Chinese Propriety Medicines: An “Alternative Modernity?” The Case of the Anti-Malarial Substance Artemisinin in East Africa

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This article discusses various modes of “modernizing” traditional Chinese medical drugs (zhongyao 藥) and transforming them into so-called Chinese propriety medicines (zhongchengyao 藥) that are flooding the current neoliberal wellness markets. This article argues that the chemical procedures used in the manufacture of Chinese propriety medicines are highly culture-specific and deserve being considered as instantiations of an “alternative modernity” (e.g., Knauft 2002), rather than of “Westernization.” These Western-Chinese combinations, produced in strife toward fulfilling Mao Zedong’s Communist-revolutionary vision, have a potential to represent a critical alterity to Western health policies, challenging rhetoric against such combinations. However, as is also noted in this article based on ethnographic fieldwork in East Africa, their potential alterity has been corroded for at least two reasons. First, the medical rationale for dispensing these medications has been shaped by commercial demands in ways that have worked toward transforming the formerly scholarly Chinese medical tradition (as outlined by Bates 1995) into a consumer-near and popular “folk medicine” (as defined...
by Farquhar 1994:212). Second, the repertoire of Chinese propriety medicines is impoverished as its efficacious “alternatively modern” drugs are being redefined as “modern” biomedical drugs. The article concludes that the potentially critical alterity of any formerly scholarly traditional medicine is more likely to be lost in those fields of health care that are both highly commercialized and polarized by the biomedical imperative to distinguish between “traditional” and “modern” medicines. As example for demonstrating how contentious the issue is, *qinghaosu* 青蒿素 (artemisinin) is put center stage. It is an anti-malarial substance which in the 1970s Chinese scientists extracted from the Chinese medical drug *qinghao* 青蒿 (Herba *Artemisiae annuae*). Some Chinese practitioners in East Africa argued that artemisinin belonged among the Chinese propriety medicines they sold. Although according to Western biomedical criteria and the Chinese scientists who were involved in its chemical identification, artemisinin is a “modern” Western drug, their polemics deserve to be more closely analyzed as what social scientists have recognized as an “alternative modernity.”

**Key Words:** alternative modernities; artemisinin; Chinese propriety medicines; integrated Chinese and Western medicine; East Africa; *qinghao*; TCM

Numerous studies in medical anthropology have illustrated that medicines and their manufacture, distribution, and consumption have significance beyond their pharmacological properties; these studies show that in fact medicines have “social lives” (Whyte, van der Geest, and Hardon 2002) or even “cultural biographies” (Kopytoff 1986). Given that medicines are not mere things but are socially and culturally constituted artifacts anchored in both local and global histories, medicines come to reflect, and also shape, any changes in the societies and cultures in which they circulate. They tell not merely reflective stories to be interpreted but are themselves active players in a field that situates people of particular times and places within wider global trends.

This article examines the thriving business of “modernized” Chinese propriety medicines (*zhongchengyao* 中成藥), with particular attention to the highly efficacious anti-malarial substance *qinghaosu* 青蒿素 (artemisinin). From a biomedical viewpoint, artemisinin undisputedly is a “modern” biomedical drug, and its safety and efficacy for severe falciparum malaria have now been established beyond reasonable doubt (McIntosh and Olliaro 2007). It is famed as the one active anti-malarial principle in a plant extract that cured infected mice, which in the early 1970s ingenious Chinese scientists in Traditional Chinese Medical (TCM) institutions had produced. This plant extract was obtained by applying modern chemistry to the traditional Chinese medical drug *qinghao* 青蒿 (Herba *Artemisiae annuae*) in a way that did not destroy this molecule. In laborious further procedures, a series of
researchers isolated, identified, and accordingly named the substance *qinghaosu* 青蒿素 (*artemisinin*).³

To be sure, the Chinese scientists involved in the identification of its chemical structure always considered *artemisinin* a biomedical drug (e.g., Zhang 2006), but some Chinese medical practitioners in East Africa adopt another viewpoint. They highlight continuities in manufacture to other traditional drugs that have also been subject to modern chemistry. They claim that *qinghao* was subject to chemical procedures comparable to those that have transformed a large number of traditional Chinese medical drugs (*zhongyao* 中藥) into so-called Chinese propriety medicines (*zhongchengyao*). From a biomedical viewpoint these practitioners are wrong, but from an anthropological viewpoint the case they make highlights a power differential in the health field that deserves closer exploration.

The chemically modified traditional medicines may or may not be safe and efficacious. Notably, barely any have been tested in double-blind randomized controlled trials recognized and validated by the Western biomedical profession. The primary reason for this may be that they do not meet the biomedical standard of what constitutes a drug—a single purified and identified substance of which one knows the biochemical mechanism that produces its clinically observed effects. Accordingly, Chinese propriety medicines have met with severe criticism outside China. Since they do not meet the requirements of an approved drug, health professionals consider them “unsafe” if not “dangerous.” Since they are not purely “traditional” and are not “natural herbs,” esoteric circles condemn them as Communist adulterations of classical Chinese medicine. Finally, the media has reinforced these skeptical attitudes when a traditional Chinese medical drug in its modern application was found to be life threatening and even lethal (e.g., Nortier et al. 2000).

To be sure, this article is not designed to advocate Chinese propriety medicines. However, as these medications constitute aspects of material culture they deserve closer anthropological scrutiny, particularly because in recent years material culture seems to have been accorded a central role in Chinese medical history (as is apparent from the trend of renaming Colleges of Traditional Chinese Medicine, *zhongyiyuan* 中醫院, as Universities of Traditional Chinese Medicine and Pharmacotherapy, *zhongyiyao daxue* 中醫藥大學). As the Chinese medical currents that in the 1950s were made into TCM are now undergoing further transformation in labs and test tubes, Chinese propriety medicines have become central to China’s health care and beyond. To appreciate these recent developments, this article explores both the rationale of the manufacture of propriety medicines in China as well as the ways in which these drugs are being dispensed and consumed on the global health market, East Africa, in particular.
The manufacture of the Chinese propriety medicines has involved modern chemistry in such culturally specific ways that one could be tempted to speak of an “alternative modernity” (Knauft 2002). This is the case, especially, if these traditional-modern hybrids are viewed as resulting from Mao Zedong’s revolutionary vision to integrate traditional Chinese and modern Western medicine (zhongxiyi jiehe 中西醫結合). As “alternatively modern” drugs, they have the potential to posit a cultural critique of the hegemonic Western pharmaceuticals. However, as will be demonstrated in this article, their manufacture increasingly caters to popular consumption in terms of folk medical categories and their repertoire increasingly includes folk medical recipes. Thus, they are in the course of undergoing a status change in respect to Western medicine, from “other” to “lesser.”

The shift from the “scholarly medical” toward the “folk medical” is evident not only in China, at the level of manufacture, but also in East Africa, at the level of medical practice and diagnosis. TCM professionals, who aim to endorse pre-modern scholarly medical currents in a “systematic” and “scientific” fashion, are generally trained to provide an integrated and all-encompassing diagnosis of the person. It involves the “four methods of examination” (sizhen 四診) and translates concrete signs and symptoms through complex analyses into “distinguishing patterns” (bianzheng 辨證) for which there is a large repertoire of “formulae” or prescriptions (fangji 方劑) that are modified for each patient’s personal constitution (Farquhar 1994:212). In East Africa, however, most practitioners engage in drastically simplified diagnostic procedures and prescribe Chinese propriety medicines in much simplified ways, such that their intervention is best characterized, according to Farquhar’s (ibid.) scheme, as “folk medical,” where each complaint is treated separately and no effort is made to integrate the patient’s complaints into an overarching distinguishing pattern. So, based on medical consumption patterns in East Africa, it appears that the historical process whereby “traditional Chinese medical drugs” (zhongyao) are increasingly manufactured into “Chinese propriety medicines” (zhongchengyao) goes hand in hand with a transformation of Chinese medical practice from a scholarly to a folk medical practice.

