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## Gold Ash: Contested yet Immortal, The Exceptional Potency of Burmese Alchemy

Céline Coderey

National University of Singapore, ariceli@nus.edu.sg

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# Gold Ash: Contested yet Immortal, The Exceptional Potency of Burmese Alchemy

Céline Coderey

'Gold ash' (*shway pya*), a substance Burmese alchemists produce through a complex process of the combination and burning of metals, is considered by many Burmese as the most potent medical ingredient existing in the country. In this article, I explore the factors underpinning its exceptional potency. Grounding my analysis on ethnography conducted in Myanmar since 2004, and more specifically on the case study of Master U Shein (1926-2014), the most well-known alchemist of the country, I illustrate the multiple facets of gold medicine's potency and show how they emerged from the dialogue between the substance and the layers of meanings it has come to acquire by its existence within a specific social and political space. In particular, I show how gold medicine has come to occupy a controversial position given that it both contrasts with the biomedical paradigm and is perceived as a threat to state power. I argue that although this controversial

position limits its growth, it also provides it with a specific political power, which, alongside the medical and spiritual power traditionally attributed to it, allows it to circulate in that inimical space. I also show that such resilience has been aided by the blurriness and weakness of the regulatory system as well as the great inadequacy and inaccessibility of the biomedical system.

**Keywords:** potency, mercury, alchemy, GMP, biomedicine, nationalism, Myanmar.

'Gold ash is the most potent medicine of all' (*shway pya a swan son hsay*) is a statement I have often heard during my fieldwork, from both healers and the laity. 'Gold ash' (*shway pya*) is a fine powder emitted by the 'ball of energy' (*datlon*) created by an alchemic process of combining and burning mercury, lead, bismuth, and silver (Rozenberg 2010: 93-94). The product of such a time-consuming and expensive process that only few people are able and willing to engage with, gold ash is not a common ingredient of the Burmese pharmacopeia, and yet it occupies a certain presence in the Burmese medical space. Some traditional doctors use it as an ingredient in the production of medicines they sell on the local market. It is mainly used in concoctions for heart and skin medicines, given that it is deemed to possess cooling, anti-aging, and brightening properties. Besides this 'formal' presence on the market, gold ash is also distributed by alchemists and other healers that operate in the informal and illicit sector. Here, gold ash is used as the primary, if not the sole, ingredient of rejuvenating, strengthening, and life-lengthening products, including as a cure for life-threatening diseases, notably HIV, which represents a real scourge in the country. Indeed, next to Thailand and Cambodia, Myanmar records the highest rate of HIV infection anywhere outside Africa (UNAIDS 2004).

Gold ash is not a unique element. It shares the medical market space with innumerable other substances from both the local traditional pharmacopeia—which includes vegetal, animal, and mineral-based products, as well as mantra, magic squares,<sup>1</sup> and enchanted water—and the biomedical tradition with its chemical pharmaceuticals. This opens the question why it is perceived to be the most potent medicine of all. What is the source of its potency, and what is so exceptional or unique about it?

Biomedical pharmacology tends to explain potency solely through chemical and physiological factors. In the strictly biomedical pharmacological sense, the potency of a medicine is understood as a measure that indicates its ability to produce a certain effect and, in a broader sense, possesses the power to cure one or more kinds of disorders rapidly and effectively. In medical anthropology, however, this notion is understood to transcend purely biomedical factors. Potency here refers to the different powers the medicine comes to acquire thanks to the healer's engagement with specific practices, procedures, and materials. In other words, the notion of potency relates to material and immaterial components that converge in the production process, and it is this combination which renders the substance effective enough to meet the goal it has been created for.

Despite the importance of medical potency for a better understanding of the medicinal world, it has seldom been examined in the literature on Asian medicines, and this is true for both herbal products and alchemic products. The latter remains even less studied than the former. Scholars who have investigated potency though, have pointed out the spiritual or even religious nature of several of the practices traditional healers use to enhance the potency of their medicines. These include respect for religious precepts, the recitation of formulae, the practice of meditation, and the summoning of superior beings. Religion also provides the cosmological framework within which traditional healers operate, and religious practices are believed to be the source of powers which can be very beneficial to medical products. The boundaries between medicine and religion blur even further in the case of alchemy, which is deeply rooted in ancient Hindu and Buddhist, yogic, tantric, and Siddha traditions, often associated with practices of immortality (Fenner 1979; Garrett 2009; Walter 1980; White 1996; Wujastyk et al. 2017). The interlaced religious and medical nature of the creation of gold ash significantly impacts the way the potency of the substance is understood and built. Medicines are empowered through religious practices often inscribed in a complex ritual, as is the case with the 'accomplishing medicine ritual' (Tib. *sman sgrub*) (Cantwell 2017; Craig 2012; Garrett 2009; Saxer 2013; Sehnalova 2015). Moreover, the alchemist himself undergoes a transformation process which is also understood in alchemic terms. This double dimension of alchemy—the transformation of the medical substance and the transformation of the alchemist—has been described as external versus internal alchemy. The first involves the mixing and heating of metals and their empowerment, aimed at producing a substance with rejuvenating, healing, and life-extending properties; the second involves the alchemist engaging with yogic and contemplative manipulations of the inner body, together with production and ingestion of alchemic medicines<sup>2</sup> aimed at granting him spiritual purification, acquisition of supernatural powers, eternal youth, and immortality (Garrett 2009; Rozenberg 2010; White 1996). Although the two forms of alchemy run parallel to, and support, each other, the literature suggests that traditionally in the practice the emphasis was more on internal alchemy, with external alchemy being mainly an instrument for it. This gradually underwent a metamorphosis and, in the latter day, the emphasis is on external alchemy, with internal alchemy playing the supporting role.

Although I recognize the medical and religious potency of the alchemic product related to its components, both material and immaterial, I believe there exists a third, and

equally important, form of potency connected to the first two. As already highlighted by van der Geest et al. (1996), Gerke (2013), Petryna (2006), and Whyte et al. (2002), this is a potency of a more social and political nature that the substance acquires by ‘living’ (van der Geest et al. 1996) and circulating in a specific social, political, and economic space, which shapes the way the medicines are perceived and used. Indeed, a pertinent question rears its head: what place does alchemy occupy in the medical field vis-à-vis herbal medicine and, especially, biomedicine? How is it perceived by medical, religious, and political authorities? If such questions are deemed valid for herbal medicine, it is my view that they are even more relevant for alchemic medicines given the controversial place its ingredients occupy within the current global system of governance.

