

The “Brilliant Moon Theriac” (*Zla zil dar ya kan*): A Preliminary Study of Mercury Processing According to the Vase of Amṛta of Immortality (*‘Chi med bdud rtsi bum pa*) and its Influence on Tibetan Pharmacological Literature

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ercury-based pharmacology is an important strand in the history of Tibetan scientific thought. Stretching its roots far back to the reception and elaboration of Indian alchemical transmutation (*dhātuvāda*), this discipline, with its complex doctrinal apparatus and varieties of procedures, pertains, paradigmatically, to a system of healing characterised by the coalescence of medicine and religion. Therefore, the study of this subject can be inserted in the emerging historiographical debate on the relationship between medicine and ritual in Eurasian civilisations.¹

Tsothel (*btso thal*), the black mercury sulphide ash that is a key ingredient of many of the “precious pills” (*rin chen ril bu*), is prepared from liquid and poisonous mercury (*dngul chu*). It is a process of transformation that is of multidimensional significance. Precious pills are not only revered as the most powerful medicine but they are regarded as being endowed with apotropaic properties aimed at protecting against poisoning and demonic forces causing epidemics. *Tsothel* is a complex “cultural artefact,”² whose religious efficacy is linked to the divine nature attributed to its metallic and mineral constituents (principally mercury), which, in order to become

¹ See Adams, Schrempf, Craig (eds.) 2013. For further readings on the relation of medicine and magic in ancient Babylonia see for example Geller 2010; Ronit Yoeli-Tlalim wrote an interesting essay dealing with the combination of moxa and *gLud* rite described in the Dunhuang manuscript ITJ 756 (Yoeli-Tlalim 2015: 749–55); for a further inquiry into the Egyptian “magical and medical papyri” see Lucarelli 2010: 55–67.

² Barbara Gerke has used this terminology in her recent study on the “cultural biography” of *tsothel*. Gerke 2013: 140–42. For a further reading on the cultural biographies of medical substances see Totelin 2012: 122–144.

beneficial, should not only be pre-processed but also be “tamed” (*'dul ba*) through specific rituals. The theurgic essence attributed to mercury conveys an extension of ancient alchemical conceptions to the pharmacological context. These conceptions are subaltern to other theoretical sciences and practises aimed at organising and experiencing the nature (of both the world and the individual) as a unique constitutive and structural reality. The possibility of transferring the knowledge acquired in the alchemical practice to the preparation of efficacious remedies against pestilences and poisons has been elaborated in the medical literature over the course of several centuries in Tibet. The inter-textual analysis of the sources allows us to formulate a series of preliminary considerations about the historical development of mercury procedures in order to assess the role of some influential written sources in shaping the theoretical frame underpinning mercury manufacturing. In particular, the sources can provide us with significant data to understand in what way *tsothel* was designed to be a “theriac” (*dar ya kan*) that eradicates poisons and even prevents atrocious pandemic and infective diseases, and ultimately to examine some authorial strategies in the transmission of pharmacological knowledge.

In this paper I address the role of the Rnying ma *gter ma* entitled *Vase of Amṛta of Immortality* (*'Chi med bdud rtsi bum pa*, CBB)³ in the process of consolidating pharmaceutical theories and practices based on mercury. Starting with an outline of the inter-textual legacy of this source and its contents, I will argue that the description of recipes that include detoxified mercury in terms of “*log gnon* to pacify all [the diseases]” (*zhi byed kun kyi log gnon*)—a terminology we also find in the *Subsequent Tantra* (*Phyi'i rgyud*, PhG) of the twelfth century *Four Tantras* (*rGyud bzhi*, RgZ)—was influenced by the CBB. I will relate synoptically the method of mercury processing described in the *Vase of Amṛta of Immortality* and the “cold preparation” (*grang sbyor*) described in the eleventh chapter of the *Subsequent Tantra*. More in particular, discussing the term *log gnon* and its multiple meanings, I will argue that the CBB codified the description of processed mercury as endowed with counter poisoning and apotropaic properties that became a narrative motif in many authoritative pharmacological collections by the fourteenth century up to today.

³ *Rin chen gter mdzod*, vol. 46 (ngo, ha): 1r1-124r1.

1. *From Alchemy to Chemistry: Tracing Important Stages in the Development of Mercury Processing.*

In order to situate the *Vase of Amṛta of Immortality* within the broader context of Tibetan medico-alchemical literature, I shall briefly refer to the fundamental corpora dealing with mercury practices and attempt to problematize the coexistence of continuity and change in the historical development of mercury processing.

The therapeutic use of mercury in Tibet dates back to the ninth and tenth centuries (we find mainly electuaries and topic pomades against skin disorders connoted by purulent secretions).⁴ A clear reference to mercury as antidote to poisoning and epidemics is to be found in medical classics such as the eleventh chapter of the PhG, which is entitled *Section on the Composition of the Gemstone Medicine* (*rin po che sman gyi sde tshan*), and that deals with the “precious medicine” (*rin po che'i sman*) or the use of precious stones, minerals and metals to prepare medicines. In this chapter, Rig pa'i ye shes, a manifestation of the Medicine Buddha's mind, explains the use of the gemstones in this way:

Having administered, one after another, [different varieties of medicines] such as decoctions, powders, pills, medicine butters, [you] feel get used to [those] medicines and yet the disease is not eradicated, [then, apply] the gemstone medicine, the *log gnon* pacifying all [diseases]. The four hundred and four categories of diseases of blood, bile, phlegm and wind, head, trunk and arms wounds, *dmu 'or*,⁵ leprosy, 'bras⁶ and *gag lhog*⁷ and [the other classes

⁴ Pelliot Tibétain 1057: 1.1–11, 10.19–20; the *Medical Method of Lunar King* (*Sman dpyad zla ba'i rgyal po*): 58v2–59r4 and the *Biji's Yellow Book* (*Bi ci pu ti kha ser*): 26.16–27.11. Simioli 2013: 43–4.

⁵ Union of *dmu chu* and 'or nad. The 'or nad disorder starts with metabolic and digestive disturbances, which interfere with the proper nutrients extraction and waste disposal processes. In the liver, the sap cannot be properly transformed in pure blood or “vital blood” (*zung khrag*). Consequently, there is an abnormal proliferation and accumulation of impure blood and “yellow fluids” (*chu ser*, lit. yellow water) beneath the skin: impure blood and fluids spread all over the body improperly moving within cavities or pathways. The process resembles the water that circulates through channels until is accumulated into ponds or the water that flows downward. See Byams pa 'phrin las, ed. 2006: 799. *dMu chu* identifies a phlegmatic fluid disorder of demonic origin (*nad bdag*). It derives from a chronic 'or nad ('od rnying) and corresponds to the accumulation of fluids within the viscera and the vital organs. It can affect three different areas of the body: (1) the interstitial space between the skin and flesh (*bar chu pags pa'i og dang sha'i steng khyab par gnas pa*); (2) accumulation of fluids into the peritoneal cavity that covers the gastrointestinal tracts or better the intra-abdominal organs (*nag chu rgyu long sogs snod kyi steng du'pho bar gnas pa*); (3) it can affect the two most external strata of the epidermis within which the yellow fluids and radiance flow determining

of] *gnyan* diseases, [all the diseases determined by] evil influences of malevolent beings such as *klu*, *rgyal po*, *'byung po* etc., all those diseases are dispelled without exception by the gemstone medicine; besides, it becomes a rejuvenating essence (*bcud len*) for healthy persons [...].⁸

Around the fourteenth and fifteenth centuries the conception of mercury as *log gnon*, was fully developed, reaching its most sophisticated forms in the exegetical context of iatrochemical literature authored by physicians of medical lineages connected to the Brang ti and the Zur families. Among the most authoritative medical collections is the *Great Measure of Gold* (*gSer bre chen mo*, SbC)⁹ authored by Brang ti Dpal ldan rgyal mtshan (fourteenth century) and the *Ten Million Relics* (*Bye ba ring sel*, BRS) by Zur mkhar ba mNyam nyid rdo rje (1439–1475).¹⁰

The first emic perspective on the history of Tibetan mercurial alchemy and iatrochemistry is provided by lHa btsun Rin chen rGya mtsho (fourteenth century) in his *the White Collection of 'Brong tse, a Treasure of Secret Instructions* (*'Brong rtse be'u bum dkar mo man ngag gi bang mdzod*, BMD). *The Collection of 'Brong rtse* contains a great deal of information about the alchemical texts and sources available in the fourteenth century, all systematised in the synoptic version of O rgyan pa's teachings entitled *Systematic Collection of the Whole Series of Teachings on the Trilogy of Mercury Transmitted by Orgyenpa, Including Aural, Special and Profound Instructions* (*O rgyan pa nas brgyud pa'i dngul chu skor gsum gyi gdams pa cha tshang bar phyogs gcig tu bkod pa zhal shes dang bcas zab pa'i khyad can*). Rin chen dpal (1229/30–1309) seems to have had a pivotal role in the history of Tibetan

the body complexion (*phyi chu sha mdangs bar du gnas pa*). See Byams pa 'phrin las, ed. 2006: 650–51. The category of “yellow fluid” comprises different body fluids such as lymph fluid, blood plasma, extra and intra-cellular fluids, and interstitial fluid. See Bauer-Wu *et al.* 2014: 3.