One could end the story here. However, as indicated above, considering the Maoist revolutionary vision that laid the foundation for their development, Chinese propriety medicines have the potential to provide a critical alterity of the hegemonic biomedical establishments and the medications they sanction. If one includes the highly efficacious anti-malarial artemisinin among the Chinese propriety medicines, which some Chinese medical practitioners propose to do, this cultural critique that Chinese propriety medicines potentially pose would also include drugs that reach degrees of efficacy that biomedicine recognizes.
In summary, this article will show that even though Chinese propriety medicines may have the potential to represent an “alternative modernity,” they have not succeeded in doing so in East Africa for at least two reasons. First, the thriving business with the “modernized” Chinese propriety medicines has worked toward transforming the once scholarly currents of Chinese medicine into consumer-near practices, which have many folk medical elements. Second, the “modernized” Chinese medical repertoire is additionally impoverished through its disengagement from, and biomedicine’s appropriation of, bioscientifically tested, highly effective substances extracted from traditional Chinese medical drugs, such as artemisinin and its derivatives. If these two trends persist, this ultimately will lead Chinese practitioners in East Africa toward dispensing “modernized” traditional drugs that provide only symptomatic treatment for folk medical complaints and that generally are ineffective.

FIELDWORK

This research draws on fieldwork undertaken in nine field trips, each of about one-month’s duration between 2001 and 2008 and each in multiple sites of Tanzania (inclusive of Zanzibar), Kenya, and Uganda. Chinese medicine in East Africa is to date primarily an urban phenomenon, with medical practices whose presence waxed and waned in Dar es Salaam, Mbeya, Mwanza, Shinyanga, Dodoma, Moshi, Arusha, Stonetown, and Chake Chake; Nairobi, Mombasa, perhaps Kisumu, and Eldoret; and Kampala and its suburbs. These practices and clinics were quite easy to find as they are often situated in populous areas, in shopping centers, or on a main road, close to a market or a bus station. Even when located in residential areas, they made themselves widely known, usually with large red script on white background in Tanzania or with white script on blue background in Kenya. They characteristically were small enterprises, occasionally family enterprises, generally consisting of at least two to three rooms. Most included staffing by local assistants, among them one to three receptionists (often strikingly beautiful and elegant young African women who also dispensed drugs over the counter), a lab technician, and sometimes an interpreter. In Kenya and Uganda almost all clinics were individually owned and operated, while in Tanzania a few were franchises of a larger chain. The population of Chinese medical practitioners was thus small and dispersed, and even though it was constantly changing, I claim to have acquainted myself with it almost in its entirety during these seven years. As migrants, the Chinese medical practitioners had been through hardship in China and abroad, and I was often initially met with the type of mixed feelings
migrants sometimes have toward government and other officials, and on
several occasions with outright hostility. Even the most honorable and
honest practitioners knew they were working in a grey zone of legality
(Adams 2002), not least due to their selling of Chinese propriety medicines.

Research methods included participant observation and semi-structured
interviews, mostly without but sometimes with a tape recorder. Full-blown
participant observation was possible only with one practitioner who invited
me to stay with his family, live in his house, and accompany him to work six
days a week from 9 a.m. to 6 p.m. and on Sundays from 9 a.m. to 1 p.m.
Four practitioners, over a period of several weeks, allowed me to attend
and tape-record their consultations, which they conducted in English or
Swahili, with or without the help of an interpreter. I conducted interviews
with 30 patients visiting a clinic in each Dar es Salaam, Mombasa, and
Chake Chake, immediately after Ramadan in December (during the small
rainy period). In Dar and Mombasa, I completed follow-up interviews six
months later, whenever possible in visits to their homes. I also conducted
interviews in the clinics with the Chinese medical doctors and, occasionally,
with their support staff.

Most practitioners displayed medicines on their shelves, which usually
represented most of their stock. One practitioner in Dar es Salaam, one in
Nairobi, and one in Mombasa allowed me to record all their drugs on
display. There ranged between 70 and 100 different kinds of Chinese pro-
priety medicines. In addition, one practitioner had about 200 different kinds
of traditional Chinese medical drugs (zhongyao) in powder form on display.
However, the recording of the Chinese propriety medicines remained a
prickly issue throughout the entire period of research. I employed different
methods: taking photographs of the medicines on display, collecting and
photocopying the inslips and packaging, and, in one case, recording in my
own Chinese handwriting the indication, composition, therapeutic function,
and dosage of each drug that was on display, as I was interdicted to make
use of the other methods. It was evident that not only the clientele but also
the doctors themselves accorded propriety medicines a central role in the
medical encounter.

CHINESE PROPRIETY MEDICINES AS AN
“ALTERNATIVE MODERNITY”

As medical anthropologists have reiterated since the 1970s, when their
discipline first came into being, the medical field is not bounded. Even those
who worked on Asian medical “systems” emphasized their heterogeneity
(e.g., Leslie 1976), and their Africanist colleagues called the notion of a
“medical system” altogether into question (Last 1981; Bibeau 1982), a point emphatically reiterated more recently (Littlewood 2007). The medical field consists of a multitude of practices that cannot be easily assigned to bounded entities defined by geographic, ethnic, religious, materialist, or culturalist criteria. Medical anthropologists also instantly chimed into the tune of other social scientists that the terms “modern” and “traditional,” “advanced” and “backward,” “scientific” and “superstitious” are not useful descriptive terms but ethnocentric historical artifacts.

However, ethnographic fieldwork highlights how “real” these terminologies can be: the terms “modern” and “traditional” may not accurately describe technological aspects of commodities but they are immensely useful tools for any actors who wish to draw boundaries between themselves and the status-lower “other.” Although the “modern” and “traditional” are highly contested concepts for anthropological analysis, they belong among the vocabulary of the people with whom anthropologists work. They thus are an intrinsic aspect of people’s lives and social practice. It is impossible to overlook their decisive social significance, particularly in the medical field.

In East Africa, tensions as to which forms of therapeutics are legitimate and which ones not make use of the above terminology. Governments consider only the “modern” medicine legitimate—biomedicine. “Modern” drugs have been tested to be efficacious and safe; traditional drugs have not. The “traditional,” as an aspect of “culture,” draws its legitimation from its claim to history and territorial rooting. However, more recently, the field of health care has become more medicalized as the issuing of licenses for opening traditional medical shops and practices moved out of the Ministry of Culture and the Ministry of Commerce into the Ministry of Health (fieldwork 2001–2008). This shift in jurisdiction also occurred elsewhere; in China, for instance, it occurred during the 1950s (Taylor 2005).

Where health polemics in the northern hemisphere center on issues of drug “efficacy,” they mostly are concerned with drug “safety” in East Africa. Social boundary marking by means of the double-blind randomized control trial, as the gold standard for evaluating treatment efficacy, has not had sufficient impact (yet) to have directly affected the regulation of traditional medicines. The medical field outside government institutions is largely unregulated, although there is a consensus that traditional medical practitioners are permitted to sell “traditional,” “natural” “herbs” (which some biomedical professionals consider to a large extent harmless and, accordingly, inefficacious). In general, however, traditional medicines are deemed unsafe because neither their rationale nor their drug inventories are grounded in modern science.

While efforts have been made to institutionalize the study of traditional herbal medicine, and phytotherapeutics in particular (Iliffe
1999:211; Langwick in press), the colonial legacy of marginalizing “traditional healers” (e.g., Vaughan 1991) continues through governmental insistence on maintaining the construed boundary between the “traditional” and “modern,” at least in Tanzania. Yet, as medical anthropologists continuously have stressed, there are “traditional healers” who use modern medical instruments like plastic gloves and stethoscopes; who aim to overcome aspects of their own “tradition” (miła); who, forward-looking, wish to be trained in primary health care; and whose clinics’ spatial layout points to Western medical concerns of diagnosis (West 2007; Marsland 2007; Gessler et al. 1995; Hsu 2005). These “modernist” healers sometimes call themselves “modern traditional,” while an anthropologist may feel more inclined to speak of them as “alternatively modern” in the light of the literature on similar phenomena in other fields.