Indeed, as medical anthropologists have described, in the last two decades Asian traditional medicines have been inscribed in a global system of governance as a consequence of their increased commercialization and the expansion of their circulation beyond national and regional borders. This system operates through the biomedical criteria of efficacy, quality, and safety, according to which products generated through alchemy are toxic. Adams (2001; 2002), Adams et al. (2011), Craig (2012), Gerke (2013), Pordié (2010, 2011), and Saxer (2013) discuss the ethical aspects issuing from the clash of epistemologies, and the obligation for traditional medicine to subordinate itself to the prevailing biomedical standard, notably Good Manufacturing Practices (GMP), in order to gain legitimacy.

That being said, some of these works also show that the adaptation to biomedical standards is rarely complete, one possible reason being that religious and social dimensions of the practice sometimes open possibilities for bypassing regulations. Saxer’s description of the case of *tsotel* in the People’s Republic of China is an excellent example of this (2013: 71-75). Despite its strong religious component, which is problematic for the Chinese state, and despite its constituents of mercury and gold, which is contrary to Chinese GMP and drug laws, Chinese regulations do not interfere with its preparation. *Tsotel* (Tib. *btso thal*) is recognized as part of the Tibetan cultural heritage and, since 2006, as part of China’s intangible cultural heritage. However, following the introduction of GMP in China in 2001, it was decreed that by the year 2004 *tsotel* would be manufactured in accordance with GMP regulations. Yet, Saxer remarks that by the time he completed his research in 2009, nothing much had changed. It can be inferred from this that the local and cultural dimension of the medicine possesses credence enough to keep it alive despite antagonistic regulations. Saxer acknowledges yet

another reason for the continued manufacture and circulation of *tsotel*: ambiguity in laws and tepid controls provide manufacturers certain latitude in the implementation of the regulations.<sup>3</sup>

Even though it is the nature of the medicine which is at stake in these restrictions, it bears keeping in mind that the medical and the religious are closely intertwined, and that it is possible that religious dimensions are targeted beyond the medical cover. To understand the position held by alchemy, therefore, one should look beyond the medical sector into the religious one, separated today by modernization and administered by different political bodies; and beyond the present, into the past. It is my contention that the restrictions imposed on alchemic remedies invest them with a political color, which transforms into a political power because of their very resilience. Therefore, I suggest that in order to better appreciate the different facets of the potency of a substance, we should look beyond the production and consumption contexts and considered the substance in relation to the wider social and political context.

In this work, I build on and complement previous studies on the subject by presenting the case of Burmese alchemy, thus showing that the belief in the potency of mercury, in both its religious and medical dimensions, expands well beyond India, Tibet, and the Himalayan region, and actually spreads elsewhere in Asia. Grounded on extensive fieldwork conducted in Myanmar since 2004,<sup>4</sup> and more particularly on the case study of Great Master (*hsayagyi*)<sup>5</sup> U Shein, the most renowned alchemist of the country, I illustrate the multiple facets of the potency of gold medicine, and show how it emerged from the dialogue between the substance and the layers of meanings it came to acquire through living in an ever-changing social and political space. I suggest that potency is a multi-layered phenomenon where religious, medical, and political dimensions intertwine and reinforce one another.

## Setting the Scene

Myanmar is composed of a central region inhabited mainly by the Burmese, and several peripheral regions and states inhabited by minority ethnic groups, such as the Rakhine, Chin, Kachin, Mon, Kaya, Karen, and Shan. The main religion of the country is Theravada Buddhism. Since attaining independence from the British in 1948, and across the entire period of military dictatorship until the present day, Myanmar’s political landscape has always been characterized by strong centralization, and by a hierarchical relationship between the center and the periphery, with the central government trying to dominate and control the other states and regions while neglecting them greatly in terms of economical support.

The socio-political history of the country has determined the development and evolution of the medical landscape. Formally introduced by the British during the colonial era, biomedicine, locally known as ‘medicine of the British’ (*ingaleikhsay*), has been supported by the local government which has developed healthcare centers, hospitals, and teaching institutes around the country. That said, because of many years of neglect by the military and the international community, medical services are inadequate, particularly in peripheral areas. A vast range of services, from primary to tertiary health care, are available in Yangon and Mandalay, with the rest of the country relying on very inadequate health centers largely limited to primary healthcare (Coderey 2016). The situation is particularly serious in specific sectors. The government has, for a long time, been unwilling to acknowledge the problem of HIV and has hindered the work of NGOs operating in the sector, and thus the accessibility to HIV biomedical treatment has always been very low. Until 2015, therapy based on antiretroviral drugs was provided free of charge only by two public hospitals and a clinic run by Doctors without Borders (MSF), all based in Yangon (ibid). Although with the democratization of the country, starting in 2011, the government has decentralized the treatment provided by the public sector and allowed more NGOs to help, the coverage is still far from meeting actual needs.

After independence, the government included indigenous medicine or ‘the remedies of the country’ (*taing-yin hsay*) in the national health system. It was, however, rather a simplified and standardized version of it, largely reduced to herbal medicine and massage. The distribution of traditional medicine services follows the same hierarchical structure as biomedical services, yet they are even more inadequate because of the limited funding granted to them.

Besides and despite this official system, other healing traditions continue to exist within the country. The main two are ‘herbal remedies’ (*beindaw hsay*) or, more commonly, ‘remedies of the country’ (*taing-yin hsay*), and *weikza* (knowledge) practices. *Weikza* practices include *aggiyat pyinnya*, which translates to ‘alchemy, the art of fire,’ from the Pāli *aggi* (fire), *yat* (art), and *pyinnya* (science), magic squares (*in* and *sama*), and mantra (*man*). Herbal remedies are traditionally used to cure ‘natural disorders’ (*yawga*) induced by an imbalance related to the karma, the weather, the food, or the mind, while *weikza* practices are mainly used for problems engendered by supernatural forces (*payawga*) (Coderey 2010, 2012).

### **Hsayagyi U Shein**

Up until 2014 when his life came to an end, Great Master (*hsayagyi*) U Shein was the most well-known alchemist

of Myanmar. In the last ten years before his passing, I was fortunate enough to visit him several times. U Shein lived in a simple, yet elegant, white two storied building at the outskirts of downtown Yangon. Right at the entrance, visitors were welcomed by an enormous statue of the *weikza*, Bo Ming Aung. *Weikza* are individuals who acquired extraordinary powers, including the power of extending one’s life and being released from the cycle of rebirth, by combining meditation of concentration (Burmese *thamahta*, Pāli *samatha*) and one of the so-called *weikza* practices: alchemy, remedies, esoteric diagrams, or mantra. Bo Ming Aung is by far the most popular *weikza*, and many people believe he will be the future Buddha. On the first floor, in the main room where visitors used to meet the Master, tea, biscuits, and fruits were offered to those waiting. In the corridor connecting it to another room, there were mainly statues of Buddha placed on lavish altars protected by glass cases. The second room housed statues of *weikza*, Hindu-Buddhist deities (*dewa*), and territorial spirits (*nat*). All these beings were connected, in one way or another, to the Master, and were meant to increase the power of his practice. During my visits to U Shein, I was able to enquire about several aspects of his practices, notably the origin of his knowledge and skills, his understanding of health and ill health, his healing practice, and the position of the practice vis-à-vis the larger medical and political context.