⁶ Abbreviation of *'bras nad*. It refers to a broad nosological category of chronic diseases that most closely aligns with that of cancer of biomedicine. See Bauer-Wu *et al.* 2014: 3–9.

⁷ Union of *gag pa* and *lhog pa*. *Gag pa* is a kind of *gnyan nad* that affects the tongue and causes swelling in the throat. *Lhog pa* is another kind of *gnyan nad*, which affects the skin causing pustules described as swelling sores or ulcers. Byams pa 'phrin las, ed. 2006: 93.

⁸ PhG 25v6–27v2: */thang phyé ril bu sman mar sogs// yang yang bsten pas nad 'dred ma thon// zhi byed kun log gnon rin po che// khrag mkhris bad kan rlung brgya rtsa bzhi'i nad// mgo dang byang go yan lag rma rnam dang// dmu 'or mdze 'bras gag lhog gnyan nad // klu rgyal po la sogs 'byung po'i gdon// rin po che yis mi sel 'ga' yang med// nad gzhi med pa'i mi la bcud len 'gyur//*.

⁹ For a further inquiry into the chapters dealing with mercury recipes see SbC 144–178.

¹⁰ Czaja 2013: 77–8.

iatrochemistry. He elaborated what nowadays is considered the prime method to purify mercury otherwise known as the tree-fold “great purification” (*btso bkru chen mo*) handed down within the *Great Measure of Gold* and the *Ten Million Relics*. The complex intertextual nature of Rin chen dpal’s teachings was clear to Lha btsun Rin chen rgya tsho, who structured them as a trilogy of medical precepts, tantric instructions and pith oral instructions. Conforming to the research for siddha’s legacy of mercurial alchemy, he related the last two series of instructions with the *Mahāmudrā* transmission of the Indian siddha Śāvaripa. These instructions regard the ingestion of unprocessed mercury (*rngul chu rjen pa gtang*, lit. “intake naked mercury”), which is empowered and subdued with mantras and whose poisons are cured with countermeasures. The medical precepts contain identifiable quotations from different medical and tantric texts including the CBB, which is classified as medical cycle on ritual precepts against poisons (*dug sman las sman skor la bsrung skor*) and diseases of demonic nature (*nad gdon ’joms pa’i skor*).¹¹ Thus, this collection inserts the transmission of the CBB in the broader history of the relationships between Rnying ma tantric sources and Tibetan medicine.

Returning to the overview on the history of Tibetan iatrochemistry, we might assume that this tradition evolved for the most part from two literary traditions: (1) Indian alchemical literature preserved in the Buddhist canon and (2) rNying ma canonical and apocryphal scriptures called “Accomplishing Medicine” (*sman sgrub*).¹² The first literary tradition is the result of a complex process of reception and *translation* of a system of knowledge at its pinnacle in the late Indian Buddhist tantric sources. Indeed, the preservation of Indian alchemical corpora might be inserted in the project of canonization of Buddhist scriptures. The *Bka’ ’gyur* includes the eleventh century translations of the *Kālacakra Tantra*¹³ and its commentary the *Vimalaprabhā*,¹⁴ which together contain extensive descriptions of alchemical practices.¹⁵ The same canon also preserves the following four Indian works: the *Treatise on the Perfected Mercurial*

¹¹ BMD 278/20-283-24.

¹² I have adopted the terminology coined by Frances Garrett in her study on the *g.Yu thog Hearth Essence* (*g.Yu thog snying thig*) because I agree with her interpretation of *sman sgrub*. Garrett 2009: 209–12.

¹³ *Kālacakra Tantra* Tōh 375, *bKa’ ’gyur* (Lhasa), vol. 79 (*rgyud, ka*): 28v5–105v3.

¹⁴ *Vimalaprabhā* Tōh 1114, *bKa’ ’gyur* (sDe dge par phud), vol. 102, (*rgyud, srī*): 1v1–69r7.

¹⁵ *Kālacakra Tantra* Tōh 375 *bKa’ ’gyur* (Lhasa), vol. 79 (*rgyud, ka*): 73r6–73v7. *Vimalaprabhā* Tōh 1114, *bKa’ ’gyur* (Sde dge par phud), vol. 102, (*rgyud, srī*): 178v3–179v5. See also Fenner 1979.

Elixir (*dNgul chu grub pa'i btsan bcos*, DGB),¹⁶ the *Compendium on Transmutation into Gold* (*gSer 'gyur bstan bcos bsdu pa*, GBB),¹⁷ *The Omniscient Lord's Elixir that, Dispelling All the Diseases, Promotes Physical Strength* (*Thams cad kyi dbang phyug gi bcud len nad thams 'joms shing lus stobs rgyas par byas pa*, TBCNJT)¹⁸—three *rasaśāstra* texts that were translated by Rin chen dpal—and the *Nectar that Transmutes into Gold* (*gSer 'gyur rtsi*, GGT).¹⁹

After analysing these sources, I offer some conclusions on the epistemological classification of the alchemical knowledge within the classical sciences (*rig gnas lnga*). These four Indian alchemical treatises are preserved under the category of “art and technologies” (*bzo rig*). This classification highlights an established representation of alchemy as operative knowledge, the linking node between the alchemical elixir and the mercurial medicine. Indeed, these writings integrate the alchemical transmutation of base metals or “gold making” (*gser 'gyur*) with therapeutic, rejuvenating and life-prolonging purposes that result in the realisation of the “perfect mercurial elixir” (*dngul chu grub pa'i bcud len*).²⁰

The second literary tradition is represented by the “Accomplishing Medicine” (*bdud rtsi sman sgrub*) literature, a genre developed in Rnying ma sources, both in the canonical literature (*bka' ma*) and in some apocryphal *gter ma* teachings. I refer to the sources that describe rituals structured according to the model of *Mahāyogatantra*, in which the *Guhyagarbha* (*gSang ba'i snying po*) and the *Māyājāla* (*sGyu 'phrul dra ba*) play a significant role. This class of writings describe *sādhana* (mainly related to wrathful deities) and aimed at empowering or better “accomplishing medicines” (*sman sgrub*), which become long-life elixirs (*'chi med bdud rtsi*). These sources offer valuable data to reconstruct the historical development of ideas related to Tibetan nosology and conceptions of death and dying processes, especially, with regard to the notion of untimely death, and the related practices to reverse it. In particular, I refer to the *Sun and the Moon Secret Union Tantra* (*Nyi zla kha sbyor*, NZB) of the *Seminal Essence* (*sNying thig*) scriptures of rDzogs chen, part of *Collected Instructions* (*Man ngag sde*), that most probably were compiled around the eleventh and the

¹⁶ Tōh 4313, *bsTan 'gyur* (sDe dge), vol. 203 (*mdo'grel*, ngo): 1r1–7r3.

¹⁷ Tōh 4313, *bsTan 'gyur* (sDe dge), vol. 203 (*mdo'grel*, ngo): 7r3–8v4.

¹⁸ Tōh 4318, *bsTan 'gyur* (sDe dge), vol. 203 (*mdo'grel*, ngo): 17v1–18r2.

¹⁹ Tōh 2394, *bsTan 'gyur* (sDe dge), vol. 53 (*rgyud*, zi): 23r4–23v6.

²⁰ This elixir overcomes illnesses (such as leprosy and other skin disorders), bestows mundane and spiritual accomplishments through associated yogic and meditative practices aimed at obtaining ultimate liberation, see Simioli 2013; Simioli 2015.

twelfth centuries.²¹ These two literary currents merged with the alchemical system ascribed to Rin chen dpal. He or those who compiled the sources ascribed to him started a Tibetan lineage of transmission of mercurial alchemy related to the Indian works (he translated the DGB, the GBB and the TBCNJT, and received and formulated teachings related to the *Kālacakratāntra* as well), but also related to the “Accomplishing Medicine” literature as we find passages from the CBB in his teachings. The next paragraph summarises the literary genre and the contents of the CBB in order to contextualise and to clarify the specific meaning of *log gnon* in tantric context of the CBB and in particular to connect this class of remedies to the cure of epidemics and poisoning.

