

# The Signature of Recipes: Authorship, Intertextuality, and the Epistemic Genre of Tibetan Formulas

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**T**his article raises critical questions on how recipes as a special “epistemic genre” (Pomata 2013) not only list ingredients but also encode historical data of knowledge transmission. Combining ethnographic fieldwork with Tibetan physicians and textual analysis of Tibetan formula books dating back to the seventeenth century that are still in use, I raise questions on how formulas as a genre are a meeting point between continuity and change and directly influence the transmission of medical knowledge and affect contemporary medical practice. Taking the example of the Tibetan “precious pill” Precious Old Turquoise 25, I ask how specific recipes have been composed and passed on by Tibetan authors and contemporary Tibetan physicians over time. I argue that in the context of Sowa Rigpa (*gso ba rig pa*, “Science of Healing”), even today, the design of formulas necessitates continuity, authenticity, continual interpretation, reformulation, and personal “signatures” in the making of remedies, now largely within the context of institutionalized knowledge transmission. In India, this poses a challenge for the present codification of formulas into a standardized pharmacopeia as currently required for four medical traditions (Ayurveda, Unani, Siddha, and Homeopathy) registered under AYUSH (the Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa, and Homoeopathy, Government of India), under which Sowa Rigpa was officially recognized as a medical system in 2010.<sup>1</sup> The Tibetan examples offer original data for re-thinking the Ayurvedic model, which classifies medicines either as “classical formulas” or “proprietary medicines.” This model raises questions on genre, authorship, and intertextuality both historically and in the context of current pharmaceutical standardization and codification of formulas across Asia.

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<sup>1</sup> See Craig and Gerke 2016 on a critical discussion on the naming of Sowa Rigpa, Blaikie 2016 and Kloos 2016 on the recognition process in India, and Kloos 2013 on how Tibetan medicine became a “medical system” in India.

1. *Introduction: Formulas and recipes as an “epistemic genre”*

Since Tibetan medicine in India was officially recognized as Sowa Rigpa under AYUSH in 2010, it is now entering a period of increased governmental regulation. Currently, the focus is on the standardization of medical education and the registration of Sowa Rigpa schools and practitioners.<sup>2</sup> Questions regarding the preparation of a National Sowa Rigpa Pharmacopeia will be raised at some point in the future.<sup>3</sup> It is thus timely to think about the nature of Tibetan formulas.

In this article, I analyze the naming, authorship, and genre of Tibetan formulas. The concept of “genre” has been extensively debated by linguistic anthropologists (e.g. Briggs and Bauman 1992). Thus, genres are no longer treated “as timeless, fixed, unitary structures,” but are being approached by scholars in terms of their intertextuality, specifically addressing their elements of disjunction, and ambiguity (Briggs and Bauman 1992: 143, 145). Furthermore, in Tibetan Studies scholars have proposed various ways of classifying the vast amount of Tibetan literature into genre and text types beyond the traditional “ten sciences” (*rig pa'i gnas bcu*).<sup>4</sup>

In this article, I approach the genre of Tibetan written formulas, their intertextuality (which refers to their interrelationship with other types of texts), and particularly their relationship with the making and transmission of knowledge. In brief, I explore the “epistemic genre” of formulas as a potential analytical platform for comparing “medical ways of knowing.”

I have two analytic concerns here: first, how we can explore the various forms of a formula in its written manifestations as an “epistemic genre” (further defined below) and, second, what do the inherent morphologies and intertextualities of formulas tell us about the culture-specific medical knowledge transmission of Tibetan recipes and their authorship. Scholars of Tibetan and Buddhist Studies have extensively shown that intertextuality is ubiquitously present in Buddhist texts, and phrases are frequently repeated and re-used across texts, stretching conventional concepts of individual author-

<sup>2</sup> Personal communication, Dr. Padma Gurmet, December 2017.

<sup>3</sup> In the People’s Republic of China and also across Europe standardization and reformulation regimes of Sowa Rigpa formulas are more advanced (see Schrempf 2015).

<sup>4</sup> See Rheingans 2015 for a recent good summary. See also Cabezón and Jackson 1996. To date, there has been no detailed analysis of genre and text types in Sowa Rigpa literature.

ship.<sup>5</sup> Similarly, my analysis of Tibetan formulas also reveals forms of intertextuality in terms of citations and silent borrowings, which aid knowledge transmission and authentication. Comparing the Tibetan material with already existing Ayurvedic reformulation regimes offers insights into possible trajectories that could be taken with the upcoming codification of Tibetan formulas in India, at the same time highlighting what is at stake in such a process.

I think it is important to consider Sowa Rigpa formulas as a distinctive genre when thinking about medical standardization since their style is fluid and provides an underlying script for continuous change and reformulation, which inherently defies standardization. As we shall see through my analysis of particular formulas, Tibetan *menjor* or “medicine compounding” (*sman sbyor*)<sup>6</sup> is a dynamic practice, and its “multiplicity” (Blaikie 2015) is at stake should Sowa Rigpa follow the Ayurvedic model of codifying and standardizing formulas, outlined below.

In the wake of increasing standardization of Sowa Rigpa in India, I fundamentally question the common definition of “classical formulas” as currently used in India, where the more authoritative, long-standing, stable formulas of classical Sanskrit texts are generally contrasted with the recently developed “proprietary medicines” (e.g. Banerjee 2009, Blaikie 2015, Bode 2008, 2015, Zimmermann 2014). In a long process of standardization and legal codification of formulas, which Ayurveda completed by the 1970s, the Indian government recognized fifty-seven canonical Sanskrit texts, which impacted the definition of a “classical formula” and the pharmaceuticalization<sup>7</sup> of medical practice (Naraindas 2014, Zimmermann 2014). By definition, “classical formulas” are those whose names and ingredients are listed in at least one of the fifty-seven canonical works. “Proprietary medi-

<sup>5</sup> See Freschi and Cantwell 2016, and other contributions to their special issue on “Reuse and Intertextuality in the Context of Buddhist Texts” (Freschi and Cantwell eds. 2016).

<sup>6</sup> This article follows the transcription developed by The Tibetan and Himalayan Library (THL) to provide the phonetic version of Tibetan terms, followed by their Wylie (1959) transliteration at first use. On the THL transcription system, see Germano and Tournadre (2003). Phonetic terms are the same in singular and plural: no -s is added. Transcriptions of proper Tibetan names do not always comply with THL version, especially when they have appeared previously in print with different spelling.

<sup>7</sup> Pharmaceuticalization here is different from commercialization in that it refers to a process that often includes the commodification of knowledge and is thus political in nature. Banerjee defines it as “a development of the pharmacological products from any medical system, irrespective of the autonomous world-view on health, illness, and disease, such that the drugs prescribed by the system acquire a salience detached from the fundamental tenets of the system itself” (Banerjee 2009, 13). Thanks to Harilal Madhavan for pointing this out.

cines” are derived from but not identical with “classical formulas.” This allows a registered manufacturer to own and trademark a proprietary medicine. Ayurvedic pharmaceutical companies may just change one ingredient or add one to a “classical formula” and then call it a “proprietary medicine” (Banerjee 2009; Bode 2008, 2015).<sup>8</sup>

Ayurvedic companies have developed different strategies to adhere to and adjust the Sanskrit versions of formulas, some of which date back to the seventh century (Zimmermann 2014). We find various reformulation regimes with Ayurvedic polyherbal compounds (Pordié and Gaudillière 2014), but also cases where reformulation is absent (e.g. Zimmermann 2014, 90). My focus here will not be on the reformulation regimes in the already-established Ayurvedic pharmaceutical industry as described by Pordié and Gaudillière, but on the nature of Sowa Rigpa formulas that are about to enter a phase of increased pharmaceuticalization, which Kloos is currently approaching from the perspective of “pharmaceutical assemblage” (Kloos 2017). I want to make a specific case in point within the emerging transnational Sowa Rigpa industry studied by Kloos: If we want to understand the complexity of Sowa Rigpa formulas and not lose sight of their variations, especially in the likely up-coming process of standardization and legal codification by the AYUSH ministry in India, we need to approach each specific formula in a much broader sense and not reduce it to *one* standard “classical formula.”

When looking at Tibetan formulas in texts from the twelfth century onwards, one is typically left with the impression that they are “incomplete.” One always hopes for more information, either about the ingredients and the amounts used, details on how to compound the formula, or how to administer it for specific diseases. While a lack of detail is characteristic for most written medical descriptions, in the case of formulas it seems as if the formula as a literary genre, in which physicians shared their pharmacological knowledge in writing, is woefully lacking in what it would take to actually make the medicine in question. This brevity stems from a medical culture of strong oral traditions, where *menjor* or “medicine compounding” was taught through hands-on experience or *laglen* (*lag len*) and secret oral instructions called *men ngak* (*man ngag*) passed on from teacher to disciple. Medical works, including formulas, were frequently memorized, though adjusted in individualized recipes for particular patients or disease patterns. Some works even present formulas in verse form to aid memorization. How were formulas written in pre-

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<sup>8</sup> On the formulary logic and “synergistic” nature of Ayurvedic formulas see Naraindas 2014.

modern Tibet, and does it make sense to consider them as “classical formulas”?

The English terms “recipe,” “formula,” and “prescription” are often used interchangeably but defined varyingly by medical historians (Lev and Chipman 2012, 16 and Pomata 2013, 139). As such, it is important to clarify their meanings in their varying clinical or pharmacological contexts. Most medical historians use formula and recipe interchangeably, while prescription refers to the individualized list of remedies prescribed to a patient. In Tibetan any kind of recipe is simply called *zorwa* (*sbyor ba*), while prescriptions are known as “medicine letter” or *menyik* (*sman yig*). Dr. Namgyal Qusar made the distinction between *zorwa* as recipe and *jortsé* (*sbyor tshad*) as formula, the latter also including the measurements, or *tsé*, of ingredients. He emphasized that most formularies do not include the measurements and thought that eighty percent of canonical recipes are *zorwa*, allowing the physician flexibility in measuring the ingredients.<sup>9</sup> Acknowledging his definitions, in this paper and for the sake of the argument, I use the English terms formulas and recipes interchangeably for *zorwa* and look at them as “forms of action” and thus a continued practice, following Blaikie (2015) and Scheid (2007). As Blaikie argued: “classical formulations emerge as medicines within fields of practice and dynamic currents of tradition in Volker Scheid’s (2007) sense, and are thus always contemporary and valid at the moment of their production” (Blaikie 2015, 18).

Blaikie questions the definition of “classical formula” as a “distinct, stable and bounded category” in Tibetan contexts through his social analysis of the Tibetan pill Samphel Norbu (Blaikie 2015, 9). He argues that this formula in its existing multiple versions (under the same name) does not “represent the corruption of classical purity” but a multiplicity of practice (Blaikie 2015, 18). My analysis of the naming, authorship, and genre of Tibetan formulas confirms his critical approach to the “classical” definition of formulas and encourages studies that question their stable character and look at the “multiplicity” (Blaikie 2015) of their ingredients and modes of knowledge transmission.