### **The Origin of U Shein’s Healing Powers**

U Shein was born on October 7, 1926 in Pylulwin in the region of Mandalay. His horoscope at birth revealed that he was destined to be gifted with special powers. At sixteen, he enlisted in the army and served for twenty years. Serious injuries to one hand and knee, inflicted by gunshots and a hand grenade, compelled him to leave the army. One night, he was visited in his dreams by a deity (*dewa*) who had been his sister in a previous life. The deity suggested that he visit a hermit, a *weikza*, who was ensconced in a cave near his hometown. At the meeting, the hermit told him he was his father from the realm of the deities, and that he wanted to transmit to him his healing powers. He did so by touching his palms, giving him a fruit to eat, and water to drink. The powers transmitted by the hermit were later visible on the palms of the Master’s hands. Showing me his right palm and indicating a triangle formed by the lines of the hand, he claimed “This is the *Shwedagon* pagoda [the most famous and venerated pagoda in Myanmar]...and [he showed me a little protuberance on the palm of his left hand] this is the *Kyaiktiyo* [the famous golden rock of the Mon state, in Southern Myanmar].” The *Shwedagon* represented his supernatural power, the power through which he cured disorders caused by aggression

(*hpan*) from witches, sorcerers, or spirits; the *Kyaiktiyo* represented his natural power, the power to cure natural disorders. After his encounter with the hermit, the deities visited him in a dream. They gifted him a ball of energy (*datlon*) and instructed him on how to use it to produce gold ash, which became the essence of his medicines. With his medicines, he first cured himself of the several injuries he had incurred in the army, and then started to cure people affected by natural and supernatural disorders. He explained that the medicine ‘was very powerful’ (*a swan shi de*) and had regeneration properties. He drew attention to the fact that since he had started taking it, he no longer needed glasses, his eyesight had improved, his hair had turned black again, his muscles had strengthened, and he felt full of vitality. To convince me of this, his assistants showed me pictures of the Master arm-wrestling with Western muscled men. By ingesting this powder, his body had become hard and cold, like gold. The Master stretched his arm toward me and invited me to touch it as testimony to the truth of his words.

### ***U Shein’s Healing Practice***

In order to ascertain whether the disorder affecting a patient was caused by natural or supernatural forces, the Master made him/her clutch a piece of laminated paper inscribed with esoteric symbols. If the patient began to tremble or feel unusual sensations, the disorder was the effect of supernatural forces. If nothing happened, it was an indication that it was a normal, natural disorder. Sometimes to complete the diagnosis the Master appealed to the help of the ‘*dewa* girls,’ which are women who could be possessed by deities, by having them possessed by a deity he then proceeded to conduct a dialogue with.

The main medicine that U Shein dispensed to cure disorders of all kinds was gold ash.<sup>6</sup> He explained that he gave clear directions to his patients on how to take his medicine, and that it was very important that they followed his directions to the letter. His disciple clarified that this substance was the outcome of a twenty-year long process involving the heating, mixing, drying, and burying of several ingredients, including metals, fruits, and honey. The first step toward its manufacture was taken by monks in the forests of Shan state. It consisted of heating and melting five metals: gold, silver, copper, zinc, and mercury. This process was conducted one hundred and eight times for each metal, with the aim of rendering the metals absolutely pure. The metals were then mixed together in a clay pot, along with pieces of apples, pineapples, oranges, grapes, and honey from remote mountainous regions. The pot was then alternately buried under the ground for one year, and placed over the ground for another year, for a

total of twenty years. Every time the pot was exhumed, it was filled with some fresh fruit and honey. This was the food (*a-sa*) for the metals, responsible for their transformation and purification. The final product was then washed, dried, melted again, and processed into very thin pieces of foil. These pieces were diced, and then heated together with the ball of energy that the Master had received from the deities at the beginning of his career, until a white powder appeared. The powder was blended with more fruit and honey, and interred for another year together with the energy-ball. The substance thereof was dried in a special oven for a period of two to five months, with gold ash being the resultant residue. In the final step, the gold ash was combined with certain binders and rolled into pills.

### ***A Renowned but Contested Practice***

During my visits to the Master’s house, his assistants often extolled the renown of the Master, declaring that visitors used to come not only from all over Myanmar, but also from Thailand, China, Singapore, Japan, and even Europe. They added that, on several occasions, the Master had been invited to Germany and Austria to attend international conferences on traditional healing methods, and that in 2006 he had been awarded a Doctorate of Natural Medicine by the University of Colombo in Sri Lanka. Documents and testimonials of such recognitions were displayed on the walls of the main room, and in books visitors could browse through while awaiting their turn. These books also contained several documents attesting to the efficacy, non-toxicity, and safety of gold ash, the main ingredient of the medicine dispensed by the Master. They also include a letter written by a Swiss HIV patient expressing gratitude toward the Master for having improved his condition, medical results from local laboratory tests showing shifts from HIV positive to negative, and a report from a Swiss lab attesting the absence of traces of toxicity in the Master’s remedy. The display of these kinds of reports are a common practice among alchemists; even though a critical mind might question the authenticity of these reports, and even the very existence of the labs producing them, this does not seem to be the case for the majority of the alchemists’ clients. In the eyes of many, the language of science is Truth—all the more so if written in English on a document issued by a European institute. When I asked U Shein about these documents, he confirmed having cured not only the Swiss patient, but also a Burmese and a German suffering from the same disease. He underscored the fact that his medicine was “much cheaper than ‘Western medicine’ (*ingaleik hsay*) which is anyway unable to cure this disease.” The Master did not tell us about the cost of the medicine, but we were told by other visitors

that the total amount for a treatment for HIV could go up to 1000 US\$. His statement about the cost of biomedical treatment being prohibitive was true only to a certain extent, because if the treatment provided in the private sector was, and continues to be, very expensive, the treatment dispensed by government hospitals and NGOs was, and still is, free of cost. With regard to the medical report, his assistant submitted that their medicine was produced through an alchemical process and contained heavy metals that were banned by the Ministry of Health because, according to biomedicine, they were toxic and dangerous to human health. The assistant of the Master said: "I agree that mercury and other metals are toxic, yet through the alchemical process this toxicity is neutralized and transformed into potency. We sent our medicine to be tested in Europe and, as you can see, the medicine is safe."