A focus on the “alternatively modern,” namely “the understanding of modernity as a differentiated and variegated process” (p. 3), has in Knauff’s (2002) view “both ethnographic purchase and theoretical value” (p. 40). The “alternatively modern,” he states, accounts for global political economy and regional histories in appreciation of culturally shaped subjective dispositions (p. 24) with, he emphasizes, methodological self-awareness (p. 25). Anthropologists oscillate between being concerned with what he calls a “nagging continuation of cultural and subjective relativism” and capitalist economies and super-ordination. They therefore can comment on how and why ideas of progress are currently so central to peoples’ endeavors and “how and why they associate these so consistently with manufactured commodities and special kinds of economic and institutional development” (p. 33). Motivations, he notes on a par with Marshall Sahlins (p. 21), are often self-conscious extensions of indigenous concerns.

Along a similar line, Donham (2002) has argued with regard to the Ethiopian revolution that analysts need to conceptually separate “being capitalist” from “being modern.” He highlights how embedded in historical irony the concept of “modern” is when he points out that the “anti-modernist” missionaries of the Sudan Interior Mission had converted the local peoples in southern Ethiopia to evangelical Christians who, later, due to their reading faculties and their acquisition of the national language, Amharic, had become the Ethiopian “modernists” and the socialist revolution’s main supporters. In this case, the “anti-modernist” Christians evolved into revolutionary “modernists.”

With this in mind, let us turn to the “modernization” of the traditional Chinese medical drugs (zhongyao) into Chinese propriety medicines (zhongchengyao), which also has been spurned in a socialist country. Taylor (2005) rightly emphasizes the importance of Mao Zedong’s vision in the 1950s toward developing an “integrated Chinese and Western medicine”
(zhongxiyi jiehe): Chinese propriety medicines can be regarded as one important result of his vision. However, their industrial production and worldwide consumption became widespread mostly during and after the economic reforms that Deng Xiaoping instigated in the 1980s and 1990s. While Mao’s twist to the nationalist project of TCM as forward-looking and progressive sparked the development and production of Chinese propriety medicines, it is in the currently neo-liberal capitalist health market and in the hands of medical entrepreneurs that they have become central to Chinese medical endeavors. Their potential for posing a critical alterity that challenges Western medicine is thus historically given but undermined by their commercial fitness in a capitalist health field shaped by the biomedical imperative to differentiate between the “traditional” and “modern.”

BEING MODERN AND NATIONALISTIC VERSUS BEING MODERN AND PROFESSION-CENTRIC

“Being modern” in Republican (Croizier 1968) and early Communist China (Taylor 2005) involved not only being progressive and revolutionary but importantly also “being nationalistic”; hence, TCM can be considered an “invented tradition” (Hsu 2007), as are all the practices of nationalistic identity-building discussed in the landmark publication The Invention of Tradition (Hobsbawm and Ranger 1983). Nationalistically, TCM curricula granted center stage to the traditional Chinese medical concepts from canonical Chinese medical texts.6

Where some promoters of Chinese medicine in Republican times had aimed at doing away with the concepts of qixue (qi and blood) and wuxing (five phases), these concepts were celebrated as fundamentals of a scientific Chinese medical “theory” in TCM (e.g., Unschuld 1985; Sivin 1987). Republican promoters deemed them “superstitious”, and instead, advocated extracting from the Chinese medical lore only those aspects that were grounded in “experiential knowledge” (jingyan), a notion then equated with “empirical observation” (Lei 2002). In Maoist China, however, this notion of jingyan had to be reworked. Thus, promoters of TCM continued to emphasize that Chinese medical expertise relied on jingyan but the notion of jingyan was glossed as transcending empiricism; it implied ordering empirical data according to a distinctively Chinese medical rationale and theory (Farquhar 1994).

One could argue that in TCM the emphasis on theory led to a revived centrality of the Huangdi neijing (and that the relative focus on therapeutics over preventive medicine gave prominence to the Shanghan-lun and Jingui yaolüe), while the Divine Husbandman's
materia medica (Shennong bencaojing 神農本草經) lost its status, together with other pharmaco-therapeutical compilations valued for their “empirical” knowledge (a Republican Chinese viewpoint reproduced in Unschuld 1986). The nationalistic promoters of zhongyi (TCM) appear as idealists who celebrated it as a “traditional science,” depicted its knowledge as systematic, and invented the field of TCM Diagnostics (Zhenduanxue 診斷學). By contrast, the current promoters of zhongyiyao (Chinese Medicine and Pharmaco-therapeutics) appear as materialists who focus on “modernizing” Chinese medicine’s material inventory, i.e., the traditional Chinese medical drugs, an undertaking which is more easily validated by the now globally accepted biosciences and is lucrative in neoliberal commercialized global health.

However, invariably, when traditional medical practitioners point out the innovative aspects of their practices and claim to be “modern traditional,” they find that biomedical health policies classify the “modern traditional” as “traditional.” For health-policy makers, the claim to “modernity” is crucially dependent on profession-specific biomedical criteria (whether the drug’s chemical structure is known and whether it is efficacious according to biomedically-approved criteria). On these grounds, qinghaosu is a “modern” Western medical drug but the Chinese propriety medicines are not.

**ARTEMISININ—A MODERN WESTERN MEDICAL DRUG OR A CHINESE PROPRIETY MEDICINE?**

In the early 2000s, anti-malarial artemisinin-derivatives made up more than 50 percent of over-the-counter purchases in some of Tanzania’s Chinese medical practices, although these transactions were, strictly speaking, illegal. Brands, packaging, and contents of those anti-malarials were multiple. Thus, Artesunate produced by Guilin Pharma contained artesunate (dihydroartemisinin hemisuccinate), Artemedine produced by the Kunming Pharmaceutical Corporation contained artemether (artemisinin with a methyl-group), Cotecsin (or Co-texin) produced by the Beijing COTEC New Technology Corporation contained dihydro-artemisinin and, more recently, Artecom produced by Tanzansino contained dihydro-artemisinin in combination with piperaquine and trimethoprim. A five-day treatment course, which typically consisted of 40 mg on the first day and 20 mg on the following four days, cost about 4500 Tanzanian Shillings (TS) and ca 500 Kenyan Shillings between 2002–2004. Indian pharmacists sold Arinate and Artesumax, distributed by a Belgian and French firm respectively, for about 6500 TS in the summer of 2002. A Tanzanian brand Malather (containing artemisinin), started to be used on Zanzibar, and sold
for about 3500 TS in summer 2003, and Thaitanzunate (also containing artemesinin, but only 100 mg instead of 120 mg), which was produced from plantations near Arusha in northern Tanzania, became available in summer 2004 at about the same price.

By December 2007, the WHO had officially recommended Artemisinin-derivatives as the anti-malarial of choice in cases of severe malaria (i.e., as a curative rather than prophylactic drug). Now, Artemisinin combination therapies were widely available, mostly in Western medical pharmacies that often were owned and staffed by personnel of Indian descent. In Kampala, brands on sale included the Chinese Artequin (a combination of artesunate and mefloquine), Duo-cotecsin (a combination of dihydro-artemisinin and piperaquine phosphate), Arco (a combination of artemisinin and naphthoquine which could be administered in a single dose), and the Novartis-product Coartem (a combination of artemether and lumefantrine). Anecdotal evidence suggests that some patients complained from side effects (fieldwork 2007). They attributed those to “the Chinese antimalarial,” namely Artemisinin or one of its derivatives, unaware that the side effects may in fact have been caused by the combination substance (e.g., lumefantrine). Artemisinin is known for its safety and relative lack of side effects (Ribeiro 1998), for which there is ample anecdotal evidence (fieldwork 2001–2006).