Pomata’s work (2011, 2013, 2014) concerns early modern European history in a Christian and Jewish context, as well as Chinese formulas. She classifies both formulas and recipes as “epistemic genres” and defines genre as “a meeting point of history and morphology, change and stability, variation and repetition, ... the way we deal with our cultural heritage—in other words, the way we interact with tradition” (Pomata 2013, 131). Pomata views creating a genre as a

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<sup>9</sup> Interview, Sidhbari, May 24, 2017.

culture-specific activity. Specifically, Pomata defines “epistemic genres” as those textual forms that include narratives, recipes, formulas, treatises, and textbooks in a given medical tradition. What all these texts have in common is that they are “directly related with the making and the transmission of knowledge,” emphasizing their cognitive character (Pomata 2013, 132, 134).

Medical historians, among them Pomata, further distinguish between literary and epistemic genres.<sup>10</sup> With “epistemic genres” Pomata specifically refers to “those kinds of texts that are linked, in the eyes of their authors, to the practice of knowledge-making (however culturally defined),” while “literary genres” refer to a variety of texts covering a wide range of purposes and activities (Pomata 2014, 2-3). The borders between the literary and the epistemic are often blurred, as we shall see in those Tibetan formulas written in poetic form, but a focus on the epistemic helps to analyze how scientific knowledge is produced and transmitted through texts in specific cultures (Pomata 2014, 3). Pomata uses this distinction to create an analytical platform on which comparative approaches of “medical ways of knowing” become possible. She argues that “a focus on recipes as epistemic genre would help us to unify ... fragmented perspectives” of recipes that have been studied from separate angles of, for example, “food cultures, the history of medicine, the history of technology, the history of arts and crafts, and so forth” (Pomata 2013, 144, note 48). As a contribution to this analytical platform, combining textual and ethnographic analysis, I will look at Tibetan *jorwa* as an epistemic genre that conveys medical knowledge in culture-specific ways and does not lend itself easily to forms of standardization.

The Tibetan term *jorwa* is polysemous and means “to prepare,” “to connect,” “to combine together.” It is the standard technical term used for all kinds of recipes whether they are part of a personal collection or a prominent textual canon. In medical contexts the term *jorwa* is combined with the word *men* (*sman*)—referring to that which is beneficial, i.e. “medicine”—and as *menjor* (*sman sbyor*) becomes a technical term for “medicine compounding.” In fact, *jorwa* appear across the vast corpus of Tibetan medical compendia, within sections on how to treat certain diseases as well as in specialized formularies and *menjor* textbooks. *Jorwa* not only record and transmit medical knowledge but reveal in-built mechanisms that preserve heterogeneous practices, for example, allowing the use of substitutes, called *tsap* (*tshab*), when substances are unavailable (Czaja, in press; Sabernig

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<sup>10</sup> See the special conference on “epistemic genres” organised by the Max-Planck-Institute for the History of Science in Berlin in June 2015: <http://www.hsozkult.de/event/id/termine-28140>. Last accessed December 18, 2017.

2011). Discussions with contemporary Tibetan physicians demonstrate that Tibetan *gorwa* texts are meant not only for the transmission of knowledge of how to make remedies, but also to establish and attribute a certain authority and lineage to a formula. Occasionally they include knowledge based on practical experience that is then passed on in tandem with texts; but in most cases practical *menjor* experience is knowledge that has been and still is transmitted orally and remains largely secret and unpublished.

Exploring *gorwa* as an epistemic genre involves looking at how their textual representations parallel, appropriate, and are geared towards practices of knowledge-making and knowledge transmission. Their outer textual appearance in Tibetan medical works seems relatively stable, but when comparing formulas under the same name over time, variations become apparent. Some substances seem more important than others, some are dropped, disappear, or change names. The number and type of ingredients might differ even as the name of a particular formula remains constant. This raises questions of how such practices will affect Tibetan responses to governmental requests for standardization in the future.

As I will show, the name is meant to present a stable literary tradition, preferably linked to a long lineage. But when it comes to practice there is constant change, flexibility, appropriation, and interpretation. Thus, I argue that *gorwa* are morphologies of flux—interactive in their expression and transmission of lineage and authority. They represent more a “form of action” than “a type of text,” which parallels a more recent understanding of what a genre is all about (Pomata 2013, 131). As will become clear, to understand *gorwa* as an epistemic genre one has to examine a large variety of Tibetan medical texts.

Tibetan medical texts abound with formulas. Single substances are rarely used, and most formulas are herbal, mineral, and animal based compounds of three or more ingredients. Among the most complex of them are Tibetan “precious pill” formulas (*rin chen ril bu*), which contain from around twenty to up to over one hundred ingredients. They typically contain not only a refined mercury-sulfide powder called *tsotel* (*btso thal*) (see Gerke 2013), but also “precious” substances (thus the name *rinchen*),<sup>11</sup> such as gold, silver, rubies, diamonds, coral, turquoise, pearls, and so forth. To date, the origin of precious pill formulas are poorly understood.

This paper explores the trajectories of *gorwa* as an epistemic genre through the example of one Precious Pill, the “Precious Old Turquoise 25” (Rin chen g.yu rnying nyer lnga), which continues to be a popular remedy today and is therapeutically used for various liver

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<sup>11</sup> See Gerke 2018 for a discussion of what makes a medicine a *rinchen*.

complaints. I analyze its earliest formulas in early seventeenth and early eighteenth century texts and compare those with contemporary formulas published by Tibetan physicians in India (e.g. Dawa Ridak 2003) as well as formula-related textbooks memorized by medical students in India today. In this comparison I address the following questions: How have formulas and their presentation in texts changed over time and how does the structure of a formula affect the transmission of medical knowledge? What is revealed in a formula and what is not? In analyzing several versions of this particular formula and in discussion with contemporary physicians, I ask what the developments and changes occurring in the published formulas can contribute to our understanding of formulas as an “epistemic genre.” Locating the topic of *yorwa* within historically-informed anthropology, I explore how Pomata’s approach can be supported by both ethnographic methods and textual analysis.

My ethnographic research employed conversations and semi-structured interviews with Tibetan physicians in India and during the 14<sup>th</sup> IATS Seminar in Norway (June 2016), focused on how they use, pass on, and relate to formulas mentioned in their classical texts and appropriate them in practice, adding their personal “signature,” even in larger institutionalized, pharmaceutical settings. For the most part such signatures remain unwritten in printed formulas. They are often attributed to a senior master physician, authenticating potency through a respected lineage, but their details are largely kept a secret. I explore several avenues of such “signatures,” considering them as an integral part of the epistemic genre of *yorwa* as a practice.

I also show one example of an institutionalized approach to teaching formulas from the largest medical institution in India, the Men-Tsee-Khang in Dharamsala,<sup>12</sup> and explore how changes in related textbooks affect medical knowledge transmission of *yorwa* today. In the discussion, I draw comparisons with the codification of formulas and their reformulations in Ayurveda to outline what is at stake when commodifying Tibetan formulas.

My first points of analysis concern the “writing” and “naming” of formulas, that is the ways formulas are written and how the name of a formula upholds authority and continuity of *menjor* knowledge. I then analyze the role of the authorship of formulas in knowledge transmission.

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<sup>12</sup> See Kloos 2008 on the history of this medical institution.



## 2. The "signature" of recipes: Writing jorwa

There has been a strong literary culture throughout the development of Sowa Rigpa and its intellectual history (Gyatso 2015). To date, Tibetan medical literature remains an understudied field and most works have never been translated. In his brief chapter on the history of Tibetan pharmacology<sup>13</sup> (*Bod lugs sman sbyor rig pa'i lo rgyus mdor bsdus*), published in 2009, Gawa Dorjé counted the formulas in about twenty medical works containing recipes. While not exhaustive, his calculations add up to almost 10,000 formulas, the highest number (3,394 formulas) being found in the fundamental work *Four Treatises* dating back to the twelfth century (Gawa Dorjé 2009, 1-5). Formulas published in five works dating before the *Four Treatises* also add up to more than one thousand (Gawa Dorjé 2009, 1-2). Gawa Dorjé did not count how many of the formulas re-appear. He also excluded formulas in manuals handed down through family lineages or orally. His figures remain rough estimates and do not reflect actual practice, but nevertheless point to a large number of existing textual Sowa Rigpa formulas.

The largest Tibetan pharmacy department in India, at the Men-Tsee-Khang in Dharamsala, currently produces 172 remedies, out of which thirty are derived from the *Four Treatises*, 107 from practical instructions of various scholars, and thirty-five from a combination of both fundamental texts and personal instructions.<sup>14</sup> These numbers reveal a strong reliance on oral transmission. Privately working physicians I met in India typically produce around seventy formulas. To date hardly any of these formulas have been studied in detail by scholars.<sup>15</sup> We know very little about the ways medical authors arranged and classified their formulas, how they were passed down, whether there are geographical differences, continuities or drastic changes within formulas published under the same name across the Tibetan world.

<sup>13</sup> What I translate here as "pharmacology" refers to *menjor rikpa* (*sman sbyor rig pa*), a large field of knowledge comprising the study of *materia medica* (pharmacognosy) or *trungpe* (*khrungs dpe*), as well as the compounding of medicine or *menjor* (*sman sbyor*). A trained Sowa Rigpa physician typically compounds *and* prescribes medicines. Only recent institutionalization has led to a separation of medicine making and clinical practice (Pordié and Blaikie 2014). Thanks to Jan van der Valk for sharing his views on these categories with me.

<sup>14</sup> <http://www.men-tsee-khang.org/dept/pharmacy/pharm-history.htm>. Last accessed December 3, 2017.

<sup>15</sup> We have ethnographic studies on Zhije 11 by Craig (2012), on Langchenata by Saxer (2013), on Samphel Norbu by Blaikie (2015), and on Garuda 5 (PADMA Grippe Formel) and Gabur 25 (PADMA 28) by Van der Valk (2016).

In many Tibetan medical works, formulas are typically listed under headings of the diseases they treat. This can relate to specific *nyépa* (*nyes pa*)<sup>16</sup> imbalances, to a list of symptoms, or to specific diseases. This way of placing formulas in texts reveals a practice-centered approach, which is also found in the *Aṣṭāṅgahrdayasamhitā*, the seventh century Sanskrit compendium that in its Tibetan translation influenced the writing of the *Four Treatises* (Yang Ga 2010). There are also similarities to what we know of early modern medical texts written in Chinese, where “medical recipes did not exist in a clean, one prescription-one illness set of rules, and plurality was a critical feature of early modern medical theory and practice” (Nappi 2009a, 759).<sup>17</sup> In the Tibetan context, such plurality might manifest as several recipes listed under the same name in different disease sections. This practice-centered approach makes it difficult to locate formulas across texts.