2. *The Paradigm of the Black Diseases and its Cures: Aetiology, Diagnosis and Cure of gnyan Diseases according to the CBB.*

The CBB is part of the Rnying ma gter ma cycle entitled the *Great Vase of Amṛta of Curative Methods* (*gSo thab bdud rtsi bum chen*), which is included in the Treasury of Rediscovered Teachings (*Rin chen gter mdzod*), an eighteenth century collection of gter ma teachings that was compiled by 'Jam mgon Kong sprul Blo sgras mtha' yas (1813–1899) and 'Jam dbyang mKhyen brtse'i dbang po (1820–1892).²² According to the colophon, the CBB was rediscovered by rDor 'bum Chos kyi grags pa,²³ a gter ston contemporary of Mar pa (eleventh century).²⁴ His hagiography narrates that the CBB yellow scroll emerged from the heart of Hayagrīva, “the glorious subjugator of the haughty spirits” (*rta mgrin zil dregs zil gnon*) at the temple of Byang Pra dun rtse, one of the “Temples Taming the Borders” (*mtha' 'dul*).²⁵ Conforming to the visionary narrative of the rNying ma gter ma literature, the origin of the CBB is pushed back to the imperial period and is ascribed to the figure of Padmasambhava, “the tamer of demons.” This connection, along with the account of its rediscovery, represents the *gter ma* logic of legitimation, which substantiates the efficacy and correctness of the practices prescribed in the CBB. The CBB could be situated in the large body of Mahāyoga and the “Accomplishing medicine” scriptures. Its structure does not progress

²¹ Davidson 2005: 228–29.

²² *Rin chen gter mdzod* vol. 46 (ngo, ha): 1.1–124.1.

²³ CBB 124.1.

²⁴ Byams pa 'phrin las 1990: 91.

²⁵ The hagiography is preserved in the *Hagiographies of One Hundred and Eight gTer stons* (*gTer ston brgyad rtsa 'i nam thar*, GBR) compiled by 'Jam mgon Kong sprul. GBR (vol. 1) 137.9–17.

in a rational sequence: the text is divided in three main tantras, subsidiary chapters and two groups of minor scrolls (the group of 36 minor scrolls and the group of 11 minor scrolls), all evolving around repeated narrative nuclei. What follows is a brief survey of the main sections that could provide a clear picture of the contents.

As evincible from the *Vajra Armor, Tantra of the Long Protection Ritual* (*rDo rje'i khrab ring srung ba'i rgyud*) and other main ritual sections²⁶ of the *Vase of Amṛta of Immortality*, the *gter ma* contains a wealth of exorcisms and contemplative practices centred on the blue Garuḍa, Vajrapāṇi, and Hayagrīva, often combined to constitute the main male wrathful deity of the rituals of protection, empowerments of medicines and offerings.

Embedded into a prophetic framework, the *gter ma* describes specific diagnostic techniques, recipes and exorcisms to dispel a category of diseases classified as *rims* or *gnyan rims*.

The *Root Tantra* summarises the contents of the CBB dividing it into very brief chapters dealing with (1) the primary (*rims kyi rgyus*) and the (2) the secondary causes of *rims* diseases (*rims kyi rkyen*); (3) "diseases nomenclature" (*rims kyi ming*); (4) "times of contagion" (*rims 'byung ba'i dus*); (5) "diagnostic methods" (*rims kyi brtag thabs*); (6) "curative methods" (*rims kyi bcos thabs*) and "rituals of protection" (*rims bsrung thabs*).²⁷ Generally speaking, the *gnyan* category subsumes infective, epidemic and malignant diseases of demonic nature: according to the CBB, human arrogance and misbehaviours outrage demons and gods that in turns exhale venomous (*dug can*) miasmas disseminating pestilences, wars, famine and cataclysms. Immorality is, in fact, the primary cause of contagion, while the secondary cause corresponds to the demonic influence (*gdon*).²⁸ The virulent and demonic essence of this kind of pathologies is accentuated by using an imaginative and codified language. These diseases come under the category of the "black poisonous all encompassing oblivion" (*ha la cog 'gyel nag po*),²⁹ a concept in which *ha la* is synonymous of virulent and *cog 'gyel*³⁰ vividly depicts the image of a multitude of falling corpses claimed by the deadly disease

²⁶ The *Vajra Armor* focuses on the ritual of the *protective wheel* (*bsrung 'khor*) centred on the main wrathful deities mentioned above. The second main ritual section is the *Ritual to Protect the Vital Force* (*Srog gi srung gi cho ga*) [CBB 104r1–117v6], which is structured on the model of the *Vajra Armor*, and contains also subsections on contemplative practices (*sgom pa ting 'dzin*) and preparations of ointments (*byug sman*).

²⁷ CBB 1r1–7r6.

²⁸ CBB 3r1–3v4.

²⁹ CBB 35v4.

³⁰ *'Gyel ba* means to collapse. The transitive form is *sgyel ba* that means to put down or overthrow; *'gyel ba* also relates to the verb *brgyal ba* or to faint.

that steals their ‘life-supporting breath’ (*lus srog dbugs ’jags par byed pa*). Other alternative names are the “black oblivion [that spreads] running quickly” (*nag po rgyug ’gyel*) and the “black one, union of the three” (*nag po sum sgril*). Those diseases are, in fact, defined as the union of three elements because are characterised by the conjunct action of *gnyan*, fever (*tshad*) and wind (*rlung*). The term *gnyan* corresponds to the final phase of several pathologies determining fever and that spread by riding quickly the subtle energy.

The *Mañjuśrī Heart Essence, Union of the Sun and Moon* (*’Jam pa’i dbyangs kyi thugs kyi bcud nyi zla lha sbyor*)³¹ is the main diagnostic section of the CBB. Other references to the diagnosis of the signs of death are scattered in miscellaneous chapters such as the *Medical Preparations of the Vital Force-Treasure* (*Srog gter gyi sbyor ba*), and in *The Pillar of the Vital Force* (*Srog gi ka chen*).³² According to the cited *Union of the Sun and Moon*, there are three categories of signs of contagion. The initial phase of “unripe rims disease” (*skya rims*) or manifestation of the demonic influence that “sinks its teeth into the sick person” (*gdon so pas zung*)³³ is accompanied by turbid dreams (*rmi lam nyag nyog*) and is characterised by the development of general physical symptoms³⁴ of contagion. The intermediate stage of contagion (*’bar rtags*) is the visible sign of *gnyan* and occurs when the infection spreads all over the body and affects vital organs or viscera (*don la ’babs*). The final signs of contagion are “the signs of life and death” (*tha ma ’tsho ’chi’i rtags*). The signs of death are classified as general and particular signs and respectively refer to the infections affecting specific organs and the gradual dissolution of the five gross elements (*’byung ba’i thim rim*) that fade into each other in a reversing order. This process also indicates radical changes in the direction of the subtle winds (*rlung*). Every visible external sign of the dying process corresponds to an internal sign of consciousness experience.³⁵ Among the signs of death enumerated in the *Pillar of the Vital Force*, some parallel the cryptic metaphors of the *Sun and Moon Union of the Seminal Essence* (*sNying thig*). The following quotes are two examples of such paradigmatic correspondence: “when the pillar of the sky and earth is destroyed, one is about to die” (*gnam sa gnyis kyi ka gdun del bar snang chag na ’chi*); “if the sound of the dākinī ceases within the inner recess of the forest, one is about to die” (*nag ’dabs gsang ba’i brag*

³¹ The diagnostic tantra is divided in root tantra that corresponds to folios 7v1-9v1 and the exegetical tantra that corresponds to folios 9v1-12v5 of the CBB.

³² CBB 44v3-49v1.

³³ CBB 7v6.

³⁴ CBB 7v6-8r2.

³⁵ CBB 11v4-12r2.

phug tu/ mkha' 'gro'i rang sgra chag na'chi).³⁶ These last quotes offer ulterior elements to address the nature of the historical connections of CBB with other literary traditions: we might assume that the CBB hints to notions derivative of the divinatory techniques developed in the context of the early *Seminal Essence* literature but also in Bon po scriptures such as the *Lamp to Clarify the Signs of Death* (according to the tradition datable around the second half of the eleventh century). In this literary context the literature on epidemics and *log gnon* flourished and influenced the medical literature.