THE MEDICAL ENCOUNTER: BEING MODERN AND COLLOQUIAL

In order to contextualize how patients purchase the Chinese propriety medicines and the above artemisinin-derivatives, a medical encounter with Chinese medicine in an East African setting will now briefly be outlined. Generally, upon entrance into a medical practice, patients would register with the receptionist and wait for a while (sometimes in conversation, more often in silence), before being invited to enter the consultation room with their file. They would close the door behind them, as they valued privacy, while the doctor glanced over name, age, and gender, and asked what their problem was. In this context it is worth mentioning that a TCM practitioner in China typically would examine the complexion and smell of the patient, occasionally look at the tongue and take the pulse (wang 望, wen 聽, qie 切), while a Chinese medical encounter in East Africa generally involved only the fourth diagnostic method: “asking” (wen 問), which is a biomedically approved diagnostic method and is also frequently encountered in folk medical practice. The four traditional Chinese diagnostic procedures have thus been reduced to one in East African contexts. A patient may speak in English or Swahili, while the doctor takes notes in Chinese, sometimes
relying on the intermediary of an interpreter. The procedure is again simplified: the Chinese characters the doctor uses include biomedical, Chinese medical, and mostly colloquial terms, as well as hybrids between them. In other words, where a TCM student is trained to write case records in a strictly Chinese medical terminology, the Chinese medical practitioners I worked with in East Africa did not adopt this professional jargon. Since their notes were interspersed with colloquialisms, they are best approximated as engaged in recording “folk-medicalized” Chinese medical knowledge. I contend that they “modernized” a traditionally sophisticated form of medical learning into a simplified “folk medical” practice: their diagnostic method relied on verbal interaction mainly and the language in which this interaction took place was straightforward, patient-near, and colloquial.

In China (during my previous fieldwork in 1988–1989), a conscientious TCM practitioner would formulate an often four-syllabic “distinguishing pattern” and spell out the “treatment strategies” (zhize 治則) before recording the main acupuncture points and/or the name of the Chinese medical formula and the corresponding selection of drugs, which could be modified, where deemed necessary. Throughout fieldwork in East Africa, however, a practitioner generally noted only the drugs (identified by number rather than name) and their dosage, after jotting down few signs and symptoms in Chinese. He would then copy onto a pre-printed form that served as receipt (and was open to tax inspection) the numbers by which each drug was identified, indicate their dosage, calculate the price of the listed items and send the patient back to the receptionist. She would take the drugs from the shelf, write onto them instructions like 3/C210, meaning “take 3 times daily 10 pills,” package them into a paper or plastic bag, providing, where necessary, additional advice on health more generally or justify the sometimes considerable price. The encounter ended with the financial transaction (patients were generally not allowed credit).

Yinyang 陰陽, wuxing 五行 or qi 氣 were barely mentioned in a medical encounter in East Africa. The reason for this was not merely that some practitioners had spurious education in TCM. Rather, the observations I made in East Africa appear to reflect a more general trend intrinsic to the current processes of “modernizing” this traditional scholarly medicine, which can be observed also among graduates of TCM institutions. In China itself, Chinese propriety medicines are currently manufactured according to a rationale that allows them to be dispensed either for biomedical conditions or for complaints framed in popular, colloquial, and folk medical terms. Only occasionally are propriety medicines manufactured for treating the scholarly Chinese medical “distinguishing patterns.”

Both Chinese medical practitioners, who with few exceptions were Chinese immigrants, as well as drug sellers, who were mostly local people,
buying *en gros* dispensed Chinese propriety medicines. Some of the locals sold only propriety medicines for one particular condition (e.g., diabetes), while others had a rich arsenal on display. In Tanga I was directed to a “Chinese medical clinic” that turned out to be a large hall in the community center where young Tanzanian men sold propriety medicines (for a Chinese medical practitioner who was based inland) next to local women who had Chinese plastic flowers and machine-manufactured embroidery on display. One of the young men said he had been the practitioner’s assistant for a few months. He knew some basics about the drugs on sale. The others relied primarily on a list the practitioner had prepared, which detailed over one hundred names and main indications of these propriety medicines in Swahili (about double the number on display). The young men did not claim to be health professionals, and were frank about doing business, without, however, admitting to being itinerant. Needless to say, the availability and proximity of Chinese propriety medicines in a community center with other sundry items, as for example plastic flowers, relegates the consumption of Chinese propriety medicines into the popular realm of a “folk medicine.” In all these cases, the traditional was “modernized” by simplifying it and by raising the sales through consumer-near attitudes but, if one takes seriously Chinese medical rationale, at the price of replacing treatment that had the potential to treat the root of a medical problem with symptomatic treatment of ill-defined complaints.

**WHAT MATTERED TO THE PATIENTS: THE PACKAGING AND PRESENTATION**

The manner in which drugs are presented often matters more than their actual ingredients (e.g., Nichter [1980]1996). In particular, the colors of the tablets, pills, and capsules, and of the packaging, are meaningful to patients and remembered. Furthermore, size, number, galenical form, innovativeness, and metonymic associations affect the effectiveness of the drug (Moerman 2002). For example, large pills work better than middle sized pills, four inert pills work better than two inert ones, capsules are more efficient than tablets, new brands more effective than old ones, and first world brands work better than those from the third world (ibid.). Moreover, bodily felt, violent intrusion is powerful: injections work better than oral ingestion (Whyte, van der Geest, and Hardon 2002).

Indeed, the manufacturers of propriety medicines were very well aware that the packaging and presentation mattered. Patients often commented on the number of drugs they were required to consume daily (for instance, one of the prescriptions discussed below, *liuwei dihuangwan*, was
administered in portions of ten pills, twice daily). They reminisced about the size of the curious “boluses” (see endnote 14), so large, one had to cut them apart before ingesting them. They were enticed by the Chinese script, the aluminum and the plastic, and the sometimes seductive imagery of the packaging. They also commented on the technology of manufacture, which they likened to that of Western biomedical drugs.12

Health professionals, by contrast, were interested in the invisible aspects of the drugs, in particular, the chemical composition of the Chinese propriety medicines. In 2001, Tanzanian health officials toured the Chinese medical practices and confiscated those medicines that were not repackaged into containers, which were clearly labeled in Swahili and indicated the date of expiry. The Chinese practitioners complained over this intervention as negatively affecting their trade. They explained that the Chinese packaging was indicative of the medicine’s exotic provenance and hence a major sales point (Hsu 2009).

WHAT MATTERED TO THE HEALTH PROFESSIONALS, AND THE RATIONALE UNDERLYING THE MANUFACTURE OF THE CHINESE PROPRIETY MEDICINES

Anthropologists have tended to analyze the social and cultural aspects of traditional medical treatments by focusing on belief/knowledge in order to explain “healing” (rather than “curing”), thereby reifying the mind-body dichotomy predominant in Western commonsense. This has led to a systematic under-recording of the material aspects of traditional medical encounters, as has already been noted in the introductory essay to Baker and Carr’s (2002) New Approaches to Medical Archaeology and Anthropology. If taken as an aspect of material culture, even so-called “natural” herbs are worth anthropological scrutiny. It is important to recognize that those in fact are derived also from animals and minerals and subject to multiple culture-specific procedures of preparation. Therefore, I prefer to speak of traditional “drugs” rather than “herbs.”

The procedures of manufacturing the traditional Chinese medical drugs (zhongyao) include harvesting the right parts of the living kind at the right time; physically transforming them by cutting, rasping, or pounding them and sometimes by then drying them in the sun, shade, or oven; chemically affecting them by roasting, frying, parboiling, or cooking, or occasionally by burning them into ashes; and by sometimes adding chalk, lemon, honey, or other food stuffs. Their consumption is time consuming and considered unpleasant. A Chinese medical distinguishing pattern is typically treated with a decoction, which means that the ingredients of a traditional
Chinese medical formula are simmered in water, often for up to half an hour. The liquid is then decanted and ingested; its taste is said to be bitter to very bitter.