While sitting together with Tibetan physicians over formula texts during my fieldwork in India, I often noticed that even they were confused and had to think about where to look for the formula. Generally, one has to know the main disease category the formula treats in order to find it. The contemporary Tibetan physician and author Dawa Ridak, who worked for many years at the Men-Tsee-Khang’s pharmacy department in Dharamsala, compiled formulas from older sources into his self-published work, briefly called *Practical Application of Manufacturing Medicines* (*Sman rdzas sbyor bzo’i lag len*, Dawa Ridak 2003). The book’s 28-page-long table of contents lists formula names under various headings of disease categories. The formula *Manu Zhitang* (*Ma nu bzhi thang*), for example, appears around twenty times under various disease headings (discussed further below). Fortunately, this book has an index; many older publications have neither an index nor a detailed table of contents, which makes it difficult to locate the same formula in many texts. Frequently the sequence of formulas follows the way found in the *Four Treatises*, and one is expected to know this foundational text to a large extent by heart.

Written formulas across Tibetan medical texts reveal a variety of particular patterns of structure, nosology, classificatory labels, and so

<sup>16</sup> The three *nyépa*—the term has often erroneously been translated as “humor”—are the basic principles of Tibetan medical physiology that are imbedded into the larger cosmology of the five elements, i.e. water, fire, earth, wind, and space. The three principles are *lung* (*rlung*, predominated by the element wind), *tripa* (*mkhris pa*, predominated by element fire), and *béken* (*bad kan*, predominated by the elements earth and water).

<sup>17</sup> To my knowledge no comparative studies have been done on Chinese and Tibetan formula works exploring potential similar characteristics.

forth. While making medicines, *menjor* practitioners frequently add their individual experiences to existing formulas, which I call adding a “signature.”<sup>18</sup> My choice of the term “signature” is based on the Latin *signare*, which means “to mark with a sign,” which, in Europe, from the seventeenth century onwards came to mean “a distinguishing mark of any kind.”<sup>19</sup> With the term “signature” I refer to the reformulations made by medical authors and contemporary *menjor* practitioners to their textual formulas, be they written or orally transmitted. In the following, I explore several avenues of such “signatures” and argue that they are part and parcel of recipes as a “form of action” and thus integral to the epistemic genre of *yorwa*. “Signatures” here imply more than just a reformulation of ingredients and include issues of a “true” adherence to an authentic lineage, carrying authority, and involve metaphors, such as who is the “composer” of a formula (see section five). Taken together, a formula embodies what I would call a “script”: it is open to improvisation and adjustment in day-to-day *menjor* practice. In the words of Dr. Penpa Tsering, who was trained at the Men-Tsee-Khang and is now an independent manufacturer of Tibetan medicines near Dharamsala:

I looked at many formula books from India, Lhasa, and Amdo. The same formula under the same name is mentioned many times, even with the same ingredient names, but each time with different amounts. I make our formulas according to Men-Tsee-Khang’s formulas and what I learnt from my teacher. If you look up Agar 15, it is mentioned in many formula texts. Many pharmacies make it, but their quantities are different, depending on climate, availability, and teachers’ experiences... Standardizing the formula would mean it should all be the same. That is very difficult, and we would have to do a lot of research to find out which formula has the best efficacy.<sup>20</sup>

When approaching Tibetan recipes we can take some inspiration from colleagues working on Sanskrit and Chinese medical formula

<sup>18</sup> The choice of the word “signature” is linked neither to the Galenic herbalist definition of “doctrines of signatures,” nor “pleiotropic signatures” of multi-component phytotherapeutics, which refer to the multi-target character of compounded ingredients in Tibetan formulas (Schwabl et al. 2013). Herbert Schwabl explains “pleiotropic signatures” as follows: “The possibility to use a variety of species in a formula leads to a different notion of the principle of ‘active substance,’ which cannot be traced back to a certain chemical molecule. The physiological principle of action is then connected to a functional pattern of action, which we labeled ‘pleiotropic signature.’” Conference presentation, 9<sup>th</sup> ICTAM, Kiel, August 9, 2017.

<sup>19</sup> [http://www.etymonline.com/index.php?allowed\\_in\\_frame=0&search=rescript](http://www.etymonline.com/index.php?allowed_in_frame=0&search=rescript). Last accessed January 20, 2017.

<sup>20</sup> Interview, Sidhbari, May 24, 2017.

texts. Francis Zimmermann (2014) studied more than five hundred herbal substances used in Ayurvedic formulas that are still manufactured today in India and derive from classical Sanskrit formulas. His focus is on detecting the “shifters” within a formula, substances that are inconspicuous within the hierarchy of a formula but are used across many formulas and “eventually account for the overall consistency of the pharmacopoeia” (Zimmermann 2014, 77). His study offers one example of the intertextuality of formulas on the level of substances and how one could methodologically approach formulary texts as an “epistemic genre,” since his methodology allows for the detection of those parameters that link formulas across texts and play a significant role in “fixing the identity of a drug in the ayurvedic *materia medica* at large” (Zimmermann 2014, 78).

Carla Nappi (2009b) studied approximately 1,500 drug descriptions found in the pre-modern Chinese *Bencao Gangmu* (Systematic *materia medica*) of Li Shizhen (1518–1593) and analyzed how Li explored and verified substances. *Bencao* texts include “significant background information on medicinal drugs, including the categorization of substances according to qualities such as flavor (*wei*), efficacy or toxicity (*du*), presence of heat, appearance, seasonality, and growth habits” (Nappi 2009b, 28), all of which strongly influenced the composition of formulas.

Both Sanskrit and Tibetan medical literature have a similar genre to describe the characteristics and habitats of single substances of plant, animal, mineral or metal origin. In Sanskrit they are simply called “glossary” or *nighantu*.<sup>21</sup> They list raw ingredients and their potencies but also types of metals, salts, oils or sets of “sour” and other substances, and so forth.<sup>22</sup> In Tibetan the most prominent genre among *materia medica* texts are the *trungpe* (*'khrungs dpe*), meaning “grown specimen.” *Trungpe* traditionally list only herbal substances<sup>23</sup> and differ widely within the various schools of Tibetan medicine, partly because of the great regional variations of flora and fauna. Their botanical descriptions were sometimes followed by a recipe, but Tibetan authors largely used *trungpe* for the purpose of plant identification (Czaja 2013, 90, note 5). Before the twentieth century, only some of them included illustrations (Hofer 2014), which made substance identification difficult and dependent on oral transmission. Beginning in the early twentieth century with Khyenrap Norbu (Mkhyen rab nor bu, 1883-1962), the first director of the Men-Tsee-Khang, founded in 1916 in Lhasa, *trungpe* began to include sections

<sup>21</sup> See Naraindas 2014, 13 for examples of the *nighantu* genre.

<sup>22</sup> Personal communication Dagmar Wujastyk, Vienna, February 2017.

<sup>23</sup> E-mail communication Olaf Czaja and Dr. Tsering Wangdue, January 2017.

on mineral and animal substances.<sup>24</sup> This is also the case in the two contemporary *trungpe* works, the *Trungpe Stainless Crystal Mirror* (*'Khrungs dpe dri med shel gyi me long*) by Gawa Dorjé (1995) and the *Trungpe of Medicinal Essences* (*Bdud rtsi sman gyi 'khrungs dpe*) by Karma Chöphel (1993).

The most famous early eighteenth century work on *materia medica* (which some physicians I spoke with considered a *trungpe*, but others did not) that continues to have great relevance today is by the Tibetan scholar physician Deumar Tendzin Püntsock (De'u dmar Bstan 'dzin phun tshogs, born 1672), titled *A Lump of Crystal* and its commentary *A Rosary of Crystal*; in Tibetan both are briefly known as the *Shelgong Sheltreng* (*Shel gong shel phreng*) (2009).<sup>25</sup> Although lacking illustrations, the work describes more than one thousand substances from across the Himalaya, India, the Tibetan plateau and mainland China and has since been quoted widely across Tibetan *trungpe* and *menjor* works.

The practical application of *trungpe* and *menjor* texts indeed seems quite different. The *menjor* texts alone do not provide enough information for a full understanding of Tibetan formulas. Tibetan medical practitioners consult *menjor* texts for the basic ingredients, perhaps their measurements, and brief descriptions of the benefits, cooling or warming properties, and the taste of the formula. Notably, I have not seen monographs of formulas that at the same time explain the nature of their ingredients. In *menjor* texts, ingredients are simply listed but not explained. To identify the ingredients of a formula, one must consult the *trungpe* literature, and to comprehend how the synergy of ingredients can be therapeutically used, one has to look up the sections on therapeutic usage in clinical works, specifically in the *Four Treatises*. The necessity of combining these texts in approaching formulas was recently addressed by Czaja (2013), who argues that in order to understand a Tibetan formula three text genres have to be consulted and compared: botanical works (by which he refers to *materia medica* works on herbs, i.e. *trungpe* in the pre-twentieth century understanding), medical treatises that describe illnesses and list respective formulas, and *menjor* texts.

Czaja points out that clinically oriented texts often offer different perspectives on the therapeutic potency of plants than *materia medica* works, which alone are insufficient to understand the healing potential of substances in formulas. He discusses several examples where mistakes in textual transmission led to misrepresentations of certain substances' potency in subsequent texts and argues "that all three

<sup>24</sup> E-mail communication Dr. Tsering Wangdue, February 2017.

<sup>25</sup> See Hofer 2014 for a more detailed description of this work.

textual forms of knowledge, namely botanical, medical and on preparation, represent three distinctive and only partially interrelated traditions” (Czaja 2013, 111). It is important to acknowledge that these three types of texts present a form of Tibetan intertextuality that is crucial for the transmission of formula knowledge. I thus suggest that all three types of formula-related works—*materia medica*, *menjor* and clinical works—should be included when talking about the “epistemic genre” of Tibetan formulas, since it is only in combination that we can gain a more complete knowledge of *gorwa*. As we shall see, this disjointedness of *menjor* knowledge spread across these various types of medical works, and the challenges this poses to pharmacological study, have also contributed to the fragmented understanding among contemporary *menjor* practitioners of how a formula works.

In the following, I specifically show the plurality and complexity involved in the naming of *gorwa*.

### 3. The naming of formulas

Anthropologists have looked at social processes of naming, and in a medical context specifically at the naming of medical systems and practices (Craig and Gerke 2016, Hsu 2013). Together with Craig, I showed how in the context of choosing a label for a Tibetan medical tradition, “naming practice is indicative of claims to lineage-based authority” (Craig and Gerke 2016, 99). Similarly, in Tibetan formulas the name is very important and indicative of the text-based authority linked to the formula, which can be a particular medical school or a revered physician of the past. Moreover, naming practices of formulas also relate to the hierarchies of substances within a given formula. In Tibetan medical literature, formulas are frequently named according to one of their key ingredients and often have a figure attached, which indicates the number of the ingredients. For example: Agar 35 (A gar 35) has thirty-five ingredients with the key ingredient eaglewood or *agar* (*a gar*); Old Turquoise 25 has twenty-five ingredients with pre-processed turquoise stone first in line among the listed ingredients.

