “Mostly increased *rlung* should be overcome by sweet taste and oily, heavy, mild and stable qualities” (*rlung mchog vphel ro mngar ba nus pa snum lci vjam brtan gyis vjoms pa*; BLO BZANG CHOS GRAGS 2005: 90/16–19). These imbalances are followed by bi- or tri-humoral pathologies. In these cases only certain combinations of tastes are indicated. One example of these complex syndromes is the tri-humoral pathology which is characterised by a deficiency of *bad kan* and a very strong increase by both *rlung* and *mkhris pa*. The treatment should be: “decreased *bad kan* should be increased by sweet and salty, very increased *rlung* should be defeated by pungent, and very increased *mkhris pa* should be defeated by bitter (*bad kan zad pa mngar ba dang lan tshwas vphel rlung vphel ba tsha bas vjoms mkhris pa vphel ba kha bas vjoms pa*” BLO BZANG CHOS GRAGS 2005: 95/4–5). The contribution is characterised not only by the classification of intensities of the disturbance but also the form of the imbalance of the three *nyes pa*. The indication of a certain taste is differentiated concerning a certain stage. A little increased *rlung* is treated with a salty taste, very increased *rlung* with sour taste and mostly increased *rlung* with sweet taste. That is remarkable because the representation of the treatment of Tibetan humoral pathology of a complexity as shown in BLO BZANG CHOS GRAGS’ text is not known so far.

Conclusion

There is no question that the seventeenth century was not only a golden period for Tibetan Medicine in general but also in the field of pharmacology and pharmacognosy respectively. It seems that the discussions around the *materia medica* commenced BLO-GROS RGYAL-PO and continued by LHUN-SDINGS RNAM-RGYAL RDO-RJE with his critique on the *Mes povi zhal lung* resulted in a fruitful development. This progress was highlighted by the most valuable pharmacopoeia, the *Shel gong shel phreng* by BSTAN-VDZIN PHUN-TSHOGS. It cannot be concluded that DAR-MO SMAN-RAMS-PA BLO-BZANG CHOS-GRAGS was the main actor for the pharmacological advancement in the seventeenth century as there were also scholars like MI-PHAM DGE-LEGS RNAM-RGYAL and others. In this paper two of BLO-BZANG CHOS-GRAGS’ pharmacological writings were analysed and

compared with other texts. There is no doubt that this scholar stood in the tradition of the *Mes povi zhal lung* but his writing is much clearer in structure and gives different species of ingredients as well valuable pharmacognostic instructions. The division of the text in two parts can be found in the earlier *Mes povi zhal lung* allusively but became a fundamental trait in the later *Shel gong shel phreng*. In regards to the classification of certain groups of medicinal substances neither BLO-BZANG CHOS-GRAGS’ text nor the *Vaidūrya sngon po* provide new information but the *Shel gong shel phreng* and the ensuing pharmacopoeia do so in great detail. Many phrases or newly introduced plant names that appear in BLO-BZANG CHOS-GRAGS work can be found in later texts but there is no stringent or systematic tendency cognizable. To decide whether this very helpful contribution can be regarded as his own achievement or if BLO-BZANG CHOS-GRAGS relied on another textual tradition cannot yet be detected.

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