In East Africa most practitioners dispensed only Chinese propriety medicines (zhongchengyao), and thereby became the core of health polemics that insisted on “traditional” healers dispensing “natural” herbs. In what follows, I account for these medications in an anthropological fashion which details botanical, chemical, and medical information as provided on their packaging and elicited in discussion with the Chinese medical practitioners who dispensed them. I argue that the way in which the drug mixtures are perceived to be either “traditional” or “modern” is a cultural phenomenon and anthropologically relevant. I differentiate between 12 modes of “modernizing” traditional Chinese medical formulae in culture-specific ways. In fieldwork, I discussed each with at least one Chinese medical practitioner, but I regrettedly did not inquire into the order in which these preparations should be presented to reflect a gradient from “traditional” to increasingly more “modernized.” However, although the ordering of the list is based on my own judgment and although the list is not exhaustive, I believe that these 12 Chinese propriety medicines, which have been selected from recordings of over 100, can be taken as exemplary instantiations of the “alternatively modern.”

The 12 instantiations of “modernizing” “traditional” Chinese medical formulae in highly culture-specific manufacturing procedures are first summarized here and then discussed in detail below. They include Chinese propriety medicines produced on the basis of well-known Chinese medical formulae (see no. 1), while others are constituted by either age-old formulae that have remained family secrets or secret folk recipes (no. 2). Some are derived from age-old formulae but contain innovative elements (no. 3). Some are entirely new formulae, developed in accordance with either Chinese medical (no. 4) or Western medical rationale (no. 5). Some contain no further identified extracts from one single plant of the Chinese materia medica, which is unusual for Chinese medical formulae as those generally are composite, and the incentive to manufacture them may have been inspired by traditional European folk medicine and phytotherapy. Some contain a variety of substances with one chemical class of substances (nos. 6–8), while some contain one purified, chemically identified substance extracted from a drug of the Chinese materia medica (no. 9). Some contain a purified, chemically identified substance, which then was chemically slightly modified (nos. 10–11), to stabilize the compound or make it more easy to absorb. Lastly, some contain a mixture of Chinese medical drugs and Western medical substances (no. 12). Those mixtures, in particular, are at the core of governmental health concerns.
In this context, a note on methodology is warranted. A reliable account of Chinese propriety medicines is rendered difficult because it is not possible to know their exact ingredients from reading the labels alone. Often just a few ingredients are mentioned, and dosages are generally not indicated. Intentional misguidance on the labels and the secrecy surrounding the formulae pose further problems. Chinese practitioners emphasized that propriety medicines were commodities to which market rules applied, such as protecting one’s “secrets of commerce” (shangye mimi 商業秘密).

The drugs 1–12 listed in Table 1 will now be discussed in this order with regard to their “traditional” and “modern” properties. Liuwei dihuangwan (Six flavor Rehmannia pill, no. 1) is a well-known prescription formula that is available as a formula drug. The main ingredients are shudihuang (Rehmannia glutinosa), shanzhuyu (Cornus officinalis), and ganshanyao (Dioscoria opposita), which all are “drugs with supplementing effects” (buyao 補藥), in particular on the Chinese medical kidneys (not the same as the biomedical kidneys, see e.g., Sivin 1987:373–377). The TCM textbook on The Study of Chinese Medical Drugs (Zhongyaoxue 1984) classifies them as drugs that “nourish blood” (yangxue 養血; p. 233), “solidify roughness” (guse 固澀; p. 255), and “enhance qi” (yiqi 益氣; p. 214). The propriety medicine also contains danpi (Paeonia suffruticosa), fuling (Poria cocus), and zexie (Alisma orientale), which have discharging effects; they “clear heat” (qingre 清熱, p. 47), “disinhibit water” (lishui 利水, p. 95), and “discharge heat” (xiere 泄熱, p. 96). As a Chinese doctor commented, Liuwei dihuangwan was an “ancient formula” (gufang 古方), based on the Chinese medical principle of “threefold supplementation and threefold discharge” (sanbu sanxie 三補三泄). In this case, the drug’s galenical form had been “modernized” but not its chemical composition.

According to Chinese medical rationale (Fangjixue 1985:104), this formula is used for treating the following distinguishing pattern: ganshen yinxu 肝腎陰虛 (liver kidney yin depletion). However, the instructions on the package of this formula drug did not refer to Chinese scholarly medical distinguishing patterns. Indications for therapeutic usage were given in colloquial Chinese and Western medical terminology, in this case, shenyin kuisun (kidney yin deficit), which is colloquial Chinese (a striking example of “folk-medicalizing” the scholarly medical diagnostic category. Furthermore, the following symptoms were enumerated: touyun erming 頭暈耳鳴 (dizziness and tinnitus), yaoxi suanruan 骨膝酸軟 (the waist and knees feel sour and soft), guzheng chaore 骨蒸潮熱 (bone steaming and hectic fevers), daohan yijing 盗汗遺精 (night sweats and semen loss), and xiaoke 消渴, which literally means “wasting and thirst” and is often considered to be caused by different kinds of yin 陰 deficiencies that tend to be equated with “diabetes.”
TABLE 1
The Rationale Underlying the Manufacture of 12 Chinese Propriety Medicines
(List Not Exhaustive)

<table>
<thead>
<tr>
<th>1. Well known knowledge age-old Chinese medical formula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liwei dihuang wan</strong> (Six flavor Rehmannia pill)</td>
</tr>
<tr>
<td>shudihuang (Rehmannia glutinosa)</td>
</tr>
<tr>
<td>shanzhuyu (Cornus officinalis)</td>
</tr>
<tr>
<td>ganshanyao (Dioscoria opposita)</td>
</tr>
<tr>
<td>danpi (Paeonia suffruticosa)</td>
</tr>
<tr>
<td>fuling (Poria cocus)</td>
</tr>
<tr>
<td>zexie (Alisma orientale)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Age-old (?) folk recipe that has remained a family secret</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liushenwan</strong> (Six spirits boluses)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Age-old formula with some new ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sanjinpian</strong> (Three-gold-tablets)</td>
</tr>
<tr>
<td>Misleading information given on packaging:</td>
</tr>
<tr>
<td>jinyinggen (the root of Rosa laevigata),</td>
</tr>
<tr>
<td>(but: jinyingzi, the seed of Rosa laevigata, is a well-known Chinese medical drug)</td>
</tr>
<tr>
<td>haijinsha (Lycopodium japonicum)</td>
</tr>
<tr>
<td>jinshateng (a local herb not listed in TCM textbooks)</td>
</tr>
<tr>
<td>Chinese doctors who use it suggest it contains:</td>
</tr>
<tr>
<td>Shiwei (Pyrrhosia sheareri)</td>
</tr>
<tr>
<td>[guan]mutong (Aristolochia manschuricnsis)</td>
</tr>
<tr>
<td>huangbo (Phellodendron amurense)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Entirely new formula, developed according to Chinese medical rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sanjiu weitai</strong> (Three-gold-tablets) called “Weitai 999” (Stomach health 999)</td>
</tr>
<tr>
<td>sanyaku (Folium et Ramulus Euodiae leptae)</td>
</tr>
<tr>
<td>juidxiang (Folium et Cacumen Murrayae)</td>
</tr>
<tr>
<td>baishao (Paeonia lactiflora)</td>
</tr>
<tr>
<td>shengdi (raw Rehmannia glutinosa)</td>
</tr>
<tr>
<td>muxiang (Saussurea lappa)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Entirely new formula, developed according to Western medical rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mocrea</strong> (immune-booster for HIV/AIDS patients)</td>
</tr>
<tr>
<td>renshe (Panax ginseng)</td>
</tr>
<tr>
<td>danggui (Angelica sinensis)</td>
</tr>
<tr>
<td>goujizi (Lycium barbarum/L. chinense)</td>
</tr>
<tr>
<td>gancao (Glycyrrhiza uralensis)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Not further identified extract from one single drug of the Chinese materia medica</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Danggui jingao pian</strong> (tablets made from Angelica sinensis extracts)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Not further identified extract from one single drug of a locally used folk recipe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leigongteng jingao pian</strong> (tablets made from Tripterygium wilfordii extracts)</td>
</tr>
</tbody>
</table>

(Continued)
Liushenwan (Six spirits boluses, no. 2)\textsuperscript{14} was also a frequently encountered formula drug. It was said to be derived from a common folk recipe rather than from a scholarly medical family tradition. It was used for treating headaches and sore throats but the package provided no information on ingredients. This folk recipe was very popular with Chinese and African clients alike. It provides a prime example of how practitioners in the name of treating a patient with a scholarly Chinese medical drug are dispensing a “folk medicine.”