While the names of formulas have stayed the same for the most part, the number of ingredients in many cases has not. For example, the remedy Jangchö 37 (Byang chos 37) manufactured at the Men-Tsee-Khang in Dharamsala has more than forty ingredients, but the recent literature, both in India and the People’s Republic of China, lists thirty-seven ingredients in accordance with the number in its name (Gawa Dorjé 2009, 160; Dawa Ridak 2003, 281). In response to my question of why the *gorwa* texts are not updated accordingly, Dr.

Jamyang Tashi, head of the pharmacy department at the Men-Tsee-Khang in Dharamsala, explained during an interview: "If we would change the name, the new generation of doctors would not be able to find the formula in the classical literature and would lose touch with the lineage."<sup>26</sup> This is very significant and shows that the naming practice ensures a stable link to the medical lineage as codified in the texts. The name also functions as a label to be able to locate the formula in the large corpus of *yorwa* works. Jangchö 37 has to stay Jangchö 37 so that its special lineage—linked to the eastern Tibetan polymath and physician Mipham Gyatso (Mi pham rgya mtsho, 1846-1912)—can be passed on under *one* name, even if in contemporary *menjor* practice more than forty ingredients are used. The reformulations are part of the oral transmission passed on from teacher to student, which I refer to as the "signature" of a recipe. This includes an inherent aspect of veracity; in other words the "signature" is truthful to the lineage.

Unlike in Ayurveda, where proprietary medicines cannot be sold under the canonical formula name, in contemporary (not yet standardized) Sowa Rigpa formula names are kept when ingredients are skipped and remedies are reformulated, simplified, or "reinvented" for the global market. Here is an example: The North American-based online shop for "Traditional Tibetan Medicines" made in Tibet called "Himalayan Remedies" offers Bimala 20 (Bi ma la 20) with nineteen ingredients, Agar 35 (A gar 35) with thirty-three, Olse 25 ('Ol se 25) with nineteen, Amla 25 (Amla 25) with twenty-three, Gurgum 13 (Gur gum 13) with nine, and Agar 20 (A gar 20) with sixteen ingredients.<sup>27</sup> While none of these remedies have kept to their "traditional" number of ingredients, they are sold as "traditional" Tibetan remedies under their "traditional" name, and no reasons are given for these modifications. There could be many reasons for skipping ingredients, for example issues of endangered plant species, unavailability of substances, avoidance of controversial non-herbal ingredients, or rising prices of ingredients. Blaikie (in press) offers recent ethnographic examples from Ladakh to show how "classical" Tibetan formulas are seen by physicians as what I called above a script, based on which they improvise and to which they make practical adjustments depending on availability and in order to accommodate climatic differences in the various geographical regions in which the medicines are produced. Dr. Penpa Tsering explained:

<sup>26</sup> Interview Dharamsala, May 2016.

<sup>27</sup> <http://www.himalayanremedies.com/shop-new-products/>. Last accessed November 23, 2016.

Actually, when we make medicine in Dharamsala, which is a colder place, we add more of the warming ingredients, like pomegranate seeds, *sédru* (*se 'bru*), to the formula. The same formula produced in South India should have less *sédru* to balance the hot climate. This is important. Now that formulas are produced for people all over the world, individualized formulas as we did in the past cannot be made and we have to make the formula more balanced to avoid complications.<sup>28</sup>

Dr. Penpa's adjusting the formula based on climatic changes points to a crucial trait: reformulations actually take place all the time in Tibetan *menjor* practices because they are an integral feature of *jorwa*. He also hints at a new reformulation strategy of "balance" to avoid complications of place and climate in globalized production practices.

#### 4. The hierarchy of substances

The naming of formulas is a culture-specific practice. In Tibetan contexts it essentially depends on the hierarchy of substances within a formula, which in turn tells us something about the shift of importance of substances, their availability and popularity at certain times in history. There are specific scripts that Tibetan physicians follow with regard to what can be changed in a textual formula and how. In the past such scripts allowed for the making of formulas for individual patients. As Dr. Penpa Tsering, who makes his own medicine, explained:

If you make, for example, Ruta 6, in the past you looked at the patient and depending on his body size, constitution and the climate of his place you compounded the ingredients. Now we cannot do this. We just make pills.<sup>29</sup>

According to Tibetan medical practitioners I spoke with, certain ingredients hold a specific status among the group of ingredients within a formula. Substances are positioned in a formula in three ways, known as (1) *kadzin* (*kha 'dzin*), (2) *kagyur* (*kha 'gyur*), and (3) *katsar* (*kha tshar*). These are mentioned across the literature and were also communicated to me by practicing Tibetan physicians. All three of them affect the composition of a formula and would, when compared to today's Ayurvedic reformulation regimes, affect the ways the formula would be judged as a "proprietary medicine." In the process of

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<sup>28</sup> Interview, Sidhbari, June 2016.

<sup>29</sup> Interview, Sidhbari, June 2016.



standardization, would it be possible to translate Tibetan ways of thinking about formulas into ways of codifying them?

Mingji Cuomo, a Lhasa-trained Tibetan physician and medical anthropologist summarized the meaning of the positioning of ingredients in a formula as follows:

Mingji Cuomo: In a formula, the way substances are listed matters. *Kadzin* is the foundation of the medicine. The first ingredient is the main one, that is for sure. If you change the *kadzin*, the name of the formula has to be changed. The sequence matters. It makes a big difference if *chongzhi* [*chong zhi*, a form of calcite] is the first or second ingredient. *Kagyur* means changing the direction of the medicine, targeting a particular illness through a specific ingredient. And *katsar* can be added to strengthen the treatment. If you miss a few ingredients at the end of the formula that is not a problem.

Myself: Musk is often mentioned at the end of the formula.

Mingji Cuomo: That is only for the good smell; no problem, and only a little is used. That always happens. This does not affect the main potency or *niipa* (*nus pa*). But if changes happen at the beginning of a formula, then this medicine is no longer the medicine known under its name, and the name should be changed.<sup>30</sup>

Mingji's introductory remarks made me look at these three parameters in more detail, exploring how the position of an ingredient within a formula affects the naming of *yorwa* and *menjor* practice.

*Kadzin*, referring to those ingredients that make up the foundation of a remedy, is the principal name giver of a formula. *Kadzin* are sometimes personified as the "king" and "queen" of a formula. It is similar to the Ayurvedic setting, where Sanskrit names are used for formulas that have an "iconic value" through the cultural connotations they trigger in consumers (Zimmermann 2014, 82). In our precious pill example, old turquoise is the main ingredient (i.e. the *kadzin*, along with pearl and coral) and also the key word in the name of the formula. Tibetans attach great cultural value to the turquoise stones, especially when they are old and worn (Walker-Watson 1983). Tibetan physicians in India referred to *kadzin* also as *tsobo*, the "chief" (*tso bo*) ingredient of a formula.<sup>31</sup>

The practice of paralleling social status and natural laws to ingredients and parts of the body was a widespread practice in China (Unschuld 2003). In Tibetan texts entire formulas as well as ingredients can be found structured according to social hierarchies. In the *Four Treatises* formulas can be hierarchically ordered and given the status of king, minister, chieftain, or subjects (e.g. chapter 4 in the last of the

<sup>30</sup> Interview, 14<sup>th</sup> IATS Seminar, Bergen, Norway, July 2016.

<sup>31</sup> Personal communication, Dr. Namgyal Qusar, Sidhbari, May 24, 2017.

*Four Treatises*, Men-Tsee-Khang 2015, 63, 78). The contemporary Tibetan physician Tsering Norbu (2013) employs the social positions of king, queen, prince, minister, and commoner to explain the potency of a formula. He specifically refers to the ingredients in the position of ministers and commoners as the *kagyur*, which means these direct the potency of the entire compound towards a certain disease or *nyépa* imbalance (Tsering Norbu 2013, 16/11-18). Dr. Dawa additionally uses horses and soldiers to categorize the possible combinations of ingredients “to subdue the strength of the hot disorders likened to a battle field” (Dawa 2002, 354). He is referring here to common metaphors appearing in the *Four Treatises*. Dawa also describes twenty-seven possible combinations for herbal remedies that are based on four principal substances, which are called “king.” In other words, these would be the *kadzin*. Dawa then gives the option of adding three other herbs as “ministers and relatives ... to direct their synergetic effect to the particular affected site” (Dawa 2002, 357). These would be called *kagyur*, referring to changing the direction of the medicine towards targeting a particular illness.

This is the classical example of how a Tibetan formula can be changed to affect a particular disease without changing the name of the formula. *Kagyur* are often included in written formulas. This is initially confusing because one can find many formulas under the same name, with the same *kadzin*, but different *kagyur* ingredients.

To give an example: Manu Zhitang—which translates as “Manu: Decoction of Four”—is a formula with four ingredients, the chief ingredient being Manu (*Inula racemosa* Hook.f.). Dawa Ridak (2003) lists around twenty formulas under the name Manu Zhitang in various chapters of his *Practical Application of Manufacturing Medicines*, similar to what we find in the *Four Treatises*. In Dawa Ridak’s book these formulas share the same three out of four ingredients, albeit their measurements change. The fourth ingredient changes with each formula, which consequently alters the overall nature of the remedy from “cold,” *zil* (*bzil*), to “balanced,” *nyom* (*nyoms*), sometimes just to “slightly cold,” *chung zil* (*cung bzil*). The “benefit,” *penyön* (*phan yon*), also changes with each variant. Consequently, the various decoctions known as Manu Zhitang are used to treat not only a variety of *nyépa* imbalances, but also very specific diseases. What makes all of these formulas retain their name Manu Zhitang? How would such naming practices be accounted for during the standardization of formulas?

There is simply not a single standard Manu Zhitang formula. Which of the approximately twenty variations under the same name is actually produced and sold as Manu Zhitang by a particular pharmacy is also an open question. The point here is that variations of one and the same formula under the same name, classified under differ-

ent disease categories, are a key characteristic of *yorwa* as an epistemic genre. They have a specific meaning and are important to the transmission of medical knowledge. The *kagyur* practices offer a flexibility for reformulations that directly defies contemporary scientific notions of standardizing a drug under *one* name.

The third parameter is known as *katsar*, which literally means "to add something." *Katsar* are small additions to existing formulas and are like the personal signature by an experienced physician or a lineage holder (Blaikie, in press). We have some examples of *katsar* appearing in written *yorwa* works. Gawa Dorjé writes about the nineteenth century polymath Mipham Gyatso, who on the basis of approximately one hundred and eight formulas created three hundred "new" herbal formulas by adding *katsar* (Gawa Dorjé 2009, 4/14-16).