3. *The Brilliant Moon Theriac: Designating Mercury as a log gnon.*

The section on mercury is part of the *Five Extraordinary Sons Superior to the Mother and the Father* (*Ma pas lhag pa'i bu lnga*) a long chapter that prescribes the use of five remedies all called theriac (*dar yak an*): *ha ti ta la a ru ra*³⁷ or “bone-theriac” (*rus pa dar ya kan*), *stag sha* or “meat theriac” (*sha dar yak an*), calcite (*cong zhi*) or “fat-theriac” (*tshi lu dar yak an*), *lha mo gsha' g.yas* or “blood theriac” (*khrag dar yak an*) and mercury or “brilliant moon-theriac” (*zla zil dar yak an*). Similar to the case of the renowned Greek *Mithridatium* or *Theriaca*,³⁸ instead of presenting a stable tradition providing one fixed recipe for the theriac, in the *Vase of Amṛta of Immortality* there are different medical compounds. The theriacs are, essentially, complex compositions, wherein the substances that give the name to the compound represent the basic constituents of each theriac and are mixed with a plethora of other ingredients. All the theriacs share similar properties and are mainly antidotes to poisons and treat *gnyan* diseases.³⁹

³⁶ CBB 44v3–49v1. The first verse is explained as an optical illusion arising when staring at the forearms fixed in a particular position: “the two forearms in the space appear like being cut off in the middle” (*bar snang khams su lag ngar gnyis kyi bar du chag lta'o*). The second one is explained as “the absence of any sound in the ears” (*rna ba'i sgra chag na'chi*). For a further enquiry on the corresponding verses in the *Union of the Sun and Moon*, see Orofino 1990: 33, 93. See also *Nyi zla kha sbyor gsang ba'i rgyud* (NZB) 28r.1–6 and *'Chi rtags sal ba'i sgron ma* (CtSg) 411/8–13; 412/8–11.

³⁷ In this preliminary study, I have chosen to do not mention any possible Latin Botanical equivalent for the Tibetan plants. I will deal with this issue in another forthcoming paper.

³⁸ Totelin 2004.

³⁹ Ancient medical uses of some types of theriac are documented in medical literature predating the *Four Tantras*, such as the Dunhuang manuscripts. Yoeli-Tlalim 2013: 57. The *Medical Method of the Lunar King* (*sMan dpyad zla ba rgyal po*, SZG) lists the use of different kinds of herbal substances, salts, animal and human products, but mercury is not mentioned. SZG 56v5–57v2.

The CBB conforms to the narrative scheme of Indo-Tibetan alchemical literature and reiterates the root hermetic principle of non-dual correspondence of macro and microcosm. According to the mythical account of its origin,⁴⁰ mercury is identified with the innate and radical moisture of spermatic origin, the “supreme radiance” (*mdangs mchog*) or ultimate distillate of the metabolic process (*lus gzungs gnas mdangs*).⁴¹ Being the physical natural moisture, mercury turns out to be an essence (*bcud len*) or elixir that can restore and rejuvenate the body.⁴² Ultimately, mercury corresponds to the three Buddha bodies.⁴³

In the CBB a group of ingredients, named *log gnon*, plays an important role in dispelling *gnyan* disease, being used to prepare and empower the theriac recipes. According to the CBB, among the *log gnon*, musk (*gla rtsi*)⁴⁴ and *gu gul* are specifically efficacious against poisons and demonic influences.⁴⁵ In the alchemical context of the CBB, mercury, due to its divine essential nature and despite its union with poisons, enantiodynamically becomes the mineral equivalent to musk. Before dealing with the alchemical procedures and the associated therapy, I focus on the ritualised aspect of mercury processing in order to provide a better understanding of the significance of *log gnon* in the specific context of the CBB. The ritual practice corresponds to the last phase of mercury processing and is aimed at transforming detoxified mercury into an apotropaic substance. During this “ceremony of protection” (*bsrung ba*), mercury is empowered as follows:

[...] Thus, this is the teaching on protection. Mix mercury with *gla ba*, *gu gul*, *mu zi* and *btsan dug* and put [the mercurial compound] into the mandala that protects against the [follow] four [categories] of diseases, demonic influences, and poisons, primary and secondary causes of contagion. Thereby, it will dispel all the classes of demonic influences of great, medium and minor entities, all of them that attack the upper, the lower and middle parts of the body without any

⁴⁰ Mercury came into being after the sexual union of the son of Heaven and Earth with a beautiful maiden born among the eight classes of demons and gods. For similar accounts in Indian alchemical writings, see White 1996: 188–202 and Wujastyk 2013: 23.

⁴¹ RgZ (lcag po ri skyar par ma) II: V 14v3.

⁴² See Gerke 2012, 2012 and Simioli 2015: 35–6.

⁴³ CBB 89r4.: “[...] *rlog pa med dang 'dod bzhing/ gang la 'dod der ston pa'i sprul sku zhes bya ba yin/.*”

⁴⁴ I identify this substance with musk because in the CBB it is also called *gla ba*. For a description of its potencies see Dga' ba rdo rje 1995: 334.

⁴⁵ Chapters twenty and twenty-one of the *Explanatory Tantra (bShad rgyud)* of the *Four Tantras* attributes the same properties to musk. Akosay, Yoeli-Tlalim 2007: 232.

exception. In particular, [this compound] is the [exorcism that] reverses the destructive rite of the yak horn,⁴⁶ destructive mantras⁴⁷ and the ritual to dispatch one's protective deities on the enemies.⁴⁸ Add the [following] nine substances *btsan dug*, *sman can ra dug*, *a ru ra*, *spru nag*, *shu dag*, *stag*, *sha ba*, *gla ba*, *dri can* and *gu gul*. Empower them with mantra and mix pure urine of a monk or of an eight-year old boy, and subsequently form the pills. If you chew three of those pills, for three times in the morning, even though this is an aeon [of degeneration] during which diseases widespread, you will be unspoiled."⁴⁹

At the end of the process, being mixed with secondary substances mercury is defined the "pure *log gnon* [protecting from] all [the diseases]" (*kun kyi log gnon dag pa*).

As we know, the term *log gnon* identifies the post-therapeutic complications or the countermeasure used to counteract the side effects of wrong processed mercury pills. However, in the CBB the term has not only this usage but classifies a group of medical substances, which belong to different categories of *materia medica*, and correlated rituals. Certainly, the word *log gnon* itself in this context is related to *zil gnon* epithet of fierce Buddha manifestations, the subjugators of demons in *Mahāyogatantra* and Rdzogs chen scriptures, and which in the CBB refers to the fierce Garuḍa, Vajrapāṇi, Hayagrīva and Vajrayoginī, the tutelary divinities of the empowerment rituals. Among the texts included in the *Section of the Thirty-six Minor Scrolls* (*Shog dril gsum bcu so drug*) of the CBB, there is the *Scroll of the Log gnon Antidotes* (*Log gnon gnyen po'i shog dril*)⁵⁰ that describes the wonderful therapeutic and apotropaic virtues of musk (*gla rtsi*), *gu gul*, *stag sha* and *shu dag*. In this scroll, all the substances are defined as the "heroes that defeat *Yama, the Lord of Death*" (*'chi bdag 'joms pa'i dpa bo*). According to the text, those "fierce heroes *log gnon*" are the specific medicines to apply in case of the "harsh all encompassing oblivion." If one does not use this restoring cure, life

⁴⁶ *mNan gtad*. This is a ritual of destruction performed to kill enemies. Nebesky-Wojkovitz 1975: 483–86.

⁴⁷ *Byad* is abbreviation of *Byad kha*. For a further enquiry see Namkhai Norbu 1995: 216–17.