Other propriety medicines are also derived from secret family traditions. One of them was popular with patients who suffered from urinary infections. It was called Sanjinpian (Three-gold-tablets, no. 3). As main ingredients, the packaging mentioned the names of three drugs that contained the constituent “gold” (\(\text{金 jin}\)) in them, namely 1) jinyinggen

\begin{table}
\centering
\caption{Continued}
\begin{tabular}{ll}
8. Not further purified substance extracted from one single drug of the Chinese materia medica \\
\textit{Di'ao 地奧} (Mystery of earth) \\
zaiti zaodai 竹 Trait (Steroid saponins)
\hline
9. Chemically produced substance that originally was extracted \\
from one single drug of the Chinese materia medica \\
\textit{Niuhuang jiedu pian} 牛黃解毒片 (Cow-bezoare poison-dissolving tablets) \\
man-made \textit{niuhuang} 牛黃 (calculus bovis, gall-stone of \textit{Bos Taurus domesticus})
\hline
10. Chemically identified purified substance that has been slightly modified \\
from one single drug of the Chinese materia medica \\
\textit{Artesunate} 青蒿素 (dihydroartemisinin hemisuccinate)
\hline
11. Chemically modified extract from a drug of the Chinese materia medica \\
\textit{Sanhuangpian} 三黃片 (Tablets of the three yellows) \\
Dahuang 大黃 (\textit{Rheum officinale}) \\
yansuan huanglian su 鹽酸黃連素 (berberine hydrochlorid, berberine being extracted from \textit{Coptis chinensis}) \\
huang qin dai 黃芩 (\textit{Scutellaria baicalensis}) (baicalin, which contains a glucoside group on the substance baikalein that in turn was extracted from \textit{Scutellaria baicalensis})
\hline
12. Mixture of Chinese medical drugs and Western medical substances \\
\textit{Fufang luobuma pian} 复方羅布麻片 (\textit{Apocynum} compound tablets) \\
luobuma 羅布麻 (\textit{Apocynum venetum}) \\
yejuhua 野菊花 (\textit{Chrysanthemum indicum}) \\
liusuan shuangjing taiqin 硫酸雙 (月字旁) (西字旁太) (口字旁秦) (dihydralazine sulphate) \\
qingsu saiqin 氯氟 (口字旁塞) (口字旁秦) (hydrochlorothiazide)
\end{tabular}
\end{table}
(the root of *Rosa laevigata*), which does not actually belong among the standard *zhongyao* (but *jinyingzi*, the seed of *Rosa laevigata*, is a well-known one; *Zhongyaoxue* 1984:256), 2) *haijinsha* (*Lycopodium japonicum*, p. 101), and 3) *jinshateng*, a local herb that does not belong among the standard ones listed in TCM textbooks. However, the practitioners with whom I discussed this propriety medicine noted that the ingredients given on the packaging were misleading. They were not important for explaining the efficacy of the medicine in Chinese medical terms. From the viewpoint of Chinese medical rationale this propriety medicine was likely to contain *shiwei* (*Pyrrhosia sheareri*), *mutong* (*Aristolochia manshuriensis*), and *huangbo* (*Phellodendron amurense*), which apparently “disinhibited water and dried out the damp” (*lishui shenshi*). Indeed, according to TCM textbook knowledge, the former two drugs “disinhibit water and enable urination” (*lishui tonglin*), the third “clears heat and dries out the damp” (*qingre zaoshi*), and “infection of the bladder” (*pangguangyan*), expressions which border on colloquialisms. Since propriety medicines of the kind are based on secret recipes, it is difficult to know whether new ingredients have been added; in this case, variants had appeared on the market after its industrial production had been launched.

A new formula, based on Chinese medical rationale, provided the basis of the propriety medicine called *Sanzhuo weitai*, advertised as “Weitai 999” (Stomach health 999, no. 4), which was used for treating stomach ulcers and other intestinal inflammations. It was said to have the effect of “eliminating inflammations and stopping pain” (*xiaoyan zhitong*). This Western medical idiom was given in the format of four syllables, which echoes that of the four-syllabic “distinguishing patterns.” The packaging stated it “ordered *qi* and strengthened the stomach” (*liqi jianwei*), which is a typical Chinese medical idiom. This formula drug applied Chinese medical rationale to combining the use of two local plants known from folk remedies, called *sanyaku* and *jiulixiang*, namely Folium et Ramulus *Euodiae leptae* and Folium et Cacumen *Murrayae*, with drugs of the scholarly Chinese *materia medica*. The latter included *baishao* (*Paeonia lactiflora*, p. 234), which is known as a blood supplementing drug; *shengdihuang* (*Rehmannia glutinosa*, p. 45), was known as a “heat clearing,” or as it is now called, “anti-inflammatory”; and *muxiang* (*Saussurea lappa*, p. 120), a *qi* ordering drug considered to reduce “bloating” (*zhang*) and stomach pain.

A new formula, based on Western medical rationale but relying mainly on the use of herbs from the Chinese *materia medica* was Mocrea (no. 5). Mocrea was a very popular immune-booster among HIV/AIDS patients.
in the early 2000s (see also Simmons 2007) but it had disappeared from the East African health market by 2007. In 2001, it was sold in bottles that lasted for a fortnight and was priced about 15,000 TS. Its packaging indicated that it contained renshen (Panax ginseng, p. 209), danggui (Angelica sinensis, p. 232), and goujizi (Lycium barbarum/L. chinense, p. 241). A practitioner suggested it furthermore contained unusual amounts of gancao (Glycyrrhiza uralensis) and, although this was not indicated on the packaging, this suggestion was reconfirmed by other practitioners. Evidently, the formula drug Mocrea was not based on a Chinese medical formula but on Chinese commonsense that the supplementing of qi (blood) as well as the kidneys and the spleen (as the above drugs did in this sequence) could be translated into “immune-boosting” in Western medical language. As a Chinese medical practitioner put it, the formula contained drugs from the Chinese materia medica but emphasized that they were put together in accordance with Western medical rationale.

There were propriety medicines that relied on drugs known from the Chinese materia medica, which consisted of only one ingredient, and were called danfang (formula containing the plant extract from one single Chinese medical drug or formula containing one single class of chemical substances or one single purified chemical substance extracted from a single drug, sometimes chemically slightly modified). These medicines often were considered “new formulae” (xinfang). While there are a few “single-ingredient formulae” in traditional Chinese medicine, most plant extracts and danfang were produced by means of a “modern” technology that appears to have been developed in “traditional” European phytotherapy.

Danggui jingao pian (tablets made from Angelica sinensis extracts, no. 6) was an extract of a well-known drug of the scholarly materia medica (Zhong-yaoxue 1984:232–233), used for “regulating the menses” (tiaojing) and indicated in cases of “irregular menses” (yuejing butiao) and “painful menses” (tongjing). Other danfang were derived from folk recipes and locally used plants. One such example is Leigongteng jingao pian (tablets made from Tripterygium wilfordii extracts, no. 7). Chinese doctors used this formula drug mostly for treating arthritis and other forms of rheumatism.

These two plant extracts (nos. 6–7) contained different chemical substances, of which only a few are known by their chemical structure. Such mixtures of chemical substances that have not been further identified do not qualify as “modern” Western medical drugs. They could be glossed as instantiations of a “Westernization” insofar as a “traditional European” practice was implemented as a “modern Chinese” technology.