On my last visit to the Master in 2013, I was accompanied by a specialist of indigenous medicine who, together with her husband, owns one of the most well-known medical factories of the country. The couple was very close to the Master, all the more so since the husband had learned the art of alchemy from him. The woman told me that also her husband produced gold ash and employed it in his medical practice, but that unlike the Master he did it almost secretly, given that, she said, "the ministry of health is against these medicines because according to Western medicine they are toxic and dangerous, and also does not allow us, traditional doctors, to cure cancer and HIV." When I asked how it was possible, given those bans, that U Shein practiced so openly, the woman replied that "The government had first tried to stop him, especially because of his charismatic personality. Yet, because the Master simply went on and because his treatments have really proven to be effective, at present even the government accepts him and allows him to join the conferences of the traditional medicine association."

Up until his death in 2014, U Shein had been dispensing alchemic treatments for forty years. At his earthly departure, he left behind five clinics spread around the country, and 3,000 disciples who continue to treat patients using medicines they produce by following the Master's methods. If U Shein was certainly exceptional for his fame and the up-front way in which he practiced his patently alchemical practice, he is very representative of the controversial place such practices occupy in contemporary Myanmar.

At this point in my narrative, I will discuss the different layers of potency of alchemic medicine, both those related to production and consumption—and to the intended effect on the individual bodies of the alchemist and the

patient—and those related to the wider context of circulation, the political body or body politic. I will also illustrate the manner in which the two levels articulate and reinforce each other, and thus contribute to the enhancement of the overall potency of the substance which is simultaneously medical, religious, and political.

## From a Medicine for Immortality to an Immortal Medicine

### *The Medical and Religious Potency of Gold Ash*

The first layer of potency of an alchemic substance relates to its targeted use, which is simultaneously medical and religious. Such potency is 'produced' through the alchemic process itself, and also through the energies and meanings concentrated upon it by the alchemist.

Alchemy has a lengthy history in Myanmar. The Burmese date it as far back as the kingdom of Pagan in the eleventh century, where it was practiced by monks belonging to the Ari sect. Pagan alchemy, representing the foundation of Burma and 'Burmeseness,' is inscribed among the sources of Burmese Buddhist civilization (Rozenberg 2010: 87). According to the earliest sources available, alchemy was then mainly used to turn metals into gold, alongside helping the practitioner to rejuvenate and eventually gain immortality (Htin Aung 1962). Sources on the colonial period in Burmese history (Ferguson and Mendelson 1981), as well as contemporary scholars (Coderey in preparation; Foxeus 2011; Rozenberg 2010), focus on this second aspect by relating it to a phenomenon known as *weikza*. This term, as we have seen, refers to a set of practices, the powers they grant, and the people who acquire those powers through those practices. The main aim of individuals who follow the '*weikza* path' (*weikza lan*) is to acquire the power to see the future, communicate with higher beings, (*weikza* and deities), cure natural and supernatural disorders, and finally overcome death and be released from the cycle of rebirths, thus becoming *weikza*<sup>7</sup> themselves. *Weikza* exist in a state of limbo, waiting for the arrival of the next Buddha, *Arimatteyya*, by worshipping whomever they believe they will gain a direct entry into nirvana (Schober 1988: 19). Even though achieving nirvana is their primary aim, while awaiting *Arimatteyya*, most *weikza* still interact with humans soliciting them to follow their path and guiding them through it. We observed that *weikza* play a crucial role in U Shein's healing practice, and many people actually believe that he himself had acquired *weikza* status, thus making his person even more threatening for the state and its medicine even more potent. According to contemporary literature and my own observations, while those goals are still pursued today, the practice seems to



have slowly but steadily acquired a more marked medical dimension of the practice: prevent and cure natural and supernatural diseases, including contemporary diseases such as cancer and HIV.

Even though the two goals—to acquire the status of *weikza* and to prevent and cure illnesses—might look very different, they can reconcile in the possibility to extend life and overcome death. Indeed, the logic behind the efficacy of gold ash to cure HIV is that gold ash extends one's life by making the body stronger and younger, possibly immortal. Now, when someone has overcome death, it is said to be accomplished perfectly (*pyi*) and gold ash has the power—or at least it is deemed to have the power—to produce this effect because it is itself accomplished, perfect, and immortal. Moreover, to achieve immortality, one needs to be purified, and this is in essence what the alchemic process is about. If rejuvenation and a longer life are the fruits of ingesting the substance, in order to overcome death and be released from the cycle of rebirth, purification and transformation through meditation are also necessary. But, the transformation of the person is also essential for the production of the perfect substance. In other words, the transformation of the substance needs to run in tandem with the transformation of the person in both his physical and spiritual essence, and the two are believed to reinforce each other.

As described to me by several alchemists, and as reported by Rozenberg (2010: 93-94), the first step for the alchemist to achieve the perfect substance is to produce an energy-ball of the type U Shein received from the *weikza*. This ball is usually made of mercury (*pyada*), to which other metals can be added. Mercury is the only metal that is liquid at room temperature, and it is theoretically impossible to make solid, unless at under -38.83 degrees Celsius. To solidify mercury, alchemists mix it with lead (*na*), bismuth (*kywat*), and silver (*ngwe*). Alchemists often equate the act of solidifying mercury and preventing its evaporation with a form of meditation. Just as meditation, as a form of concentration, prevents one's mind from being distracted and flying away, alchemy allows one to 'catch' the material (Rozenberg 2010: 92). The mixture is then heated with fire, which is said to increase its potency. Then, the ball is purified (*than sin*) from metallic elements which have been mixed with the mercury. This process involves covering the ball with borax, lemon, oil, and honey. Interestingly, the elements mixed with mercury that have to be eliminated are sometimes referred to as *mala*, which is the term used for the mental impurities of greed, hatred, and delusion that alchemists attempt to eliminate through the practice of meditation. At this point,

the ball 'dies.' Indeed, it so strong and resistant, that its weight undergoes no change regardless of the temperature of the fire. The idea is that the ball ends up escaping the laws of change and impermanence that condition all existences. Finally, the ball is resurrected by being nourished (*kyway*) with silver and gold. When it is full (*pyi*), it vomits (*an*) dust deposit and 'golden ashes' (*shwepyay*). The terms used, notably 'nourish' and 'vomit,' reflect the idea that the ball is a living being. Indeed, obtaining the powder signifies that the ball is alive and that the person has successfully attained the state of *weikza*, or can attain it by ingesting the ashes or holding the ball in his mouth. The potency of the substance is thus spiritual and medicinal at the same time, and relates to being immortal and gifting immortality to people who consume it.

### ***The Marginalization of Alchemic Practice***

The second level of potency of gold ash is a political one, which emerges from the circulation of the substance within an inimical space, at both the political and medical level.