⁴⁸ *Ibid.*

⁴⁹ CBB 90v6–91r3: "[...] *de nas srung pa bstan pa ni/ nad gdon dug dang rgyus rkyen bzhi/ gang bsrung gong gi dkyil'khor la/ gla ba gu gul mu zi dang/ btsan dug bsdeb pas gdon gyi rigs/ steng 'og bar gsum thams cad kyi/ chen 'bring chung gsum ma lus thub/ khad par mnan gtad byad rbod bzlog/ sman chen ra dug a ru ra/ spru nag shu dag stag sha/ gla ba dri can gu gul dgu/ che zhing sngags gyis byin brlabs gtsang ma dge long am lo brgyad pa'i byi pas/ chur sbyar phra phus ril bu tsam/ snga dro gsum gsum mur ba yis/ nad kyi skal pa byung yang nyams med//.*"

⁵⁰ CBB 96v6–97v1.

will be exhausted; only those substances are the *log gnon*, “the murderers of Death”.⁵¹ According to the CBB, *log gnon* addresses, in particular, the two substances musk or *gla rtsi* and *gu gul*. These are empowered during a suppressive ritual to eliminate the *gnyan* disease known as *lhog pa* in the [The Ritual] of *Log gnon of Sucking [the Infection] with the Adamantine Sow’s Tongue (Log gnon phag mo’i ljags ‘jibs)*. During the ritual the healer visualises himself as the Black Sow Goddess Vajravāhārī (Phag mo nag mo) with a sharp thunderbolt dagger. Being the manifestation of the fierce goddess, the healer visualises himself killing and devouring *gnyan*, while he cuts the pustules with a lancet and drinks infected serum and blood. While performing the ritual, the practitioner empowered musk and *gu gul*, along with *thar nu*. All these substances are used to kill or subjugate the mercury as said in another short scroll called the *Scroll of the [Method to] Penetrate and Kill Mercury (dNgul chu khong gsod shog dril)*. The CBB stresses the counter poisoning virtues of musk that becomes the king *maghita (rgyal po ma gi ta)*.⁵² In the *Brilliant Moon-Theriac*, detoxified mercury, due to its divine quintessence, established through philosophical and alchemical implications, is identified with musk, also called king of the essences *maghita*, the supreme antidote to all poisons. In paragraph 6, I highlight how this terminology with its multidimensional significance endured over the course of centuries, being assimilated in later pharmacological texts that quote the CBB verbatim.

5. Comparing the CBB with the PhG.

A preliminary analysis of the eleventh chapter of the PhG, shows that the chapter was drawn upon different scriptural sources. Yang ga’s study suggests that the *Minor Tantra (rGyud chung, RgC)* might be the first draft of this chapter, but still the original sources remain unknown.⁵³ The PhG, probably dating back to the twelfth century prescribes two different methods to compound mercury: (1) the “hot preparation” (*tsha sbyor*), that seems to be very similar to the hot preparation of mercury prescribed in the *Lunar King*, which predates

⁵¹ CBB 97r6–97v1: “[...] *mi bzad nad cog ‘gyel la log non dpa’ rgyod sbyor ba yis/ ‘di yis ma sos tshé tshad yin/ log non ‘chi bdag gsod byes yin//.*”

⁵² *Ma gi ta* is synonym of musk but is also used to address a series of herbal substances viz *phur nag* or *bya rgod spos*, which are fragrant as musk, share the same potencies and dispel *gnyan nad*. *gSo rig gces btus rin chen phreng ba (RcP)* 545/27 – 546/10.

⁵³ Yang ga 2010: 250. See also the *Minor Tantra* in the *Eighteen Auxiliary Teachings (Cha lag bco brgyad)* 759.16–762.6.

the Four tantras;⁵⁴ (2) the “cold preparation” (*grang sbyor*) that is very similar to the method to process mercury of the *Vase of Amṛta of Immortality*. The *Subsequent Tantra* cold composition is divided into three parts: (a) “methods” (*thabs*), (b) “compounding [detoxified mercury with other ingredients]” (*sbyor*), (c) *log gnon*. Mercury processing in the CBB (around the eleventh or twelfth century) is divided in: (a) a ten-fold method to detoxify mercury, (b) ritual of protection (*srung*) and recipes (*bcos*). In the following I compare the various steps of the mercurial practice on both the PhG (and a commentary) and CBB.

A. The Cold Preparation of Mercury in the PhG:

a) The nine steps of Mercury processing:

- 1) “Removing oxides (*g.ya' phyi*) Mercury is rubbed with hot substances (powders of *sga, pi pi ling* and *pho ba ris*) in a sack made of deerskin. Afterwards, mercury is washed with cow’s urine and triturated (*ba chur [bkru pas] btags*).⁵⁵
- 2) “Expelling poisons” (*dug 'don*). Being soaked in urines, mercury is cooked with calcite (*cong zhi*). This long process finished when the compound is exsiccated.⁵⁶
- 3) “Smoothering” (*'jam btsal*). The compound is mixed with *pi pi ling, pho ba ri, bul tog, cong zhi* and *nag mtshur*.⁵⁷ These substances are gentle on the body because are both effective and have not side-effects.
- 4) “Instruction to guide [the efficacy of the remedy]” (*sna khrid*). Prescription of *cha la* and *dbyi mong* to the patient in order to guide the efficacy of the medicine in the right direction. Other

⁵⁴ See the *Lunar King* [SZG 58v3–59v4].

⁵⁵ According to the seventeenth century commentary *Blue Beryl* (*Bai du rya sngon po*, BDR) mercury is washed with cow’s urine, human urine, borax, acid fruit juices, and alum and then triturated. BDR 1669.13–15.

⁵⁶ According to the *Blue Beryl*, mercury is cooked with calcite and eight minerals viz. orpiment (*ba bla*), realgar (*ldong ros*), magnetite (*khab len*), silver ore (*ngul rdo*), black alum (*nag mtshur*), mica (*lhang tsher*), pyrite (*pha wang long bu*) and eight metals viz. gold, silver, copper, lead, tin, bronze, brass, iron and urines. The eight minerals are said to bind (*'ching byed*) the “poison of heaviness” (*lci dug*) and the “penetrative poisons” (*'phigs dug*), while the eight metals devours (*za byed*) such poisons. The compound is processed until it becomes gluey and can be pierced with a stick, which has to stand right in the compound in order to prove that the latter has reached the expected thickness. BDR 1669.15–21. For a further inquiry on the toxicity of mercury, see Sonam Drolma 2013: 113–14.

⁵⁷ The doses of each of the five substances are established according to the nature of the disease to be cured: in case of hot diseases, the quantity of *pi pi ling* and *pho ba ris* is diminished; conversely, in case of cold diseases the quantity of those two substances is augmented. BDR 1669.21–1670.1.

substances selected according to diseases to be cured (hot or cold pathologies).

- 5) “Trituration” (*bshig pa*). Mercury is triturated with *star bu* and then kneaded with cow’s urine (*ba chu*) and saliva (*mchil ma*).⁵⁸
 - 6) “Opening the channels of the body” (*rtsa kha ’byed*). A decoction with *g.yer ma*, salts and other substances is administered to the patient to open the channels of the body.
 - 7) “Storage in a [appropriate] recipient” (*snod pa btang*). Mercury is mixed with copper ash in order to be more easily assimilated by the body.⁵⁹ Before ingesting the pills, the patient has to take ghee for a couple of days.
 - 8) “External protection” (*phyi srung*). Before administering the pills to the patient, the latter must be smeared with white butter in case of hot diseases, and with black butter in case of cold diseases.
 - 9) “Increasing the potencies” (*nus skyed*). Mercurial pills are taken with *chang* to increase their potency.
- b) “Types of Compounding” (*sbyor ba*) or Preparations of specific recipes that are said to be enhanced by adding mercury.⁶⁰ Among those recipes the following occur also in the CBB: a recipe to cure *tsha rnyog*,⁶¹ *’bras, sur ya*,⁶² *rtsa nad*^{63,64}; a medicine to overcome leprosy, *’bras, gag lhog, dmu chu, ’or nad* and *skya rbab*^{65,66}; a remedy to cure fevers determined by poisoning (*dug tshad*);⁶⁷ a remedy to cure poisoning caused by meat food (*sha dug*)⁶⁸ and a remedy to cure black pox (*’brum nag*);⁶⁹ the remedy to eliminate pus from

⁵⁸ Patient’s body is smeared with butter in order to close all follicles (*ba spu’i bug a bgag*) [so that mercury can stay in the body]. BDR 1670.14–16.

⁵⁹ BDR 1670.10–12.

⁶⁰ See also BDR 1671–73.

⁶¹ Fever determined by impure blood, *chu ser* and an excess of *rlung*. Byams pa ’phrin las, ed. 2006: 287.

⁶² This disease affects liver, lung, colon and kidneys. It leads to sores in tissues and skin. The name of this disease is due to the shape of the pustules.

⁶³ Byams pa ’phrin las, ed. 2006: 689; 695.

⁶⁴ This remedy contains: *cu gar, li shi, sug smel, ka ko la, dza ti, dzan dan dkar dmar, a bar, skyur, ’bras bu gsum, spos dkar, thal ka rdo rje, so ma radza, dom mkhris, ru rta*.

⁶⁵ Swelling disease affecting the liver. It leads to pale skin and pustules similar to water bubbles. Byams pa ’phrin las, ed. 2006: 34.

⁶⁶ It contains: *bstan dug, a ru ra, mu zi, gla rtsi, shu dag, ru rta, gu gul, bzang drug, spos dkar, thal ka rdo rje, so ma ra dza* and honey (*sprang rtsi*).