Mipham, being a prolific writer, took the trouble to actually write down formulas incorporating his medical experiences, thereby creating a new generation of *yorwa*. Since individual medical knowledge is transmitted orally from teacher to student or kept as internal notes within pharmacies, in most cases *katsar* remain unwritten. For example, when the senior Tibetan physician Tenzin Chödrak (1924-2001) took over as head of the Men-Tsee-Khang pharmacy department in Dharamsala in the 1980s after his arrival from Tibet, he developed new recipes with new names. He also introduced many *katsar* to existing formulas, based on his experience and oral instructions from his teacher Khyenrap Norbu, director of the Men-Tsee-Khang in Lhasa. These *katsar* exist in internal documents at the Dharamsala Men-Tsee-Khang pharmacy and are marked as "Tenzin Chödrak's *katsar*" or "Khyenrap Norbu's *katsar*."<sup>32</sup> They are the particular "signature" of Men-Tsee-Khang *yorwa*, but do not appear in their published *yorwa* texts.

Newly appointed heads of pharmacy cannot simply change the *katsar* if their predecessors are well-known senior physicians such as Tenzin Chödrak.<sup>33</sup> Their high position and medical experience is greatly respected, and in this case affirms lineage and authority to Men-Tsee-Khang recipes made in the diaspora and links them back to Lhasa, considered by many the original center of Tibetan medicine and the Dalai Lama's traditional seat of government. Most likely, a formula carrying the same name has different ingredients when produced in Lhasa or Dharamsala, or any other Tibetan medical factory for that matter; its *katsar* underlines the authority and authenticity of the formula.

<sup>32</sup> Personal communication, Dr. Choelothar, Chontra, May 2016.

<sup>33</sup> Personal communication, Dr. Choelothar, Chontra, May 2016.

*Katsar* can be an unprocessed substance but also a blessed ingredient like a relic or an already processed compound such as the compounded mercury-sulfide powder *tsotel*, which can be added to other formulas as a *katsar* to enhance the potency, or *nüpa*, of the existing formula. In Dharamsala, Tenzin Chödrak created a merged formula called Sangdak Daryaken (Gsang dag dar ya kan), to treat cancer. He added *tsotel* as a *katsar* to increase its potency. Usually *tsotel* is added only to precious pills, or *rinchen rilbu*. Here it adds a specific signature to a recipe compiled by a respected senior physician without turning it into a *rinchen rilbu*. *Katsar* are also added for individual patients to increase the power of the medicine to tackle serious illness.<sup>34</sup> Dr. Choelothar, a senior physician at the Men-Tsee-Khang in Dharamsala, aptly sums up the way in which *katsar* are personal “signatures”:

Making medicine is like cooking. You make a nice curry and add your specific *masala*, a little different than written in the texts. It makes the food more flavorful or the medicine more potent.<sup>35</sup>

How does one codify and standardize such uniqueness in medicine making? When uniqueness implies ownership, as is the case in the contemporary codification and pharmaceuticalization of traditional medicine in India, adding *katsar* would have to be standardized as a certain reformulation practice. This might look similar to Ayurvedic pharmaceutical firms adding substances to “classical formulas” to turn them into “proprietary medicines,” over which they then hold exclusive marketing rights (e.g. Madhavan 2014). While within Sowa Rigpa it has been an integral part of *menjor* practice for a very long time, in future, adding *katsar* to a textual formula might require a special licensing in India as a “proprietary medicine.” How would the authority of a *katsar* lineage be codified in a “proprietary medicine”?

### 5. The authorship of formulas

Traditionally, authorship in Tibet and across Buddhist Asia was usually a collective endeavor, with authors freely copying and inserting sections from previous authors into their writing without necessarily citing their sources (Freschi and Cantwell, eds. 2016). While Western scholarship would now identify such practices as “plagiarism,” in

<sup>34</sup> Interview Dr. Ngawang Soepa, Dharamsala, December 6, 2012.

<sup>35</sup> Interview Chontra, India, June 1, 2016.

Tibetan premodern writing culture this is common practice,<sup>36</sup> and a student, if at all, comes to know the sources of non-referenced quotes through personal study and oral instruction. The author of a *gorwa* text where a “classical” formula is listed is not necessarily the composer, but rather the tradent of this particular version of the formula. To understand this kind of knowledge transmission, Rob Mayer’s (2010) blog “Authors, plagiarist, or tradents?” is useful. Mayer argues that “the person producing a text sees himself as *passing on* existing knowledge, rather than creating new knowledge from nothing.” Similarly, authors of *gorwa* texts are foremost the tradents of earlier formula knowledge.

For many formulas no composers are mentioned, and many of them have their roots in the *Four Treatises*. However, some formulas are still known as being composed by a specific physician or as being linked to a particular medical school or lineage. For example, there are two versions of the Old Turquoise 25 formula; the first follows “the tradition of Lhalung” (*lha lung gi lugs*), the second the so-called “tradition of 100,000 lives” (*tshe ’bum lugs*) (Dawa Ridak 2003, 202/28 and 203/5), which in most other works corresponds to the Old Turquoise 25 formula attributed to the eastern Tibetan physician Pöntsang Yeshe (Dpon tshang ye shes, b. 1627/28 or 1641?). While the name remains stable, the two formulas’ ingredients and measurements differ; moreover, ingredients change through reformulations, copying, and (re)printing over time.

To understand Tibetan *menjor* knowledge transmission presented in the examples below it is important to consider that “the final product has the input of more persons than the nominal ‘author,’ often extending backwards (and even forwards) over considerable stretches of time” (Mayer 2010). I present my translation of one formula below to show the workings of such “collective authorship” as an intertextual feature of *gorwa* genre. In Buddhist literature this kind of intertextuality is so wide-spread that Freschi and Cantwell argue that “scholars need at least to consider whether or not previous material has been incorporated into each new work, rather than accepting authorial statements as representing what is meant by authorship in a modern context” (Freschi and Cantwell 2016, 2). This issue should be considered when including “origins” of formulas in a pharmacopeia.

Collective authorship is of course not unique to the Tibetan case, but standardization practices have shown that to prioritize a single “source,” or *jung khung* (*byung khung*), for a formula bears the risk of losing out on the intertextualities of formula writing. It is beyond the

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<sup>36</sup> See Salguero (2014, 15) for similar practices in premodern China.

scope of this paper to analyze all existing Sowa Rigpa pharmacopeias and formularies from the People's Republic of China, where Tibetan medicines have been standardized since the 1990s (Saxer 2013, 42). To give just three examples: (1) The *Catalogue of Everyday Tibetan Medicines* (*Rgyun spod bod sman dkar chag*; Lhakpa Tséring and Wangtop 2008), published in Lhasa, lists (with exceptions) the medical text from which each formula was copied in a supplemental table of contents (2008, 52-102). (2) The 900-page formulary *The Great Collection of Tibetan Medical Formulas* (*Bod sman sbyor sde chen mo*), published by the Men-Tsee-Khang of the Tibetan Autonomous Region (Sonam Dhondup and BMTK 2006), also lists only one text from which the formula was copied as its "source." Other texts listing modifications, earlier versions, and intertextualities of the formula are not mentioned. (3) The earlier *Standard Tibetan Pharmacopeia* (*Sman rigs thsad gzhi*; Ministry of Health (PRC) 1998) avoids the issue altogether by neither providing the source text nor the name of the tradent of the formulas listed.

Below I present the rich intertextuality of a Tibetan formula, which although in some sources is attributed to a composer or lineage is in itself a collective piece of writing, including (unacknowledged) quotes or paraphrases from other medical works dating from various centuries. To analyze these intertextualities of *yorwa* as an epistemic genre let us explore Dawa Ridak's presentation of the first of the two versions of the Old Turquoise 25 formula (see Fig. 1), which will suffice to make my point. Note that this is not the formula currently used by the Men-Tsee-Khang in Dharamsala.

The formula is clearly structured and non-poetic, except the section on therapeutic benefits, which follows the traditional nine-syllabic verse form<sup>37</sup> and was copied (with spelling errors) from earlier texts, explained further below. Each of Dawa Ridak's formulas has three subheadings: 1) "compounds [and] measurement" or *jortsé* (*sbyor tshad*), which lists the names of ingredients and their measurements; 2) "nature" or *rangzhin* (*rang bzhin*), which indicates the cooling, warming, or balanced characteristic of the entire formula, and 3) "benefit" or *penyön*, which describes the therapeutic applications. While Dawa Ridak's book is popular among contemporary Sowa Rigpa medical practitioners who make medicines on a small scale across the Himalaya, the recipes alone do not include sufficient in-

<sup>37</sup> The Tibetan language is mono-syllabic in nature, and meaning is basically syllabic. Often two syllables with independent meaning form a compound word that has its own meaning. In order to keep with the poetic meter of lines of nine mono-syllables each, medical terms are at times represented by only one syllable. While it aids the memorization of the text, it also makes it more obscure and often impossible to understand without oral instructions from a qualified teacher.

formation to actually make the formula. They give indications that certain substances, such as precious and semi-precious stones and cinnabar, have to be pre-processed, but the specifics of how to do so are typically not detailed in formulary works.

Brevity curtails or covers some of the detailed knowledge behind making the formula. Some plants, for example, *taksha* (*stag sha*), are known to have various types, and the type used is not mentioned. Oral tradition and practical experience would be essential additions to use the book in daily *menjor* practice. Moreover, animal substances mentioned in some recipes, such as rhino-horn, or *séru* (*bse ru*), are nowadays endangered and illegal and are thus skipped or substituted. Availability of raw materials and sustainability are now major concerns for the Sowa Rigpa industry (Blaikie in press) and influence how written formulas are actually put into practice.

The measurements in the formula below do not follow traditional Tibetan weights but give proportions in grams, which allows for flexibility and easy calculations. Dr. Choelothar explained this as follows: “0/050 means that if you prepare one kilogram of the entire formula, fifty grams should be from this ingredient, or if you make more in one batch, use proportionately a fiftieth from a thousand.”<sup>38</sup>

གཡུ་རྩིང་ཉེར་རྩེ།  
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 རྩི་ལོན། རྩི་བ་བདགས་ལྷེ་ལྷུ་ར་ལྷུ་བས་འདམ་འཕག་བ། །རི་ལ་བྱར་རི་ལ་བ་བསྐྱོལ་གངས་ལྷུལ་པ་  
 ལོས། །ལེབ་རྩིན་ལྷུ་ར་དང་རྩིན་འདུལ་དུག་ཐབ་དང་། །རྩི་གོར་རྩིན་ལྷུ་ར་ལྷུ་ར་ལྷུ་ར་  
 དང་། །གཞུང་རིངས་མཚན་འབྲུམ་ནག་པོ་དལ་སྐྱེམ་དང་། །མཚན་རྩི་དཀར་ནག་མཚན་  
 གནད་ཅེ་བྱར་འཛོམས། །(རྩི་ལྷུང་གི་ལྷུགས་)

Fig. 1 — A formula of Old Turquoise 25 from a contemporary menjor book (Dawa Ridak 2003, 202/16-28).

<sup>38</sup> Personal communication, Chontra, India, May 2016.