Since the colonial period, alchemy, like the other *weikza* techniques, has been learned in two ways: either through revelation from a deity or a *weikza*, like in the case of U Shein, or, (and this is by far the most common way), through an initiation into a congregation of *weikza* practitioners. The leaders of such congregations are often charismatic figures. This charisma, combined with the supernatural power members of these groups are deemed to have acquired, has always been feared by state authorities who saw in them potentially subversive forces. This is all the more so, given that some groups assume a messianic and millenarist stance, with some *weikza* deemed to be the future Buddha or king of the universe who will return to restore peace by reviving respect for Buddhist law (Coderey 2012; Foxeus 2011; Patton 2018; Pranke 1995; Schober 1988). During the colonial period, this activity was mainly associated with the practice of esoteric diagrams. A particularly renowned historical fact is that Saya San, leader of a major anticolonial movement, was using magical charms and tattoos to protect his followers (Ferguson and Mendelson 1981). This event created, in the eyes of the British, a strong connection between tattoos and charms and the Burmese impulse to resist authority (Htin Aung 1962). Today, it seems that the anti-state phenomenon has become more closely associated to alchemy rather than to esoteric diagrams. Rozenberg (2010) describes one ritual where accomplished *weikza* confine themselves inside caves and meditate whilst the cave is on fire. This is considered a life-extension ritual while also confirming that the person is an accomplished *weikza* (proven when his body

is not destroyed by the fire). According to my informants, this ritual takes place mainly on the occasion of major changes in government (such as change of the governing body, or change of the president). In any case, because of the subversive character of the *weikza* practices, the colonialists, and later the military, have tried to neutralize them. Ferguson and Mendelson affirm that under General Ne Win, the state tried to limit the *weikza* by censoring all books related to them, and forbidding the members of these groups from naming the future king (1981: 74). In 1979, the *Shwayingyaw gaing*, one of the main *weikza* congregations was banned and the activities of all congregations reduced. *Weikza* practices, however, persisted.

A further, and more radical step toward the neutralization of alchemy has been taken in the aftermath of the country's independence in 1948 through the formalization and institutionalization of traditional medicine. This process allowed political motivations to find ground, support, and cover in medical reasons.

In 1952, a few years after Burma gained independence, the new Burmese government decided to include indigenous medicine, the 'medicine of the country' (*taing-yin hsay*), in the formal healthcare system alongside Western medicine, the 'medicine of the British' (*ingaleik hsay*). The official reason touted was that the government wanted to valorize indigenous medicine, which it considered to be in decline, firstly because it had been neglected by the British, and secondly because it had always been transmitted through a plurality of lineages using esoteric languages. The national medicine the government wanted to valorize *did not* actually exist at that time. In fact, when the Burmese government initiated its valorization program, the medical landscape of the country was very rich and heterogeneous, with important variations among different ethnic and religious groups. Now, as a result of its valorization project, the Burmese government only recognizes medical traditions from Buddhist groups and neglects the others. This means that the medicine the government intended to valorize and spread was not a national medicine which includes all those different traditions, as the term 'medicine of the country' (*taing-yin hsay*) would suggest, but the medicine of the Buddhist regions which aims at becoming national. Such process, I argue, was very much in tune with, and part of, the attempt to dominate and control the peripheral regions in the name of the nation building. Since independence, and notably during the military dictatorship, Myanmar's political landscape has always been characterized by a strong centralization and by a hierarchical relationship between the center and the periphery, with the central government trying to dominate and control other states and regions. It has done so through

various means, from physical violence and terror, to internal displacements, from the dissemination of Burmese Buddhism throughout the country to, I argue, the building of a national traditional medicine.

Moreover, if the intent was to preserve and valorize traditional medicine, this was done through a homogenization with biomedicine, which had become the global standard to assess the value of other traditions. Medical traditions were thus standardized and stripped of those aspects that did not fit the principle of evidence-based medicine.<sup>8</sup> Interestingly, these aspects that were neutralized, by complying with biomedical criteria, coincided with the esoteric elements of the medicine, including the *weikza* practices, in which the government saw a threat for its authority. Once again, this authority was needed in order to keep the control over the nation the government was trying to build.

Lastly, the creation of a uniform and standardized healthcare system, based on biomedical criteria, allowed the state to control and neutralize all potentially threatening forces, be they related to inter-ethnic diversity or to an esoteric nature. A similar attempt to eliminate dimensions of medicine perceived as problematic for the nation-building project has been attested to in other countries as well, notably Bhutan (Tae 2017), Vietnam (Wahlberg 2014), and China (Taylor 2005).

The double nature of the project—the need to comply with biomedical criteria and the desire to neutralize threatening forces—is clearly reflected in its different components such as in the regulation of teaching, practice, and the production of medicines. In 1967, a teaching institute was opened in Mandalay, followed by a second one in Yangon. In 2001, a university was opened, also in Mandalay, leading to the closure of the other two institutes, and a ban on all the informal schools that existed previously. The curriculum established for the university consisted of elements of traditional medicine, to which elements from other Asian medicines and biomedicine were added. The component of tradition medicine includes: traditional herbal medicine, based on Buddhist medical knowledge and *Ayurveda*, astrology, and *weikza* practice, which is here reduced to alchemy. The main focus is on herbal medicine while the other two methods are given minor berths. All methods are used only for the treatment of natural diseases; supernatural disorders are not considered.

Of all the different *weikza* traditions, why had alchemy alone been retained in the curriculum? During my interview with him in 2014, the vice director of the university

stated that ‘The traditional medicine council realized that it was important to keep also alchemy because that too was part of traditional medicine and especially because they realized—and had proven—that it was really powerful.’ I see this statement as a desire to protect the national heritage and to demonstrate the value of alchemy in defiance of biomedicine. This is amply evident in the fact that alchemic medicine is chiefly used for the cure of disorders that biomedicine is unable to treat, such as HIV, as we will discuss later. I suggest that alchemy was the only *weikza* practice that could be integrated in the curriculum because alchemical remedies are—in their nature and modality of action—closer to biomedical drugs than esoteric diagrams and mantras, whose modality of action is more abstruse. It is also possible, however, that by submitting the practice to a standardized format of training, the state was hoping to mitigate the danger it perceived in the practice, vis-à-vis measures of biomedical criteria, and the consequent risk that people could be harmed. Moreover, I maintain that by building a scientific, non-occult version of the practice, the state also hoped to contribute to the marginalization of the original, non-formalized, version, the militarist nature of which was growing in parallel to the dissatisfaction people harbored against the military junta.