⁶⁷ The recipe contains *bzang drug, gla rtsi, btsan dkar, bse ru dkar po, gi wang, mtshan, a ru ra, brag zhun, bong nga dkar dmar, phya tshan gsum, khyung sder dkar smug, dpa’ bo ser po, dom mkhris, tig ta, ma nu, ru rta, skyer ba’i bar shun, ka ra, chos sman*.

⁶⁸ *Cu gang, li shi, gur gum, gi wam, gla rtsi, bong nga dkar po, ru rta, brag zhun, gser gyi me tog, byi’u la phug, nyung ma’i khan dha*.

⁶⁹ It contains *smug po sbal rgyab, mdzung rtse dmar po, gans thigs, cong zhi, tsha la, gla rtsi*.

the cest (*brang khog rnag khrag*).⁷⁰ The section on compounding includes also the “rejuvenating remedies” (*bcud len*) that is an electuary (*lde gu*)⁷¹ prepared with a medical compound called *kun rgyug*, which contains mercury, musk, yellow sulphur (*mu zi ser*), *dbang lag*, *star bu* all amalgamated with honey and ultimately mixing *ra mnye* and *nye shing*.

- c) “*Log gnon*” The use of substances to overpower the side effects of mercury pills: (1) the text prescribes *'bying thig*, *bzang drug* and *ka ra*; (2) powdered *bzang drug* and powder of copper (*zang thal*) and in case of diarrhoea; a warm soup (*thang tsha mo*) or simple hot water containing powdered *zang drug* is prescribed in case of mouth wound (*kha rma*), abdominal and gastrointestinal pain (*rgyu long gzer*), and in case of *lhen skran*⁷²; (4) meat (*sha*), ghee (*zhun mar*), *chang*, *sgog skya*, *dza ti* and *shing kun* are prescribed in case of dazed head, of toothache and painful gums (*so rnyil na*), and insomnia; (5) a cold soup containing two types of salts (*rgya tswa* and *rgyam tshwa*), *pi pi ling* and *star bu* are prescribed in case of shivering legs and disjunction of bones and joints (*rus tshigs 'bral*).

B. Mercury processing according to the CBB:

- a) The tenfold method to detoxify mercury and contrast the side effect of wrong mercury processing:
- 1) “Removing oxides” (*g.ya phyi*). Mercury is rubbed with salts (*tshwa sna*) and hot substances (*spod tsha*) in a sack made of deerskin or goatskin in order to eliminate the oxides.
 - 2) Expelling poisons” (*dug 'don*). Mercury is cooked (*btso*) with urine and acid substances; thereupon mercury is washed with pure water to eliminate poisons.
 - 3) “Soothingening” (*'jam btsal*). Mercury is mixed with *sga* and *spod*, ‘human fat’ (*tshil chen*), and *bul tog*.
 - 4) “Trituration” (*bshig*). Mercury is triturated in a stone mortar with acid substances viz. *skyu ru ra*, *star bu*, acid *chang*.
 - 5) “Inducing bliss” (*bde byed*). Prescription of a warm decoction containing *g.er ma* and *rgya tsha*.

⁷⁰ It contains *bse ru dkar po*, *ga dor*, ‘*grong thal*, *re skon*, *zangs thal*, and butter (*mar gsar*).

⁷¹ Byams pa ‘*phrin las*, ed. 2006: 406.

⁷² *Skran nad* localized at the base of the breastbone (*lhen sna*). The disease is caused by not digested food (*ma zhu ba*), a subsequent increasing of phlegm (mucus similar to “calf’s nose-mucus” or *be snabs*) in the stomach, and it is associated with excess of wind. Byams pa ‘*phrin las*, ed. 2006: 1009.

- 6) “Pour into an [appropriate] recipient” (*snod du glugs*). Mercury is mixed with powdered copper. The patient has to assume ghee for a few days.
 - 7) “Increasing the potencies (*nus bskyed*). Mercurial pills are prepared and ingested with *chang*.
 - 8) “Protection” (*srung*). The patient body is smeared with white or black butter (it depends on the kind of disease to be cured: white butter is used for hot diseases while black butter for cold diseases).
 - 9) “Union of the assisting substances” (*nang yan pa*, lit. servant, arch. for *nang du g.yog po rgyug*). Appropriate substances “which help” (*kha 'dzin*)⁷³ are added to the formula to support the therapeutic effect of the medicine on a specific organ (*snod don*) that is affected by the disease.
 - 10) “Log gnon.” The mercurial compound is mixed with substances that can overcome the side effect of improperly processed mercury: (1) the text prescribes the use of *bying 'thib*, *zang drug* and *ka ra*; (2) *bzang drug*, powdered copper (*zangs thal*), powdered *so ma ra dza* are used in case of diarrhoea; (3) a warm soup containing medicine used during the phases of smoothening and trituration are prescribed to cure mouth, hands and body wounds (*kha lce lus rma byung*), in case of abdominal and gastrointestinal pain (*rgyu long gzer*), and to overcome *lhen skran*; (4) prolonged administration of meat (*sha*), ghee (*zhun mar*), *chang*, *sgog skya*, *dza ti* and *shing kun* in case of dazed head, of toothache and painful gums (*so rnyil na*), and insomnia; (5) a cold soup containing two types of salts (*rgya tswa* and *rgyam tshwa*) and *star bu* are prescribed in case of shivering legs and aching bones and joints or when occurs a disjunction (*rus tshigs nam khol*).
- b) “Ritual of protection” (*bsrung*). Mandala ceremony to empower the mercurial medicine with mantras and mixed it with *gla ba*, *gu gul*, *mu zi*, *btsan dug*. Alternatively, mercury is mixed with the “nine heroes” or *gla ba*, *gu gul*, *btsan dug*, *a ru ra*, *spru nag*, *shu dag*, *stag*, *sha ba*, *dri can*, urine of a fully ordained monk or of an eight year old child. This ritual confers to apotropaic properties to the medicine.
 - c) “Prescriptions” (*bcos*) or specific recipes. Many recipes are aimed to cure specific kinds of fever and *gnyan rims*. Among those medicines, the following occur also in the *Subsequent Tantra* are: the recipe to cure pus and impure blood of the chest (*byang khog*

⁷³ Byams pa 'phrin las, ed. 2006: 263.

rnag khrag);⁷⁴ the recipe to cure *dmu 'or*, *skya rbab*, *rnag tshad rnying 'bras*, *su rya*, *rtsa nad*;⁷⁵ the recipe to cure fever caused by poisoning (*dug tshad*);⁷⁶ the medicine to cure poisoning caused by meat food (*sha dug*).⁷⁷

- d) "Long-life practice" (*tshe sgrub*). Preparation of a *bcud len* or long-life elixir. Mercury is mixed with the three fruits (*a ru ra*, *skyu ru ra*, *bar u ra*), the five roots (*ra mnye*, *nye shing*, *lca ba*, *ba spru* and *gze ma*). Besides, mercury is mixed with *rtag tu ngu*, animal substances such as the meat of *da byid*,⁷⁸ of *rtsang pa*⁷⁹ and snake meat (*sprul gyi sha*). Other substances are animal testicles, calcite, the three sweet substances (*sbrang rtsi*, *bu ram*, *bye ma ka ra*) and clarified butter (*zhun mar*).

A closer examination of this synopsis leads me to draw some considerations. The sources describe four identical sets of practices regarding the detoxification of mercury, the intake of mercury pills and the related preparatory therapy, a list of recipes, and the *log gnon* to contrast the side-effects of the mercury pills. The description of the practices is identical (same procedures and *materia medica* with few exceptions) but they are enumerated in a different order and the CBB classifies the *log gnon* under the same group with the nine steps to detoxify mercury and the therapy. In the following two cases, the order but also the nomenclature are different: (1) the sixth step of "opening the channels" described in the PhG corresponds to the fifth procedure of "inducing bliss" described in the CBB; (2) the fourth phase or the "instruction to guide the efficacy of the remedy" of the PhG corresponds to the ninth phase of the "union of assisting substances" of the CBB. The last two mentioned phases deal with the intake of the medicine, which involves cleansing procedures and dietary restriction as well as the yoga practice of channels and subtle energies or *tsalung* (*rtsa rlung*). The phases of "opening the channels" and the "inducing bliss" refer to this kind of yoga and, as evident in the second case, to the states of bliss aroused during this practice. Moreover, the hot potency of the spicy *g.yer ma* is used to enhance the yoga and to induce bodily heat (*drod*). According to the CBB, the

⁷⁴ It contains *ser tshur*, *stag sha ba*, *phur thal*, *mgron bu'i thal*. CBB 92r3.