**Translation:**<sup>39</sup>

**Compounds [and] measurement:** pre-processed old turquoise (*g.yu rnying las snon byas pa*) 0/050; pre-processed pearl (*mu tig las snon byas pa*) 0/010; pre-processed coral (*byu ru las snon byas pa*) 0/040; tamed<sup>40</sup> cinnabar (*mtshal btul ma*) 0/020; chebolic myrobalan (*a ru*) 0/050, iron fillings (*lcags phye*) 0/200; beleric myrobalan (*skyu ru*) 0/080; a type of mineral exudate (*brag zhun*) 0/040; white sandalwood (*tsan dkar*) 0/040; red sandalwood (*tsan dmar*) 0/050; [the herbs] *ba le ka* 0/050, *stag sha* 0/050, *ru rta* 0/060, *bong dkar* 0/040, *ge sar* 0/050, [and] *rdo dregs* 0/020; rhino-horn (*bse ru*) 0/010; eaglewood (*a gar*) 0/030; [the herb] *ko byi la* 0/020; solidified bile (*ghi wam*)<sup>41</sup> 0/010; nutmeg (*dza ti*) 0/020, cloves (*li shi*) 0/025; good quality *cu gang* [processed from types of bamboo] (*cu gang legs pa*) 0/035; a type of saffron (*gur gum*) 0/025; musk (*gla rtsi*) 0/010; a type of cardamom (*sug smel*) 0/030; dharma medicine (*chos sman*) 0/020.

**Nature:** cooling (*bzil*)

**Benefit:** Generally, grind [the substances] into a fine powder and smoothen it with the liquid of [the plant] *spyi shur*; roll [the paste into] pills and administer them with cold boiled [water]. [The liver diseases treated with this remedy are:] “red enlarged [liver]” (*leb rgan rgyas*) and “elastic [liver]” (*[ldan ’dus] ldem bu*) and “poison-like” (*dug thab*), “dropping water” (*chu shor*), “little thief” (*rkun bu*), [and] “dropping down” (*’or lhung*) and “overflowing” (*kha lud*); “central paralysis/stiffness” (*gzhung rengs*), “black liver rheumatism” (*mchin grum nag po*), and “emaciated exhaustion” (*hal skem*). It overcomes “dispersing vital channels” (*rtsa byer*), and “black and white diaphragm” (*mchin dri dkar nag*).<sup>42</sup> [This formula follows the] tradition of Lhalung.<sup>43</sup>

<sup>39</sup> The identification of the ingredients is a difficult topic, and my English translations of commonly known ingredients are only a rough approximation and ignore possible (sub)types and spatio-temporal variations. This does not solve the problem of botanical identifications (which I try to avoid), but should give an idea of the substances found in the formula. See van der Valk 2016, 63ff on the problems of idealized identification, naming and classification practices in Sowa Rigpa.

<sup>40</sup> “Tamed” here refers to pre-processed cinnabar.

<sup>41</sup> Also spelled *gi wam* or *gi wang*. There are variations in its identification: elephant’s bezoar, enterolith, intestinal calculi, gallstone or bile, with several possible substitutions in circulation (Sabernig 2011, 89).

<sup>42</sup> For alternative English translations of these disease names see also Yang Ga (2010, 205). These disease names are still used in Tibetan clinical practice today, but often with modified medical interpretations, for example, “elastic liver” is described most often in contemporary Tibetan clinical settings in Xining and north India as Hepatitis B with other hepatitis viral variants often linked to similar de-



When analyzing the collective authorship and intertextualities of this formula one is taken back through several key medical works, not only on *menjor* but also general clinical texts as well as the *Four Treatises*. The formula emerges as a collective composition dating back to the seventeenth century with its attributed therapeutic usages copied from the *Four Treatises* dating back to the twelfth century. Table 1 summarizes the reuse, intertextuality, and “authorship” of the formula. This is not an exhaustive survey of all written instances of the Old Turquoise 25 formula, but enough to show the extensive intertextual practices involved in writing a formula.

Based on my preliminary analysis, the following picture emerges: one recent version of the formula was included by the nineteenth century accomplished physician Orgyen Tekchok (O rgyan Theg mchog) from eastern Tibet in his work *A Beautiful Ornament for the Compendium: A Treasury of Medicinal Elixirs* (Zin tig mdzes rgyan bdud rtsi'i sman mdzod, Orgyen Tekchok 2005, 215/20), which is now published as part of a collection known under its short title *Sorig Notes* or *Sorig Zintig* (Kongtrul et al. 2005).

Prior to this, the key tradent of the formula was Deumar Tendzin Püntsock (b. 1672), who lists the formula in his *Nectar of Immortality: White Crystal Rosary* ('Chi med bdud rtsi shel dkar phreng ba), which is a text within a larger compilation titled *Precious Garland: Selected Extracts on the Science of Healing* (*Gso rig gces btus rin chen phreng ba*) (Deumar Tendzin Püntsock 1993).<sup>44</sup> The *Nectar of Immortality* depicts formulas in poetic verse form; each verse typically lists four ingredients. Deumar's recipes follow the rhythm of a nine-syllable verse, a style which was also popular in Buddhist poetic writing. It is thus a good example of a medical text in which the literary and the epistemic merge (see Pomata 2014).

Going back a hundred years prior to Deumar, the complete formula of Old Turquoise 25 appears in the section on treating liver diseases in a compilation, now published as the *Drigung Collection on Medicine and Astrology* ('Bri gung sman rtsis phyogs bsgrigs) (Drigung

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scriptions of the disorder (personal communication Tawni Tidwell, February 2018).

<sup>43</sup> Dr. Tsering Norbu, *Materia Medica* Department, Men-Tsee-Khang, Dharamsala, told me (personal communication, June 2017) that the Lhalung tradition is linked to the Tibetan physician Zurkhar Nyamnyi Dorjé (1439-1475) of La thog in Dwag po. I could not confirm this and did not find the formula in his main work *Bye ba ring bsrel* (Zurkhar Nyamnyi Dorjé 1993). Lhalung might refer to the monastery of Lha lung in the region of Lho Brag in southern Tibet, bordering Bhutan, founded in 1154 (Buswell and Lopez 2013, 472).

<sup>44</sup> We currently do not know if these texts were compiled by Deumar himself or after his death.

Chödrak et al. 2008, 343/22-24—344/1). It was written by various authors including the lineage holder Drigung Künkhyen Rigzin Chödrak ('Bri gung Kun mkhyen rig 'dzin chos grags, 1595-1659) and his students, which included Könchok Dropen Wangmo (Dkon mchog 'gro phan dbang po), who was the teacher of Pöntsang Yeshe, the official composer of one of the versions of the formula. This is the earliest version of the formula I found, although one has to keep in mind that these texts are contemporary compilations of older texts by various authors of various centuries and could have been edited.

The thirteen liver diseases mentioned in the “Benefit” or *penyön* section correspond to the first thirteen of the eighteen types of liver diseases listed in chapter thirty-six of the Instructional Tantra, the third part of the *Four Treatises*.<sup>45</sup> The short descriptions of how to roll and administer the pills appear in all three works with spelling variations (Drigung Chödrak et al. 2008, 343/20-21; Deumar Tendzin Püntso 1993, 453/16-454/1; Orgyen Tekchok 2005, 216/1-2). A variation of the recipe, under the name “Old Turquoise 27,” is also mentioned in all three texts.

The reformulation into Old Turquoise 27 is made by adding two extra ingredients—which could be understood as a *katsar*: the common spice green cardamom (*sug smel*) and a so-called “dharma medicine” or *chömen* (*chos sman*).<sup>46</sup> The latter refers to consecrated compounds made by Buddhist dignitaries in monasteries. *Chömen* are typically compounded from dozens of ingredients, including sacred relics, and are consecrated through mantras and “accomplishing medicine” or *mendrup* (*sman grub*) rituals (Cantwell 2015; Garrett 2009). Thus the total amount of actual substances in this extended formula is unknown; it would far exceed twenty-seven. This demonstrates how the formula’s actual ingredients do not always add up to the number given in its name, especially when compounds are added as *katsar*. Moreover, substances used during pill making, such as the plant *spyi shur*, neither count as an ingredient nor as a *katsar*, even though they add smoothness to the final medicine.<sup>47</sup>

Dr. Dawa Ridak can be called the modern tradent, who combined the above mentioned sources into his contemporary version of the

<sup>45</sup> Yönten Gönpo lists the thirteen liver diseases as (Yutok Yönten Gönpo 1982: 299/4-6, my numbering): 1) *leb rgan rgyas dang*, 2) *ldem bu dang*, 3) *dug thabs*, 4) *chu shor*, 5) *rkun bu*, 6) *'or lhungs dang*, 7) *kha lud*, 8) *gzhung rengs*, 9) *mchin grum nag po dang*, 10) *mchin nad hal skem*, 11 and 12) *mchin dri dkar nag dang*, 13) *gnad mchin rtsa byer*. The remaining five liver diseases (14) *mchin rlung*, 15) *mchin rgud*, 16) *rnlan grangs*, 17) *glang dgur*, 18) *grang sbos*) were probably skipped by later authors during a copying error. Thanks to Olaf Czaja for pointing this out.

<sup>46</sup> Notably, in a modern formula text published in the People’s Republic of China the *chömen* is replaced by *tsotel* (Tuppa Tséring and Könchok Trinlé 1994, 225/9).

<sup>47</sup> Interview, Dr. Namgyal Qusar, Sidhbari, 24 May, 2017.

formula. He himself is very much aware of his tradent position and said during an interview on how and why he wrote the book:

What I wrote is not something new. I collected it from other sources. However, one mistake I made in this book is that I did not give my sources in detail. But since I published this it has become available to some interested doctors and it is helpful, especially for the doctors who practice in the Himalayan belt.<sup>48</sup>

Dawa Ridak himself made two contributions to the formula, the first regarding structure and the second regarding measurements. First, he chose the three headings “compounds [and] measurement,” “nature,” and “benefit” to structure the formula. Tibetan physicians explained to me that the “nature” (e.g. heating, cooling, or balanced) of the formula is often not mentioned in the older works, but is very important for physicians’ clinical practice; this also adds to the popularity of Dawa Ridak’s book among practicing physicians. Second, he added measurements, which are based on his *menjor* experience at the Men-Tee-Khang in Dharamsala as well as other sources, which he does not mention. The measurements are valued greatly by small-scale practitioners across the Himalaya, who still compound their own medicines but often do not have access to institutional *menjor* training and textbooks. Both contributions have given a practical value to the book.

#### 6. *The modern tradents: Re-writing menjor texts*

The new generation of Tibetan physicians in India look critically at their *menjor* texts. Some find them too confusing and incomplete, and in practice hand-written notes by the chief pharmacist are considered all that is needed to compound a medicine, especially if the pharmacist had a well-known teacher with an authoritative lineage. Several of the pharmacists working privately in the Dharamsala area rely in their day-to-day practice on their hand-written notes taken while studying with their teachers, without necessarily consulting published *menjor* texts.<sup>49</sup> Only a few attempt to actually revise or re-write *menjor* texts. Here, I analyze recent *menjor* texts published in India and discuss them in the context of authorship, intertextuality, and *menjor* knowledge transmission and what they contribute to our understanding of *jorwa* as an epistemic genre.