Starting in the 1970s, several healthcare services—both public and private—have been opened around the country. This wide distribution is said to be motivated by the intention to provide healthcare to every citizen and to fill the gap left behind by biomedical services. However, I contend that the establishment of these services in all states, including those inhabited by minority groups whose medical traditions have not been considered in the formalization project, is also a strategy of integration and domination, much akin to the installation of Burmese Buddhist pagodas in non-Burmese territories (Houtman 1999; Rozenberg 2001: 108, 116). Given the meager economic support the state provides to these services, they have always been highly inadequate, and the use people make of them, relatively low.

In order to regulate the medical practice and to guarantee its quality and safety, the government introduced a license which could be obtained only through university training. All practitioners who were trained informally, such as U Shein, were suddenly outlawed.<sup>9</sup> The government also explicitly banned astrology and alchemy from the public services on the basis that these practices did not conform to the principle of evidence-based medicine and, in the case of alchemy, because its products were considered toxic. My view is that this ban also serves the government’s wish to contain the threat these practices represent

to its own power. This is also supported by the fact that the government, at the same time, has been persecuting *weikza* congregations and condemning their activities (Rozenberg 2010; Sadan 2005). The fact that alchemy is retained as a subject in the university curriculum but is banned as a practice is the paradoxical outcome resulting from the co-presence of a plurality of actors and of a diversity of goals: the government, the Ministry of Health, the desire to preserve a heritage, but also the necessity to assure one’s authority and control over the country, and the obligation to comply with biomedicine-based global governance policies. In the private sector, the situation is less clear. Astrology is not banned and is often practiced; alchemy, on the contrary, although not banned, is less tolerated because of the potentially harmful nature of its components and because of its association with militarist, anti-state, insurgent movements. Alchemy is thus practiced more rarely than before, and in a discreet manner. Finally, the government has also prohibited all traditional doctors from administering injections, performing surgery, as well as from treating cancers and HIV,<sup>10</sup> regardless of whether they work in the public or private sector. According to my findings, controls are quite regularly enforced in the public sector, while action is taken in the private sector only if a patient is seriously harmed.

The regulatory process has also affected the production and circulation of medical products. In 1996, the government introduced a system that permitted only license-holders to produce and sell their products, intending to ‘enable the public to consume genuine quality, safe and efficacious traditional drugs’ (WHO 2012). In order to be granted the license, manufacturers had to ensure that their procedures were in compliance with the standards of the Good Manufacturing Practices (GMP) established by the World Health Organization (WHO). According to the manufacturers and practitioners I have talked to, the rules state that the products must be natural, chemical ingredients must not exceed a certain dose, and toxic or poisonous substances, such as heavy metals, are allowed only up to a certain limit. In addition, the number of ingredients should be limited, materials must be of a good quality, and all ingredients must be listed on the application form, as well as on the package of the product. Such parameters automatically exclude alchemical products from the market, since they contain heavy metals and are concocted with secret formulae. Inspectors analyze the raw materials, check the final product in the laboratory, and verify that all ingredients used in the product appear on the list. However, according to my informants, controls are enforced neither regularly nor efficiently, and in some cases laboratory checks are omitted.

## **The Political Power of Gold Ash**

The institutionalization and standardization of traditional medicine has marginalized several traditional techniques, including alchemy, which are judged by the government as potentially harmful both for people's health and for the power of the state. Marginalization is a political act, reflecting and expressing the domination of the West—through colonization and biomedicalization—and of the state, which itself re-appropriates the language of biomedical science and makes of it its own instrument of power and control.

The case of U Shein is just one among the many that illustrate how alchemists, convinced of the power of their medicines and motivated by the frustration of their marginalization as well as the desire to take revenge of the authority the state attributes to biomedicine, continue their practice. Most practice clandestinely, aware that the government keeps an eye on them. Yet, some are bold enough to operate openly, if not ostentatiously. This is mainly the case of those like U Shein, who have acquired an international recognition which somehow grants them legitimacy. Either way, they defy the state and the confines imposed by biomedicine. This is particularly evident when we consider the fact that the main disorder they treat is HIV. If many alchemists explain the use of alchemy by relating it to its life-extending and rejuvenation properties, they also stress that HIV represents one of the main limits of biomedicine, in so far as 'it is not able to fully cure this disorder,' as many of them put it. I argue that trying to accomplish this by alchemy, and claiming that it is possible to do so, is an attempt to challenge the efficacy of biomedicine and to counter the marginalization imposed by it. Ironically, the legitimization, or proof of the veracity of such a lofty claim, still often passes through the medium of biomedical science. Indeed, U Shein displays lab test reports to attest to the efficacy and safety of his medicine. Biomedical science, the inimical force upon which the foundation of marginalization rests, is used as an instrument of legitimization and of rehabilitation.

By being marginalized, and especially by continuing to exist despite being marginalized and proscribed, alchemic medicine has thus acquired new political and nationalistic meanings; it has become a nationalistic tool that operates outside of and despite the authority of biomedicine and the state. Now, if the political meaning acquired through marginalization provided alchemy the fuel to challenge it, it is undeniable that such resilience has been favored by the vagueness and weakness of the regulatory system, as well as the inadequacy of the healthcare system in general, and of biomedicine in particular.

If alchemy has been marginalized, its marginalization has been different from that of the other esoteric *weikza* practices (diagrams and mantra). If, for the latter, the marginalization is absolute, for alchemy it is somehow more ambiguous. On the one hand, the circulation of alchemic remedies is prohibited, and the practice of alchemy is banned in the public sector. On the other hand, alchemy is taught at the university, but in a very standardized and secular form. As for the weakness of the regulatory regime, because guidelines are only guidelines and not laws, the private sector is poorly regulated, regulations are hardly implemented, laws seldom enforced, and controls rarely accomplished, creates a certain space for maneuver. This is all the more so given the corruptibility of the actors at stake. Some successful manufacturers from Yangon, well connected with the government, concede that the inspectors grant more latitude to them than to others, affording them the leeway to sell medicines that contain gold ash, albeit in a discreet manner. Finally, some lay informants assert that elbow room is tacitly allowed on account of the fact that 'even the government believe in the efficacy of gold medicine.' With regard to the range of products available in the market, a manufacturer claimed that 'the department of traditional medicine is aware of the presence of these ingredients in some products, but close one's eyes to it because they also believe in their efficacy.' Again, regardless of the veracity of such statements, its circulation contributes to promote the idea of the power of gold ash.

## **Conclusion: An Immortal Medicine**

In this article, I have suggested that to understand the potency of gold ash, one has look beyond the production and consumption contexts of this substance, draw it out of the individual phases that constitute its life, and examine it vis-à-vis the wider medical and political space in which it 'lives.' Only in so doing can one appreciate the plurality of positions attributed to the substance, and the diversity of meanings it is invested with. I have shown that, far from being a coherent unit, the social space is an assemblage of heterogeneous and sometimes antithetical forces in that some are responsible for the marginalization of the practice, while others open up possibilities for its survival. A certain negotiation is viable and, in a sense, justifiable given that it operates in a space left largely empty by biomedicine which is often inaccessible and unable to address all disorders in a satisfactory manner.