Some propriety medicines consisted, however, of only one group of chemical substances, such as Di’ao (Mystery on earth, no. 8), known to
contain only steroid saponins, *zaoti zaodai*. It was used for treating patients with chronic heart disease. Others originally had been derived from a Chinese medical drug but are now “man-made” (*rengong* 人工). One such substance is *niuhuang* (calculus bovis, gall-stone of *Bos Taurus domesticus*, no. 9), which is the main ingredient of *Niuhuang jiedu pian* (cow-bezoare poison-dissolving tablets). Even though this substance was man-made, the drug was not classified as a “modern” Western medical one. Its yellow pills, which looked just like *No-flu*, were used—just like *No-flu*—for treating colds.\(^{16}\)

For some Chinese practitioners, the purified substance *qinghaosu* (artemisinin) extracted from the Chinese medical drug *qinghao* (*Herba Artemisiae annuae*) belonged among these *danfang* propriety medicines.\(^{17}\) These practitioners had no sense of the distinction biomedical researchers make between the substances of herbal extracts with compounds of unknown chemical structure and purified substances from such extracts whose chemical structure has been identified. Furthermore, they did not want to understand why “such a fuss” was made about the chemical procedure of identifying a molecule, as it represented for them just one among a large range of other chemical procedures applied in the course of “modernizing” traditional Chinese medical drugs.

The drug called Artesunate (no. 10) did not actually contain artemisinin but artesunate, a substance derived from a slight chemical modification of the naturally found artemisinin. Indeed, several propriety medicines contained purified chemical substances extracted from Chinese medical drugs that had then been chemically modified. One such drug was called *Sanhuangpian* (tablets of the three yellows, no. 11). It also looked much like *No-flu* and also treated colds. Its main constituents were *dahuang* (*Rheum officinale*, p. 70), berberine hydrochlorid (berberine being extracted from the Chinese medical drug *huanglian* 莨連, identified as *Coptis chinensis*, p. 42), baicalin (which contains a glucoside group on the substance baicalein that in turn was extracted from *huangqin* 黃芩, identified as *Scutellaria baicalensis*, p. 41). The combination of substances derived from these three Chinese medical drugs *dahuang*, *huanglian*, and *huangqin* was new, as was the chemical modification of the substances berberine and baicalein that had been extracted from the latter two.

Finally, let us turn to the main target of Western medical polemics: propriety medicines that combined Chinese medical drugs with substances commonly used in biomedicine, as for instance *Fufang luobuma pian* (*Apocynum* compound tablets, no. 12). It contained at least two drugs known from the Chinese *materia medica*, namely *luobuma* (*Apocynum venetum*, p. 204) and *yejuhua* (*Chrysanthemum indicum*, p. 29), but the combination of them represented a new formula. To the above two Chinese medical *luobuma* and *yejuhua* were added two chemical substances, namely
dihydralazine sulphate, which is a Western medical drug known to reduce blood pressure, and hydrochlorothiazide, which facilitates urination, and thereby reduces hypertension. Western health officials invoked concerns about the safety and Western esoterics spoke of adulterations, but Chinese medical practitioners spoke positively about such combinations that in their view enhanced the effectiveness of the traditional Chinese medical drugs, and vice versa, reduced the side effects of the biomedical drug substances. Chinese medical practitioners often praised precisely these propriety medicines as the most remarkable achievements of contemporary Chinese medical research, and so did some patients who enjoyed their striking therapeutic effects. Perhaps, a case could be made for Fufang luobuna as an “alternatively modern” drug that rather than being likened to supposedly ineffective traditional medicines, promises to pass toxicological testing in regard of its safety and clinical tests in respect of its efficacy?

DISCUSSION

The above description highlights the wide array of Chinese propriety medicines. In contrast to patients who cannot tell the difference between traditional Chinese medical drugs (zhongyao), Chinese propriety medicines (zhongchengyao), and China-made Western medical drugs (xiyao 西藥), and in contrast to Western health officials who either distinguished between only the two categories of the “traditional” and the “modern” (or sighed about the chaos), the Chinese practitioners with whom I discussed these propriety medicines differentiated in a level-headed fashion between at least six categories.

They made a distinction between (1) scholarly Chinese medical formulae (published or secret), now prepared in a “modernized” galenical form; (2) folk medical recipes; (3) entirely new formulae composed according to either Chinese or Western medical rationale; (4) chemical substances extracted from the Chinese materia medica, in more or less purified form (among which belonged artemisinin); (5) chemically modified extracts and substances (among which belonged artesunate); and (6) combinations of Western and Chinese medical drugs. In addition, several propriety medicines consisted of combinations involving a variety of these different categories.

Chinese medical practitioners consider propriety medicines “modernized” traditional Chinese medical drugs. The chemical procedures employed for this modernization represent in their view an updated continuation of culture-specific Chinese medical procedures of drug preparation. Biomedical health professionals, by contrast, would classify ten of the above propriety medicines as “traditional,” one as a “modern”
biomedical drug (artesunate), and the last one as neither “traditional” nor “modern” because it combines “pure” Chinese and Western medical drug substances. There evidently are anthropological reasons to explain why propriety medicines of this ambiguous kind are at the center of health polemics (Douglas 1966).

Category confusions aside, biomedical professionals have sincere concerns. Chinese propriety medicines pose a safety hazard because their effects remain scientifically unexplored and unknown. Some have been found to contain vitamins and steroids that can be applied in dosages harmful to health. However, the health hazard they pose, paradoxically, has been attributed less to their “traditional,” scientifically unexplored “natural” components than to the purified chemical substances they contain. Safety is an issue, no doubt, but whether a drug is safe or unsafe is not a matter of whether it is classified as “traditional” or “modern” (Heinrich 2005).

The concept of “alternative modernities” puts the ongoing polemics surrounding the regulation of Chinese propriety medicines into perspective. Rather than pointing out a “Westernization” of Chinese medical drugs, the above list highlights playfulness, experimentation, and inventiveness that enlarges an already rich cultural repertoire. It shows how chemistry and pharmacognosy have been used in culture-specific ways within a project of modernizing Chinese medical drugs. However, as they straddle the health profession’s construed boundary between “modern” and “traditional,” Chinese propriety medicines have evoked great apprehension.

In this context, we are reminded that historically, the word “modern” had unfavorable connotations and only became imbued with meanings of the “improved” and “efficient” (Williams 1976:208–209), when a progression-oriented outlook started to dominate understandings of history in 19th-century Europe (e.g., Koselleck 2004:243). Classic social theory by Marx, Durkheim, Weber, and Simmel accorded the “modern” the potential for more efficient social organization, technological advancement, and moral/humanistic improvement (summarized by Knauf 2002:9). More recently, as horizons of analysis have been widened, “modernization” evokes the imagination of “progress” and “development” (e.g., Anderson 1983) and of “globalization” (Appadurai 1996). “Traditional,” by contrast, gained currency among medical practitioners in movements of raised self-awareness as a term for anything that is “not modern Western” (Das 1993). Finally, the very definition of these words in the medical field is intrinsically problematic: the “Western medical” is plural (Mol and Berg 1998) and the “modern” is not necessarily “Western.”

One could dismiss Chinese medical practitioners who claim artemisinn is a “modernized” form of a traditional herbal remedy as a self-interested group of drug sellers, which they are. However, the literature on “alternative
modernities’’ reminds us that ‘‘the work of modern progress as ideology and as power cannot be ignored’’ (Knauft 2002:41). As demonstrated here, the rationale underlying the manufacture of Chinese propriety medicines highlights that some traditional Chinese medical drugs have been modernized in ways that have the potential to be imbued with the critical alterity intrinsic to any ‘‘alternative modernity.’’ The biomedical rhetoric, however, recognizes no grey zones, overlaps, and hybrids and insists on classifying a practice or drug as either ‘‘modern’’ or ‘‘traditional’’ (see also Ferzacca 2002). Dressed in concerns over safety and efficacy, it instantiates a power differential that relegates the ‘‘alternatively modern’’ into realms of the ‘‘traditional.’’