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<sup>48</sup> Interview, New York, July 2011.

<sup>49</sup> Personal communication Dr. Penpa Tsering, Sidhbari, India, June 2016.

Dr. Tsering Norbu was trained in the 1980s at Lhasa Men-Tsee-Khang. He then came to India and is currently the head of the Materia Medica Department at the Men-Tsee-Khang in Dharamsala, where he composed a new *menjor* book to address some of the difficulties he found with earlier *menjor* texts (Tsering Norbu 2005). His viewpoint is not shared by all of his colleagues and challenges sensitive issues of secrecy of oral transmissions, or *laglen*, which is generally not shared with those outside one's lineage (Pordié and Blaikie 2014, 348). Tsering Norbu explains his viewpoint:

I collected a lot of different *menjor* works and compared formulas. For example, I found three formulas called Thanchen 25, but their ingredients differed. Young doctors won't know which of these is good, which one to use. I also added the measurements of each ingredient as I knew them from personal practice. I know a lot of small-scale amchi<sup>50</sup> in the Himalayas make medicines based on *menjor* books, but don't know how much [of each ingredient] to use. For them measurements are important. Some doctors did not like this, because they thought the amounts should be kept secret, but for amchi making medicines in remote areas this is helpful. So I included them.<sup>51</sup>

Both Dawa Ridak, who was introduced earlier, and Tsering Norbu are progressive young physicians who prefer to give up some of the secrecy for the benefit of training young amchi, especially in rural areas. Their publications stand in sharp contrast to the official *menjor* textbooks that form part of the Men-Tsee-Khang teaching curriculum. A particular set of short formula books that medical students memorize today are collectively known as *Potency Summaries* or *Nüpa Chokdü* (*Nus pa phyogs bsodus*). "Potency" here refers to the "nature" or *rangzhin* of the medicine (hot, cold, or balanced), whether it is intoxicating or not (*bzi yod med*), and the therapeutic benefits or *penyön*. Several versions of these texts have been published, some in several editions, under different titles since the 1990s by the Men-Tsee-Khang in Dharamsala (Khyenrap Norbu and MTK 1995, Penpa Tsering 1997, Ngawang Soepa 2015). The *Potency Summaries* follow the tradition of Khyenrap Norbu, who first composed such a text early in the twentieth century listing the remedies made at Chakpori and Men-Tsee-Khang in Lhasa, the two main medical establishments founded in 1696 and 1916 respectively.

During medical training it is compulsory to memorize a *Potency Summaries*. Following our example of Old Turquoise 25 from the Lhalung tradition in the most recent *Potency Summaries* (Ngawang

<sup>50</sup> Amchi is a Mongolian-derived term referring to a Tibetan physician.

<sup>51</sup> Interview, Dharamsala, May 2015.

Soepa 2015, 63), students memorize only the benefit section with the list of liver diseases (based on the *Four Treatises*); the ingredients and instructions on how to make the formula are not mentioned. Only the 1995 edition mentions the Pöntsang Yeshe tradition of the formula (Khyenrap Norbu and MTK 1995, 60/2). The entry on Old Turquoise 25 in Soepa's *Potency Summaries* (Ngawang Soepa 2015) adds an extra line of instruction in parenthesis at the end, which reads: "[This compound] clears all liver disorders similar to a genuine elixir.<sup>52</sup> This compound [is] slightly cooling in nature, and not intoxicating. The dosage [is] one pill."<sup>53</sup>

An exception among the recent *menjor* textbooks is a small textbook self-published by a medical student (Püntsock Tendar 2006). The Men-Tsee-Khang college teachers I spoke with appreciate Püntsock Tendar's work for the extra details he adds to the general *Potency Summaries*, specifically the list of ingredients and textual sources of formulas (the sources are also listed in Khyenrap Norbu's *Potency Summaries* but not in the one memorized by students today). One aspect stands out in Püntsock Tendar's *Potency Summaries*. He is the only author/tradent passing on the formula of Old Turquoise 25 listing all eighteen liver diseases from the *Four Treatises*, not just the first thirteen as all his above-mentioned predecessors did. Here, he differs from his source, Deumar's *Nectar of Immortality* (Deumar Tendzin Püntsock 1993; Püntsock Tendar 2006, 89), which only lists thirteen liver diseases from the *Four Treatises*.

Penpa Tsering's *Potency Summaries* (1997) was especially written for the public, i.e. Tibetans taking Tibetan medicine. It became very popular and describes the benefits of Old Turquoise 25 in simple colloquial Tibetan, such as loss of appetite, tiredness, headaches, nose bleeding, dry mouth, reddish eyes, and so forth (1997, 73-74). Medical students read it for an easier understanding of the more technical *Potency Summaries* that they have to memorize (e.g. Ngawang Soepa 2015).

In answer to my question of whether students still learn the ingredients of formulas, one college teacher of the Men-Tsee-Khang told me that those will be covered in the classroom at some point but are not subject to memorization, unless formulas appear in the *Four Treatises*, of which large parts are still memorized. The teaching emphasis nowadays is not on how to *make*, but how to *prescribe* the medicine in

<sup>52</sup> The phrase "similar to a genuine elixir" also appears in Khyenrap Norbu's entry on Old Turquoise 25 (1995, 60/2) and in other contexts across older medical texts where it indicates a wide therapeutic range and the superiority of a formula (e.g. Jampel Trinlé 1997, 5/16), but not necessarily a tonic.

<sup>53</sup> *mchin nad kun 'joms bdud rtsi dngos dang mtshung/ sman sbyor 'di rang bzhin cung bsil la bzi med / ril bu gcig thun* (Ngawang Soepa 2015, 63).

clinical practice. This reflects the Men-Tsee-Khang's policy of educating young generations of physicians as clinicians, who are supplied with pills from the Men-Tsee-Khang pharmacy and do not have to know the ingredients of formulas and how they are made.

Pordié and Blaikie observed in their analysis of medical education in Ladakh that, "The institutional separation of the many fields of competence and the specialization of medical knowledge suits the preparation of professional physicians, but is inadequate for the training of competent practitioners in terms of pharmacy ..." (Pordié and Blaikie 2014, 364). In India, to date there is no specific *menjor* curriculum or degree course to become a Sowa Rigpa pharmacist. Various attempts to even discuss *menjor*-related issues among Tibetan physicians have largely failed because each pharmacy follows its own oral tradition and special *men ngak*, which is not shared with others.<sup>54</sup>

Because of the institutional separation of fields of medical knowledge, there can be quite a difference between the *penyön* of a formula made at the pharmacy and the *penyön* of that formula memorized under the same name by a student at the college. For example, in the 1980s at the Men-Tsee-Khang some *penyön* had to be corrected in the *Potency Summaries*, because they followed a different lineage of the formula than what the head pharmacists was compounding at the pharmacy. Both formulas had the same name but the medicine distributed to the clinic dispensaries had a different therapeutic effect from its description in the textbook that the practicing physicians had memorized. This was later corrected.<sup>55</sup> It happened because formulas with different ingredients and benefits have been passed on under the same name but were reformulated while passed down through different medical lineages.

*Menjor* practice based on the unpublished notes of a pharmacist, with batches of medicines reformulated with different *katsar*, or *tsap* (if some ingredients are not available), works if the person making the medicine is also prescribing it, which is characteristic of small-scale Sowa Rigpa practice (Blaikie 2014). It could thus be argued that if the increased institutionalization of Sowa Rigpa practice leads to such a disconnect between clinic and pharmacy, practitioners and their patients might in fact benefit from a certain standardization of formulas and text books.

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<sup>54</sup> Dr. Penpa Tsering, personal communication, May 24, 2017.

<sup>55</sup> Dr. Penpa Tsering, personal communication, May 24, 2017.

Century	Name of Tradent/ Reformulator/ Author/ Editor	Title of Work	Sections in the Written Formula				
			Measurements	Pill making	Nature of remedy	Benefiting 13 liver diseases	List of ingredients
<b>CONTEMPORARY POTENCY SUMMARIES</b>							
(2015)	Ngawang Soepa	<i>Potency Summaries</i>	no	no	yes	yes	no ingredients mentioned
(2006)	Püntsok Tendar	<i>Potency Summaries</i>	no	no	yes	yes (18 liver diseases)	yes
(1997)	Penpa Tsering	<i>Potency Summaries</i>	no	no	yes	no, but describes "modern" liver symptoms	no ingredients mentioned
(1995)	Khyenrap Norbu (1883-1962) and MTK	<i>Potency Summaries</i>	no	no	no	no	no ingredients mentioned
<b>INTERTEXTUALITIES</b>							
(2003)	Dawa Ridak	<i>Practical Application of Manufacturing Medicines</i>	yes	yes	yes	yes	27
19th century (2005)	Orgyen Tekchok (b. 19th century)	<i>A Treasury of Medicinal Elixirs</i>	no	yes	no	yes	25+2
18th century (1993)	Deumar Tendzin Püntsok (b. 1672)	<i>Nectar of Immortality</i>	no	yes	no	yes	25+2
17th century (2008)	Drigung Rigzin Chödrak et al. (1595-1659)	<i>Collection on Medicine and Astrology</i>	no	yes	no	yes	25+2
12th century (1982)	Yutok Yönten Gönpö (fl.12th century)	<i>Four Treatises</i>	formula not mentioned	formula not mentioned	formula not mentioned	18 liver diseases are listed	formula not mentioned

Table 1 — Key Tradents and Intertextualities of the Old Turquoise 25 formula (Lhalung tradition, except Khyenrap Norbu<sup>56</sup>).

<sup>56</sup> Khyenrap Norbu's formula refers to the second tradition going back to Pöntsang Yeshe (Khyenrap Norbu and MTK 1995, 60/1-3).

7. Discussion: Considerations for the codification  
of Sowa Rigpa formulas

In the wake of the pharmaceuticalization of so-called traditional medical systems and the codification and reformulations of their drugs, formulas in India are nowadays approached as “classical formulas” in contrast to “proprietary medicines” (e.g. Banerjee 2009, Pordié and Gaudillière 2014). Both were defined in the introduction of this article. The related assumptions that underpin such divisions have been critiqued for the Tibetan medical contexts by Blaikie, who questions the distinct and stable entities of so-called “classical formulas” and highlights their continuous emergence “within fields of practice” (Blaikie 2015, 18).

The present paper explored the nature of Tibetan formulas in terms of their authorship, intertextuality, and naming practices, as well as their purposeful design, which inherently includes a certain flexibility to reformulate recipes, which I called the “signature” of a formula. I took the example of one of two existing versions of the formula of the precious pill Old Turquoise 25 to analyze such “signatures.” They encompass more than reformulating a recipe by adjusting, substituting, or adding ingredients, but take account of the relationship a practitioner has with a formula, its ingredients, the patient, and the place of manufacture. The signature of a formula also refers to its inert script that might entail a certain adherence and respect for a particular lineage. This is done, for example, through intertextual practices, by including sections from earlier authentic medical texts such as the *Four Treatises* into a written formula, as well as on the substance level by including *katsar*, which might contain consecrated substances related to a particular Buddhist or medical lineage.