While I acknowledge that the very condition of negotiation emanates from the grey area created by the ambivalence of the regulatory system, the weaknesses of the

bureaucratic machinery, and the gap left by biomedicine, I have here defended the idea that the motivation and the power to navigate this space is a direct consequence of the very marginalization of the practice. By being marginalized, alchemical medicine has acquired new political and nationalistic meanings. In addition to the medical and religious power and properties traditionally attributed to this product, it is the political power that has invested it with the fuel to circulate in an inimical medical space. Ironically, the very factors that were supposed to repress or eliminate this medicine from the medical landscape have actually enhanced its power and contributed to its resilience. Gold ash is no more simply a substance where medical and religious dimensions merge, but is also an instrument of resistance against biomedicine and the state. While some practitioners operate covertly, and others in an overt manner, both contribute to the dissemination of the idea that this substance is so powerful that even the government and the medical authorities cannot do anything to stop it. Like quicksilver, gold ash and the alchemical practice slither away from the ambit of state authority despite controls, limitations, and marginalization.

At this point, it is legitimate to question whether herbal medicine could have attained the same multi-faceted potency and quality of resilience as alchemy. The answer is probably not, primarily because the position alchemical products occupy within the social and political space largely differs from that of herbal products. Herbal medicine, too, has undergone its share of transformations through its encounter with biomedicine and the dominance of biomedical criteria. Yet, the main variance between herbal medicine and its western counterpart is epistemological incompatibility. Biomedical standards of regulation cannot accept the large number of ingredients herbal medicines are composed of because of the difficulties involved in testing such complex products. To survive, herbal medicine 'only' had to simplify its formulae. For alchemy, on the contrary, it was not a question of adaptation, but of disappearance. Its epistemological incompatibility with biomedical standards is too strong to lend itself to adaptation in the manner that herbal medicine is able to do. The marginalization of alchemical medicine is not simply the marginalization of a substance, but of the deeply rooted qualities that this substance represents and embodies in Burmese culture. Even as herbal medicine also represents local tradition and identity, and also has a spiritual dimension running parallel to its political meaning, I maintain that these aspects are stronger in the case of alchemy given the very nature of the substance—gold ash—and its unique attribute of immortality. The articulation between, on the one hand,

the substance itself and its unique characteristics and, on the other hand, the socio-political space in which it lives, has multiplied its layers of potencies and thus contributed to its resilience. Gold medicine, always already a medicine for immortality, has become an immortal medicine.

This analysis of alchemical medicine thus comes to shake the classic, common understanding of potency as something pertaining to the medical and the religious dimension associated with the production context, and invites us to amplify this notion by including also the social and political connotations the product acquires by its very circulation across time and a specific social space. Far from remaining external factors that contribute only in the facilitation of circulation, these connotations inscribe themselves as integral to the potency of the product and facilitate its resilience. Consequently, the resilience of the product becomes not only a proof of its potency, but also a component of it.

**Céline Coderey** is a Research Fellow at the Asia Research Institute of the National University of Singapore, where she is also a Lecturer and Fellow of Tembusu College. Her research looks at health and healing in contemporary Myanmar combining the lenses of medical and religious anthropology. Her recent works cover the institutionalisation of traditional medicine, the governance and institutionalization of medical products, (the obstacles to) the accessibility of biomedical health care services, notably in the sector of HIV and mental health, practices of divination, and alchemy. She is the author of several articles on these topics and co-editor of the forthcoming book (Routledge 2019) *Governance and Circulation of Asian Medicines*.

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## Endnotes

1. Magic squares are inscriptions made on paper or metal sheets of numbers and/or letters referring to Buddhist, astrological, and cosmological concepts, further empowered by the recitation of mantras and the summoning of powerful beings.
2. In some traditions, visualization and even identification with the deities play a crucial role in the process as much as the identification of the two main alchemic substances, mercury and sulfur, with the semen of Shiva and the vaginal fluid and uterine blood of the Goddess respectively (Garrett 2009).
3. In this context, economic factors must not be discounted either. The fact that the precious pills are a multimillion-dollar business in China certainly plays a role in keeping their circuits alive.
4. I have been conducting research on health and healing practices in Myanmar since 2004; fieldwork focused on alchemic medicines has been carried out from 2014 to 2017 mainly in Yangon, the main city of the country, and in Mandalay, the second main city which represents the cradle of Burmese tradition, and also in Thandwe, Sittwe, and Mrauk U, all three in Rakhine State.
5. This is a form of respect used to address and refer to a senior (supposedly) very powerful healer.
6. In case of aggression, the Master also used another very special medicine he created during a large ceremony held

once a year, at the full moon of November, traditionally considered the most powerful moment for healing practices. Many healers from all over Myanmar and even from abroad gathered in the Master's house for that event and contributed to the production of that medicine.

7. Although the idea of rejuvenation and extending life is shared by most alchemic traditions around Asia, the immortality goal is unique to only few of them. For instance, Chinese Daoists speak of it (Pregadio 2006; Sivin 1968) while it is unknown to Tibetan alchemists.

8. The department of traditional medicine is under the control of the Ministry of Health, which is represented by biomedical doctors, and even the teaching institutes are headed by practitioners of Western medicine. Because of a difference in status, traditional medicine also receives less support in terms of equipment, medicines, and research funds, compared to Western medicine.

9. To those individuals, the government offered the option to pursue a formal training in a public institute and pass an exam in order to get an official recognition. Yet the majority, and U Shein among them, never did so.

10. According to the traditional doctors I spoke with, the reason for this is that biomedical doctors want to have the prerogative over those techniques and diseases, while biomedical doctors argue that these rules are intended to prevent traditional doctors from harming patients.

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## References

- Adams, Vincanne. 2001. The Sacred in the Scientific: Ambiguous Practices of Science in Tibetan. *Medicine Cultural Anthropology* 16(4): 542-575.
- . 2002. Establishing Proof: Translating “Science” and the State in Tibetan Medicine. In *New Horizons in Medical Anthropology: Essays in Honour of Charles Leslie*, edited by Margaret Lock and Mark Nichter, 200-220. London: Bergin and Garvey.
- Adams, Vincanne, Mona Schrempf, and Sienna Craig, eds. 2011. *Medicine, Between Science and Religion*. New York: Berghahn.
- Cantwell, Cathy. 2017. Reflections on Rasāyana, Bcud Len and Related Practices in Nyingma (Rnying Ma) Tantric Ritual. *History of Science in South Asia*, 5(2): 181-203.
- Coderey, Céline. 2010. Du Karma aux Planètes: Les Thérapeutes Arakanais et leurs Pratiques Hétérogènes de Soins. *Moussons* 15: 29-53.