However, even biomedicine cannot claim to be ‘‘modern’’ (Latour 1993). Applied to the East African health markets this means that the imperative among health policy makers to draw a distinction between ‘‘modern’’ and ‘‘traditional’’ medicines is merely rhetorical. This rhetoric nevertheless may have a decisive effect on the future development of ‘‘traditional’’ scholarly medical learning. Potentially valuable ‘‘alternatively modern’’ innovations as Fufang luobupian are now relegated into the domain of the ‘‘traditional’’ (and, by implication ineffective), and successful innovations which meet biomedical standards are renamed as ‘‘modern biomedical.’’ Meanwhile, those ‘‘modern traditional’’ aspects of a formerly highly sophisticated medical practice which align the ‘‘modern’’ with the popular have gained center stage. As the Chinese medical diagnostic process is reduced to the method of ‘‘asking’’ only, as Chinese medical terminology is being replaced by colloquialisms, as Chinese folk medical recipes are manufactured and sold in the guise of being ‘‘modernized’’ Chinese scholarly medical drugs and as they are dispensed in community-centers, some forms of Chinese medicine currently practiced in East Africa have acquired ‘‘folk-medical’’ features. While Mao’s revolutionary vision had the potential to give rise to a critical alterity, it has not achieved this in the East African health fields which are marked by both a commercialization of health care and health policies insistent on imposing a distinction between ‘‘modern’’ and ‘‘traditional’’ medicines.

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NOTES

1. Medical anthropology quickly embraced Appadurai’s Social Life of Things (1986), not least because he emphasized how important consumer (i.e., patient and practitioner) attitudes are to the production and distribution of commodities (i.e., medicines). See also Nichter and Vuckovic (1994). This article discusses the two ends in the chain of hands through which the propriety medicines wander in their social life: drug manufacture and its rationale, on the one hand, and consumption practices at the grass roots, on the other.

2. Biomedical drugs consist of purified chemical substances, of which one ideally knows the biological mechanism that explains their efficacy. Artemisinin fulfills all these criteria. Traditional Chinese medical drugs (zhongyao 中藥), which in common parlance euphemistically but mistakenly are called “herbal remedies” or “natural herbs” (Hsu forthcoming), typically consist of culturally specific mixtures of chemical substances as found in one or several plants, animals, or minerals.

3. There are several publications on the “discovery” of artemisinin by scientists involved in the process. The issue is highly contentious and a social scientifically valid history has yet to be written. Strictly speaking, Chinese medical scientists identify the species A. apiacea with qinghao and the traditional Chinese medical drug, which initially was subject to modern extraction methods, was in fact huanghuahao (A. annua), see Hsu (2006) and endnote 17. This is said in awareness that on the one hand European and Chinese botanical categories cannot easily be mapped onto each other (Métalieu 2001) and that on the other hand species are not entirely arbitrary categories, and therefore their identification does not lend itself to a strong relativist argument (e.g., Atran 1990; Ellen 2006).

4. The “folk medical” is here contrasted with the “scholarly medical” (Bates 1995) currents of Chinese Medicine. For a contrast between scholarly and folk medical modes of diagnosing, comprehending, and treating a complaint, see Farquhar (1994:212).

5. There are “traditional” herbalists, who as true “modernists,” accuse healers they call “ritualists” of engaging in make-believe and fraud, unaware of the anthropological credo that all ritual, past and present, even that intrinsic to a “modern” medical encounter, has been thought to be able to transform the status of individual persons—sometimes drastically, from ill to healthy—invariably on the basis of make-believe.

6. TCM revived knowledge from the so-called four classics, of which three dated to the Han dynasty (206 BCE–220 CE), namely the Yellow Emperor’s Inner Canon (Huangdi nei jing 黃帝內經), the Treatise on the Cold Damage Disorders (Shanghanlun 傷寒論) and the Essentials from the Golden Cabinet (Jingui yaolue 金匱要略). The fourth one was a late imperial response to the Shanghanlun and comprised treatises subsumed under the heading “Warmth factor school” (Wenbingxue 温病學). See Hsu (1999:241–245).

7. Cf. Eric Karchmer, personal communication 2007. The diagnostic method bian zheng lun zhi is a TCM invention, which becomes evident particularly if one traces the semantics of the term, but it reformulates scholarly medical practices that can be traced to the Shang
han lun (Cold Damage Disorders) of 196 CE (Hsu 2007). If Farquhar’s (1994) monograph is best characterized as providing a synopsis of TCM Diagnostics, which are taught to students in the second semester, and if Hsu’s (1999:chapter 6) as focusing on the TCM Fundamentals (Zhongyi jichu lilun 醫基礎理論), which are taught to TCM students in the first semester, both centered on TCM’s invented aspects.

8. Chinese medical practitioners adopted a polemic framed in ethnic terms: in this situation, they aligned themselves with the Chinese biomedical scientists who had rediscovered the anti-malarial properties of qinghao and had identified the molecule qinghaosu. They claimed to be selling a Chinese drug and some even said it was a Chinese propriety medicine. They considered it unfair that Indian pharmacists could sell it, who had licenses on the basis of their Tanzanian biomedical training (Hsu 2002). A fully trained TCM practitioner felt qualified to dispense artemisinin, as all TCM education involves coursework in biomedicine (in 1988, it amounted to 835 hours in a five year degree, see Hsu 1999:157).

9. At the time, a lowest grade government employee who worked in Dar es Salaam had a salary of 50,000 TS; in Kenya the value of a Shilling was about ten times more.

10. Among the exceptions belonged a Tanzanian acupuncturist who had studied Western medicine in China and a Ugandan who also had studied Western medicine first, followed by a one year course on TCM.

11. “Galenicals” are different forms in which Galen prepared medications: creams or extracts, plasters or tinctures, etc.; it refers in this article to an even wider variety of medicinal preparations.

12. In contrast to Moerman’s (2002) findings that capsules are more effective than tablets, some Chinese practitioners felt tablets were more effective than capsules as the latter were industrially easiest to produce and patients were drawn to prestigious production technology.

13. Few treated patients with zhongyao in deep-frozen powdered form, such that they could be dissolved in water and ingested instantly (although I overheard patient conversations revealing uncertainty of whether or not the powder should be boiled for half an hour). Traditional zhongyao are available only in Muhimbili hospital, in a government-sponsored research project for treating HIV/AIDS patients under the auspices of the Chinese and Tanzanian health ministries. An air-conditioned building stores the drugs from the prestigious pharmacy Tongrentang 同仁堂 (On the pharmacy’s history, see Cochran 2006:16–37 and figs. 2.1–2.5).

14. A “bolus” (wan 丸) is usually as large as a very big cherry, but in this case both the plastic bottle and its ingredients were tiny; the “boluses” not larger than seeds of sesame.

15. The Chinese medical doctor in question said that on previous cartons this herb had been mentioned. The particular package I had in hand mentioned hai gangei, also known as baqi, neither of which is mentioned in Zhongyaoxue (1984).

16. The Chinese practitioner who discussed this drug with me mentioned in this context that African drug sellers had once approached him with the intention to sell him powdered rhinoceros horn (xi jiao 犀角), which is well-known as an aphrodisiac in Chinese folklore but according to Chinese scholarly medical rationale has an entirely different value: it “clears great heat” (qing dare 清大熱), he said. More precisely (based on the Bencao gangmu 本草綱目 pp. 2829–2833), it “cools blood” (liangxue 凉血), “discharges fire” (xiehuo 泄火) and “dissolves poison” (jiedu 解毒).

17. Strictly speaking, the plant huanghuahao 黃花蒿 (yellow blossom hao) is Artemisia annua and the plant qinghao (blue-green hao) is Artemisia apiacea. See Bencao gangmu, p. 946 and pp. 943–946, and Zhongyao dacidian (1987: no. 4182 on p. 2052 and no. 2491 on p. 1228). The drug qinghao (Herba Artemisiae annuae) often contains plant material from both species, and also others.
18. The “hot tip” was that any drug containing *luobuma* in combination with hydrochlorothiazine would be a highly effective drug for treating hypertension.

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