I showed that Sowa Rigpa formulas are not stable entities in time but are recipes in flux inherently designed to be reformulated and adapted. This inherent design is such that practices of standardization, such as codifying a formula as “classical” or “proprietary,” will most likely affect the medical knowledge and pharmaceutical practices formulas are designed to transmit. I therefore chose to approach formulas as an epistemic genre (Pomata 2011) that are not limited to specific types of texts but also include practices in flux that are impacted by their collective authorship through intertextual practices as well as through practices of naming. It is the multiplicity of formulas in their textual representations and practice that provide the context and background to understand the development of formulas over time as they interface with practical experience, lineage, authority, and other texts.



An extensive textual comparative and philological analysis of formulas across centuries and texts would offer a deeper understanding of *zorwa* as a genre. The analysis of Old Turquoise 25 is but a first preliminary example. With the likely forthcoming standardization of Sowa Rigpa practices in India our understanding of formulas will depend on our ability to bring together our fragmented perspectives on formulas, which as Pomata suggests can be achieved by looking at formulas as an epistemic genre (Pomata 2013). I argued that *zorwa* as an epistemic genre goes far beyond current definitions of “classical formulas,” also because it takes into consideration a large variety of Tibetan texts and their intertextualities. *Zorwa* as an epistemic genre should include the *materia medica* literature that describes raw ingredients, sections in general compendia that include formulas under headings of specific disease, the *menjor* medical compounding literature, as well as the modern *Potency Summaries*, which present the potency and therapeutic effects of formulas with or without listing ingredients. The disjointedness of *menjor* knowledge spread across these various types of medical works poses a challenge to finding and justifying a “standard” formula. The ways formulas are written reflects a varied understanding among Sowa Rigpa practitioners of how substances work and formulas are made, thus making evident that *zorwa* as a genre is also a type of practice.

In terms of authorship, I demonstrated that modern authors of *menjor* texts are not “individual authors” but more often tradents of collective medical knowledge, sometimes going back to one specific composer, such as Pöntsang Yeshe, or a specific medical lineage, for example, the Lhalung tradition. Some authors include their individual medical experience in their written versions of formulas, but individual *menjor* experience remains largely oral and often secret. This unwritten medical knowledge is also a part of the *zorwa* genre. With the extensive reuse of formula sections and reformulation and substitution practices across texts, it is often difficult and sometimes impossible to establish their “origin,” which might explain why Sowa Rigpa pharmacopeias published in the People’s Republic of China only mention one source text for their “standard” formula, if at all. It would require extensive research to trace the intertextualities of each formula across different texts to its earliest versions.

While formulas are appropriated and changed continuously, they are not always updated in writing. Therefore, even if in the course of standardizing a Tibetan pharmacopoeia a textual formula would be chosen as the representative “classical version” of that formula, it should be clear from the beginning that the currently manufactured drug based on this formula is in most cases already a reformulation.

Strictly speaking, there is rarely a “classical” unchanged version of a formula.

The inclusion of quotes from the *Four Treatises* into the therapeutic application of formulas that were developed much later raises broader questions concerning the intertextuality in Tibetan genres, exemplified here by the continued influence and importance of canonical works such as the *Four Treatises* in the writing of formulas. The liver diseases in the *Four Treatises* are still used in contemporary clinical practice, having persisted through oral transmissions and constant adaptations. Can we understand the attribution of a list of liver disease categories from the *Four Treatises* found in a formula composed some six hundred years later as a move to classify or authenticate the new remedy as a key liver formula? Did physicians writing formulas simply rely on the older disease terminology they were familiar with for centuries through the continuous memorization of this root text? The factor of sacredness also plays a role. As Dr. Penpa Tsering explained:

It is like this. For formulas we take the *penyön* from old texts, like the *Four Treatises* or a text by Khyenrap Norbu. We consider it sacred. We do not make any changes to them.<sup>57</sup>

We can thus understand this way of formula writing as the accumulation of *menjor* knowledge, passed on by various tradents, and expressed in the sacred words of the root text or respected teachers of the past. In the *gorwa* genre the purpose of such intertextual practices lie in linking formulas to an authentic, and thus potent, lineage.

How the formula is eventually used in clinical practice is a matter of individual training, reflective of how clinical experience is passed on from teacher to student. Further ethnographic fieldwork in this direction would be fruitful.

The standardization of formulas will be a defining aspect of the future of the Sowa Rigpa industry. Their detailed study should be considered an important part of the “pharmaceutical assemblage” and necessary to arrive at a “bigger picture” of the industry (Kloos 2017). There are several possible scenarios Sowa Rigpa formula standardization might take in India. In the People’s Republic of China, for example, Tibetan formulas have already undergone standardization strongly influenced by biomedicine and Traditional Chinese Medicine (TCM) formulas and have led to individual pharmacies patenting formulas (Saxer 2013). Once patented, Tibetan formulas can no longer be produced commercially by other Tibetan pharma-

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<sup>57</sup> Interview, Sidhbari, May 24, 2017.

cies for the stipulated time. This is especially detrimental for rural Sowa Rigpa medical practitioners still making their own medicines (Blaikie et al. 2015; Czaja and Schrempf, forthcoming; Hofer 2012; Schrempf 2015). Problematically, long-standing formulas that do not appear in the Tibetan Drug Standards of 1995<sup>58</sup> or Chinese pharmacopeia are considered “new” and have to undergo expensive scientific studies to prove their efficacy and safety, which Saxer demonstrates ethnographically for the secret lineage formula Langchenata (Saxer 2013, 153ff). That Langchenata could not be registered as a “traditional” drug shows how in the People’s Republic of China “in reality a distinction is not made between ‘traditional’ and ‘new’ knowledge, but between already documented, filtered, and approved knowledge and knowledge yet to undergo this process” (Saxer 2013, 155). Notably, in the course of preparing the drug for the clinical trials the formula had to be reduced from twenty-one to fifteen ingredients to conform with regulations (Saxer 2013, 158).

It is unlikely that Sowa Rigpa in India will follow the Chinese model of largely patenting standardized Tibetan formulas. It is much more likely that in India, Sowa Rigpa will follow the “proprietary medicine” model similar to the ways Ayurveda codified its formulas, which allows small-scale pharmacies to receive licenses for their reformulations relatively easily as compared to applying for costly and complicated patents (Madhavan 2014, 147-18).

There is a lot to learn from the Ayurvedic model. Looking back, we know that the codification of Ayurvedic formulas in the 1970s led to a reductionism of Ayurvedic practice and the displacement of individual practitioners, whose therapeutic choices became limited to the Ayurvedic pharmaceuticals available on the market (Zimmermann 2014, 80-81). Zimmermann’s assessment of this limitation is clear. He argues:

When the lay practitioner is no longer allowed to make changes according to the local and idiosyncrasic context of medical practice in the composition of an ancient formula, which has been standardized and codified, the traditional approach to disease and drugs in terms of a humoral constitution comes to compromise with modern ideas of differential diagnosis and specific clinical indications. Doctors, who formerly were addressing the whole personality of the patient, are limited to the role of mere prescribers of medicines, and medical practitioners are displaced to the benefit of pharmaceuticals (Zimmermann 2014, 80).

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<sup>58</sup> This seems to be an earlier version of the one I cited above (Ministry of Health 1998). On the development and challenges of the Tibetan Drug Standards see Saxer 2013, 41-43.

Some form of such standardization in Sowa Rigpa is already taking place with medial students memorizing formulas in *Potency Summaries* which do not include the ingredients of formulas. To avoid a reductionism similar to that described by Zimmermann for Ayurveda, it is crucial to raise certain questions now. Some Tibetan physicians I spoke with are very aware that Sowa Rigpa would lose a lot following the Ayurvedic model. As Dr. Namgyal Qusar emphasized:

We must not copy the Ayurvedic model. The Ayurvedic model is not fitting for our Tibetan medicine. Standardization is a reductionist approach. We should change in a way so we can preserve our tradition and practice. ... *yorwa* are written in a way more open for the doctors themselves to prepare medicines in the way they want.<sup>59</sup>

Without an understanding of the characteristics and variations of Tibetan formulas, the making of a Sowa Rigpa pharmacopeia could well lead to a loss of the medical flexibility that is historically and currently at the core of Sowa Rigpa *menjor* practice. The multiplicity of formulas might be reduced to one “classical” or “canonical” version without paying attention to the individual condition of the patient, the importance of lineage, authorship, intertextualities, the naming of a formula, and integral variations of *kadzin*, *kagyur*, and *katsar*, all three of which offer an inbuilt flexibility for reformulations that directly defies contemporary scientific notions of standardizing a drug under *one* name. Should Sowa Rigpa in India follow the Ayurvedic model, the relationship a physician has with a formula into which he engraves his signature through adding a *katsar* would change drastically. A claimed ownership of a “proprietary medicine” would require a new name and a published list of ingredients. Thus, adding a *katsar* would possibly require a so-called “classical formula” to be registered as a “proprietary medicine”; from a Sowa Rigpa viewpoint, however, adding *katsar* is a type of “signature” that does not change the formula’s name or status as a genuine, long-standing formula but remains the secret oral knowledge of a particular pharmacy that should not have to appear on any label.

Most Sowa Rigpa formulas currently made in India will by definition qualify as “proprietary medicines,” opening up an economic avenue in which pharmaceutical companies can claim exclusive manufacturing and marketing rights through renaming and thereby branding new products. An Ayurvedic example here is Dabur Chyawanprash or Himalaya Chyawanprash, the first name being the company’s name and the second the name of the “classical” formula

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<sup>59</sup> Interview, Sidhbari, May 24, 2017.

(Madhavan 2014, 170). On its way to becoming a proprietary medicine, Old Turquoise 25 would require at minimum a prefix or suffix in its name to abide by the rule of not branding a classical medicine with its original name.

The insights gained from this Tibetan case are significant to other medical systems facing standardization, since it raises questions pertinent to traditional medical systems facing official government recognition. Such recognition inevitably leads to the making of a standard pharmacopeia. I have shown that what is at stake in the move to standardize the inherent nature of Sowa Rigpa recipes is their multiplicity. In the process of standardization, the respective institutes, commissions, and professionals deciding what will become the standard "classical formula" hold power and responsibility, especially if several formulas exist under the same name across different medical lineage texts or with different amounts of ingredients. There is a danger that politics and favoritism will influence decisions about which names will be chosen and which variations and substitutions will be dropped. How will authorship and intertextualities be dealt with? What is the future of unwritten "signatures" in long-standing formulas? Approaching traditional formulas as an "epistemic genre" might prove useful for our understanding of the multiple signatures they often contain.

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