⁷⁵ It contains *bzang drug*, *bras bu sum*, *tsan dan gnyis*, *spos dkar*, *thal ka rdo rje*, *dom mkhris*, *ru rta*, *mu zi*. CBB 92r5–6.

⁷⁶ It contains *bzang drug*, *gla rtsi*, *tsan dan ka ra*, *gi wang*, *brag zhun*, *bse ru*, *bong nga dkar*, *khyung sder*, *skyer shun*, *a ru ra*, *ma nu ru rta*. CBB 92r6–92v1.

⁷⁷ It contains *gla rtsi*, *ru rta*, *bsil gsum* (*cu gang*, *gur gum*, *li shi*), *bong dkar*, *byi'u la phug*. CBB 92v1.

⁷⁸ Lizard whose meat can give strength and luminosity to the body and can cure virility. Byams pa 'phrin las, ed. 2006: 96.

⁷⁹ Another lizard. Byams pa 'phrin las, ed. 2006: 700–01.

method of administrating the mercurial medicine involves the practices of opening and closing the channels (*rtsa kha 'byed sdom*) and the use of “assisting substances” in order to get rid of the poisons and induce vomit (*dug phyung ma thag skyugs*)⁸⁰ with the aim of purging the body from intoxicating substances.

Later sources such as the *Great Golden Measure*⁸¹ (fourteenth century) and also the *Collection of 'Brong rtse*⁸² (fourteenth century) describe these phases as one of O rgyan pa's teachings, which is called *the teaching to draw [out] poisons* (*dug 'dren du bsten pa*) and actually consists in the practice of the channels, the diagnosis of poisoning and the addition of specific substance to the medical formula in order to assist the organs affected by poisoning. This phase is absent in the corresponding chapter of the *Minor Tantra*. The last recipe of the CBB, the one related to the long-life practice corresponds partially to that described by the PhG. This remedy appears in the ninety-one chapter of the *Tantra of Oral Instructions* (*Man ngag rgyud*)⁸³ of the *Four Tantras* or the chapter devoted to the cure of virility (*ro rtsa*). The substantial difference between the two texts is given by the ritual of protection to confer apotropaic and counter poisoning virtues to the mercurial medicine, which is described in the CBB but is absent in the PhG. However, as seen, the incipit of the PhG chapter refers clearly to these peculiar properties of the mercurial compound. It could be plausible that the tantric ritual associated to mercury processing was omitted in the medical writing in order to be kept secret and be taught orally.

6. Lineages of Transmission and Inter-textual Legacy of the CBB.

The *Current of the River Ganges, Enumeration of the Received Teachings on the Vast and Profound Sacred Dharma* (*Gan ga'i chu rgyun*, GcG), authored by the Fifth Dalai Lama Ngag dbang blo bzang rgya mtsho (1617/1682), provides us with an uninterrupted lineage of transmission of the CBB. According to this text, the CBB was transmitted to g.Yu thog Yon tan mgon po the younger (12th century), who is said to have compiled the RgZ, as well to other important masters of Brang ti and Zur medical lineages. The Fifth Dalai Lama himself received the transmission of the cycle by his master Zur chen chos kyi rang sgröl (1604/1699).

⁸⁰ CBB 90r6.

⁸¹ SbC 150.20–157.15

⁸² BMD 271.17–272.13.

⁸³ RghZ (*cun ze par ma*) 270v2–3.

As we know from Sangs rgyas rgya mtsho (1653–1705), the regent of the Fifth Dalai Lama, one important source he relied upon to write the *Blue Beryl* was a text entitled the *Amṛta Vase* (*bDud rtsi bum pa*) attributed to Padmasambhava, a text that could be identified with the CBB.⁸⁴ Relevant data on the popularity and the effective role of CBB in consolidating mercury-based iatrochemistry can be provided by the inter-textual analysis of the sources. The corpus of mercurial instructions ascribed to O rgyan pa (the teaching preserved in the *Great Measure of Gold* and the *Ten Million Relics*) shows that most probably O rgyan pa drew on a wide range of medical and tantric sources. dPal ldan rgyal mtshan (fourteenth century) in the *Great Measure of Gold* traces O rgyan pa's teaching on mercury detoxification back to Nāgārjuna and Vyāḍipā (the author of the DGB and GBB, translated by O rgyan pa) and cites two referential scriptural sources entitled the *Essence of Amṛta Tantra* (*bDud rtsi snying po*) and the *Tantra of the Seminal Theriac* (*Thig le dar ya kan*). The first one title might refer to the *Four Tantras*, of which the complete title is the *Amṛta Essence, Tantra of Secret Instructions on the Right Branches of Medicine* (*bDud rtsi snying po yang lag brgyad pa'i man ngag gi rgyud*). The second title might refer to the section of a CBB dealing with mercury, a chapter entitled the *Brilliant Moon Theriac*. In the following I analyse the content of the *Great Measure of Gold* outlining quotations that were evidently taken from the CBB. According to the *Great Measure of Gold*, O rgyan pa's three-fold "method to subdue mercury" (*dn̄gul chu 'dul thabs*) can be summarised as follows: (1) the "elimination of oxides and extirpation of poisons" (*g.ya' phyi dang g.ya' khu 'don*), (2) the "cooking and washing [processes] to eliminate perforating [poisons]" (*lce 'bigs btso bkru*) and (3) the "confrontation with the enemy and changing form" (*dgra dang phral nas gzugs su bsgyur ba*) achieved by mixing mercury with sulphur and other metals and minerals. The eight minerals called the "eight devourers" (*za byed khams brgyad*) and eight metals or "eight binding elements" (*'ching byed khams brgyad*) cover a fundamental role in the entire process to stabilise mercury. Silvery mercury, deprived of poisons, is completely transformed into a black powder by being rubbed with yellow sulphur, and by being amalgamated with the eight minerals and metals corresponding to the five elements of all the phenomena of existence. The intertextual analysis of this source reveals that the system of mercury detoxification attributed to O rgyan pa, contains extensive quotations from the CBB and its formulation of mercury as *log gnon* as the *Great measure of Gold* states:

⁸⁴ Czaja 2007: 363–64.

[...] Once deprived of poisons and perfected, extremely soft as Chinese silk or cotton, mercury becomes the supreme elixir, which prolongs the lifespan and promotes the physical constituents. It purifies the channels and clarifies the gateways of the senses. Mercury strengthens the aged; grey hair and wrinkles will not appear. The demonic forces will neither harm the upper part nor the lower part of your body. It is the supreme mantra among the exorcisms to reverse the destructive ritual of the yak horn, the destructive mantra, the witchcraft to dispatch your protective deities on the enemies, and any sorcery. In case of pernicious diseases, when other antidotes cannot be beneficial, subdued and perfected mercury, mixed with specific substitutive ingredients chosen on the basis of the disease to be treated, overcomes pathologies difficult to cure. In case of poisoning, if in the remedy that counters poisoning mercury is absent, the other ingredients cannot eradicate the poisons; this is why mercury is the main ingredient. [...]

Mercury is the supreme antidote, the *log gnon* that pacifies the diseases. [...] ⁸⁵

At the end of the process, mercury as the alchemical gold of ancient literature is described in these terms:

[...] With regard to the phase of *changing form*, yellow sulphur, orpiments, realgar, hematite, chalcopyrite, silver ore, and white cinnabar are the eight elements that bind mercury. ⁸⁶ Without sulphur, the reaction will not take place. [...] Mica (which has been macerated into goat’s urine, grounded to fine powder in an open vessel over a fire of burning cow dung) and a coating of copper sulphate called blue bamboo are mixed on the surface of the eight elements. [...] Once mercury is mixed (mercury ground together with monk *Vajradhara* or breastfed infant’s urine) and rubbed, it becomes the colour of the sky. After the “confrontation”, having changed its form, it becomes the *matrix* and the *universal basis*, the *king of essences* known as the king *ma gi ta*. When it becomes like a cloud that floats on the sea (physically, some powder is left floating on the surface of water