- . 2012. The *Weikza's* Role in Arakanese Healing Practices. *Journal of Burma Studies* 16(2): 181-211.
- . 2016. Accessibility to Biomedicine in Contemporary Rakhine State. In *Metamorphosis. Studies in Social and Political Change in Myanmar*, edited by Renaud Egreteau and François Robinne, 260-287. Singapore: NUS Press.
- Craig, Sienna Radha. 2012. *Healing Elements: Efficacy and the Social Ecologies of Tibetan Medicine*. Berkeley: University of California Press.
- Fenner, Edward Todd. 1979. *Rasayana Siddhi: Medicine and Alchemy in Buddhist Tantras*. Ph.D. Dissertation, University of Wisconsin, Madison, WI.
- Ferguson, John P. and E. Michael Mendelson. 1981. Masters of the Buddhist Occult: The Burmese *Weikzas*. *Contributions to Asian Studies* 16: 62-80.
- Foxeus, Niklas. 2011. The Buddhist World Emperor's Mission: Millenarian Buddhism in Postcolonial Burma. Ph.D. Dissertation, Stockholm: Stockholm University.
- Garrett, Frances. 2009. The Alchemy of Accomplishing Medicine (*smans grub*): Situating the *Yuthok Heart Essence (G.yu thogs nying thig)* in Literature and History. *Journal of Indian Philosophy* 37(3): 207-230.
- Gerke, Barbara. 2013. The Social Life of *Tsotel*: Processing Mercury in Contemporary Tibetan Medicine. *Asian Medicine: Tradition and Modernity* 8(1): 120-152.
- Houtman, Gustaaf. 1999. *Mental Culture in Burmese Crisis Politics: Aung San Suu Kyi and the National League for Democracy*. ILCAA Study of Languages and Cultures of Asia and Africa Monograph Series, no. 33. Institute for the Study of Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies.
- Htin Aung, Maung. 1962. *Folk Elements in Burmese Buddhism*. London: Oxford University Press.
- Patton, Thomas Nathan. 2018. *The Buddha's Wizards. Magic, Protection, and Healing in Burmese Buddhism*. New York: Columbia University Press.
- Petryna, Adriana, Andrew Lakoff, and Arthur Kleinman, eds. 2006. *Global Pharmaceuticals: Ethics, Markets, Practices*. Cambridge: Cambridge University Press.
- Pordié, Laurent. 2010. The Politics of Therapeutic Evaluation in Asian Medicine. *Economic and Political Weekly* 45(18): 57-64.
- . 2011. Savoirs Thérapeutiques Asiatiques et Globalisation. *Revue d'Anthropologie des Connaissances* 5(1): 1-12.
- Pranke, Patrick. 1995. On Becoming a Buddhist Wizard. In *Buddhism in Practice*, edited by Donald S. Lopez, 343-358. Princeton: Princeton University Press.
- Pregadio, Fabrizio. 2006. *Great Clarity. Daoism and Alchemy in Early Medieval China*. Stanford: Stanford University Press.
- Rozenberg, Guillaume. 2001. *Thamanya: enquête sur la sainteté dans la Birmanie contemporaine*. Ph.D. Dissertation, École des Hautes Études en Sciences Sociales, Paris.
- . 2010. *Les Immortels. Visages de l'Incroyables en Birmanie Bouddhiste*. Vannes: Éditions Sully.
- Sadan, Mandy. 2005. Respected Grandfather, Bless this Nissan: Benevolent and Politically Neutral Bi Bo Gyi. In *Burma at the Turn of the 21st Century*, edited by Monique Skidmore, 90-111. Honolulu: University of Hawaii Press.
- Saxer, Martin. 2013. *Manufacturing Tibetan Medicine: The Creation of an Industry and the Moral Economy of Tibetanness*. New York, Oxford: Berghahn.
- Schober, Juliane. 1988. The Path to Buddhahood: The Spiritual Mission and Social Organisation of Mysticism in Contemporary Burma. *Crossroads* 4(1): 13-30.
- Sehnalova, Anna. 2015. Inviting Medicine: Mendrub (*Sman grub*) healing for everyone and everything. In *Tibetan and Himalayan Healing: An Anthology for Anthony Aris*, edited by Charles Ramble and Ulrike Roesler, 633-649. Kathmandu: Vajra Books.
- Sivin, Nathan. 1968. *Chinese Alchemy. Preliminary Studies*. Cambridge: Harvard University Press.
- Tae, Jonathan. 2017. *The Patient Multiple. Ethnography of Healthcare and Decision-Making in Bhutan*. New York: Berghahn Books.
- Taylor, Kim. 2005. *Chinese Medicine in Early Communist China, 1945-63: A Medicine of Revolution*. London: Routledge.
- UNAIDS. 2004. *Myanmar: Epidemiological Fact Sheets*. <[http://data.unaids.org/publications/fact-sheets01/myanmar\\_en.pdf](http://data.unaids.org/publications/fact-sheets01/myanmar_en.pdf)> (accessed on 10 January 2018).
- van der Geest, Sjaak, Susan Reynolds Whyte, and Anita Hardon. 1996. The Anthropology of Pharmaceuticals: A Biographical Approach. *Annual Review of Anthropology* 25: 153-178.
- Wahlberg, Ayo. 2014. Herbs, Laboratories, and Revolution: On the Making of a National Medicine in Vietnam. *East Asian Science, Technology and Society: An International Journal* 8: 43-56.
- Walter, Michael Lee. 1980. *The Role of Alchemy and Medicine in Indo-Tibetan Tantrism*. Ph.D. Dissertation, Department of Uralic and Altaic Studies, Indiana University, Bloomington.

White, David Gordon. 1996. *The Alchemical Body: Siddha Traditions in Medieval India*. Chicago and London: University of Chicago Press.

WHO (World Health Organization). 2012. *Traditional Medicine in Myanmar*. <[http://www.searo.who.int/entity/medicines/topics/traditional\\_medicine\\_in\\_myanmar\\_2012.pdf](http://www.searo.who.int/entity/medicines/topics/traditional_medicine_in_myanmar_2012.pdf)> (accessed on 25 May 2017).

Whyte, Susan Reynolds, Sjaak van der Geest, and Anita Hardon. 2002. *Social Lives of Medicines, Cambridge Studies in Medical Anthropology*. Cambridge: Cambridge University Press.

Wujastyk, Dagmar, Suzanne Newcombe, and Christéle Barois, eds. 2017. Transmutations: Rejuvenation, Longevity, and Immortality Practices in South and Inner Asia. *History of Science in South Asia*, 5(2): i-xvii.