⁸⁵ SbG 144.8–144.19: “[...] *dug dang bral ba’i skyon med ni/ rgya dar ram/ srin bal dang ’dra ba shin tu ’jam ste/ tshé dang lus zungs ’phal zhing bcud len gyi mchog tu ’gyur rol/ rtsa khams d’wangs la dbang po’i sgo rnamshin tu gsal/ sgas sra zhing / skra dkar dang gnyer ma mi ’byung / steng ’og gi gdon gyis kyang mi tshugs zhing/ mnan gtad byad kha rbod gtong mthu bzlog sogs la mchog bsnags so/ nad rigs gdug cing gso dka’ ba gnyen po gang gyis kyang ma phen pa la/ dngul chu dul ma skyon med la/ rang rang gi kha ’dzin kha bsgyur dang sdebs te btang na gso dka’ ba’i nad kun ’joms shing/ khyad par dug nad la sbyor ba ’di med par/ gzhen gyis rtsa ba ’byin mi nus pas ’di gal che’o// grogs kyis sman nus bskyed/ yun ci tsam las kyang nu spa mi ’tshor mi ’grib/ des na ’di ni gnyen po’i mchog zhi byed kyi log gnon du gyur pa yin no//”*

⁸⁶ The identification of these minerals is controversial. My current identification is based on a previous research dealing with the cited four alchemical treatises included in the *bsTan ’gyur*, see Simioli 2014: 56–8.

poured into a vessel) because it is purified, perfected mercury is similar to a king that can do everything [...].⁸⁷

These passages demonstrate a continuity of pharmacological narrative motives in this literary tradition. These textual connections bring out the existence of a semantic field rooted in the alchemical tradition of the CBB and that reached its climax in the pharmacological research during the fourteenth century. There is a connection between the theriacs, the *log gnon* and the blackish mercury sulphide prepared according to the “great purification.” The alchemical literature circulated in Tibet since the eleventh century and its Tibetan elaboration, constitute a long-lasting tradition at the basis of these iatrochemical developments. Ancient therapeutic and nosological themes are enriched theoretically and practically in the scholarly pharmacological literature of the fourteenth and fifteenth centuries. The pharmacological terminology is enriched by new terms borrowed from the philosophical language: this is the case of “matrix and base of all” (*kun gzhi ma*), generally addressing the nature of mind as the basis of both suffering and liberation, in this context it refers to mercury.

7. Conclusion and Further Research

Mercury processing, and in particular the *log gnon* presents a perfect case study for debating a crucial problem that confronts historians of sciences in their task of reconstructing the past: the challenge of tracing the continuity and changes of medical and chemical ideas and practices over centuries, while avoiding anachronisms. The study of the CBB might allow us to reflect on the historical relationship

⁸⁷ SbG 147.11–148.6: “[...] rang gzungs su bsgyur ba ni/ mu zi nag po dngul chu'i ljid tsam gcig/ ba bla/ ldong ros/sbal rgyab/ pha wang (gru bzhi) gser zil/ dngul rdo/ mtshal dkar te dngul chu 'ching pa'i khams brgyad po 'di'i mu zi med thabs med/ gzhan kun 'dzoms na legs/ re re tsam ma tshang yang chog lhang tsher (lhang tsher 'dul thabs lhang tsher la ra'i gcin blug la rtan par btags pa ska sla zho tsham song ba rdza ser pa'i nang du rdo g.yas gyis kha bcad la lci ba'i mes 'tsher lhang song song bsregs pa'i thal ba'o) mthing shun cas pa smyug ma sngon po'i phyi rtsi stel de gnyis kyang khams brgyad pa'i steng du bsres la/ khams brgyad po re re la bong dngul chu'i sum cha re tsam byas pa rnam cha mnyam pa dang/ dngul chu bsres (dge sbyong rdo rje 'dzin pa'am khye'u zho 'thung gi chu'i brlan dang ma bral bar 'dam 'thag gnyis gsum du bya'o) bstan pa 'jam bsros pa'i nang du yun ring mnyes pas nam mkha'i mdog ltar 'gyur ba ni dgra dang phral ba rang gzugs su bsgyur ba te/ kun gyi gzhi ma bcud rgyal ma gi ta zhas bya'o/ g.ya' dang bral ba shin tu legs pa'i tshad rang gi rnam da gnam mkha'i mdog (sngon po) 'dzin cing/ rgyam tsho'i steng du sprin chags (snod chu'i bkang ba'i steng du blugs pas steng du khod sdong pa) na 'byongs pas rgyal po dang 'dra bar kun gyi khur cing grub pa'i chu yin pas[...].”

between Tibetan medicine as exposed in the *Four Tantras*, in the *Golden Measure* and in later pharmacological sources with elements that can be traced to its tantric heritage in Buddhist Nyingma texts. Reframing the historicity of rDor 'bum Chos kyi drag pa is problematic and the date of his rediscovery of the CBB is unknown. We cannot establish with certainty whether the CBB, as suggested by its colophon, can be traced back to eleventh century and, therefore, it cannot be ascertained if the *gter ma* predates the PhG. However, we have a rather clear picture of the literary context (the connections with the *Accomplishing Medicine* and the *Seminal Hearth* literatures) in which the CBB was formulated and of its transmission through the indirect tradition embodied by authoritative medical collections from the thirteenth century onwards. The eleventh chapter of the PhG describes two methods of detoxification, one similar to the method described in the *Lunar King* and another extremely similar to that we find in the CBB. We cannot exclude that, as ascertained in other cases,⁸⁸ also this chapter of the *Four Tantras*, in the version it has been handed down to us, was compiled relying upon a variety of sources. As said, the chapter of the *Minor Tantra*, which is considered a first draft of eleventh chapter of the PhG, does not include the sections on the channels and the drawing out of the poisons, which are central in the CBB and in *Great Measure of Gold*. It could be reasonable to think that those steps were added later on because of the importance they had in the *Great Measure of Gold* and other later sources, which had a central role in the codification of mercury processing. We find traces of influences of the CBB on the fourteenth century iatrochemistry in the Brang ti medical collection. The cited passages of the CBB show a continuity of narrative motives in the pharmacological literary tradition: as evincible from the Brang ti text, there is the endurance of the conception of processed mercurial compounds and pills as apotropaic protections and antidotes to poisoning. Given the alchemical origin of the association of mercury with the divine quintessence of the universe, and its further magical and philosophical elaborations, we might understand the reasons why the mercurial compound is considered a medium that, combined with the potencies of several substances (plants, gemstones, animal and human substances), can dispel demonic diseases, protects against poisons, and evil incantations. In the CBB, the ritualised aspect of mercury processing is related to an operative natural magic knowledge of *materia medica*: during the rituals for “accomplishing medicines” the mercurial remedies absorb the virtues of the nine special substance or “nine heroes” (*dpa' bo dgu*) and are imbued with

⁸⁸ See for example Gerke 2012.

the powers of the demons-subjugator deity (*zil gnon*), which is embodied by the tantric practitioner/ physician. My on-going research on the CBB has led me to individuate a certain degree of the influence of the CBB on the medical literature from the fourteenth century up to the seventeenth century. I refer to chapters on the *gnyan rims* disease in the *Supplements (lHan thabs, LhT)* composed by Sangs rgyas rgya mtsho, who seems to have relied upon the CBB. Looking in detail to this comparison is beyond the scope and the limitations of this paper, and will be the subject of further research. However, I showed that the influences of the CBB on the medical literature are still visible in the seventeenth century authoritative writings of Sangs rgyas rgya mtsho. This aspect might be particularly pertinent considering that during the sixteenth and the seventeenth centuries, as demonstrated in Janet Gyatso's recent ground-breaking study,⁸⁹ there was the rise of certain empirical modes of thought, of attitudes conducive to a physical understanding of the human body, illnesses and their treatment. The inter-textual analysis of the sources might shed some light on how physicians dealt with the dual foundation of medicine that is not only the result of divine revelation, whose transmission is related to hermetic genealogies, but also a well-founded medical discipline.⁹⁰In this sense, we should carry out an in-depth analysis of the relation between speculation and observational experience in the medico-alchemical context, and ultimately provide a more balanced assessment of the historical relationship between alchemy and medicine. This preliminary research on the CBB is conceived as a starting point for a further detailed analysis of the discourses used to explain the nature of the *gnyan rims* diseases in the medical literature over the course of centuries.

⁸⁹ Gyatso 2015.

⁹⁰ In this respect, I would like, as an example, to point to the *Ten Million Relics (Bye bya ring srel, BRS)* that shows how the philosophical speculation on medical topics is sometimes substantiated by the textual exegesis of fundamental tantric cycles. Zur mkhar ba Myams nyid rdo rje on the one hand enriches O rgyan pa's teachings on iatrochemical procedures with annotations of his own hands-on pharmacological and medical practices, but on the other hand explains the spiritual practices connected to mercury processing by adhering to Indian *mahāsiddha* Drilbupa's exegesis of the *Cakrasaṃvara / Heruka tantra*. BRS 766.15–767.8. Simioli 2014: 38.

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