THE LIMITS OF INDIVIDUALISM AND THE ADVANTAGES OF MODULAR THERAPY. CONCEPTS OF ILLNESS IN CHINESE MEDICINE*

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Abstract

Seen from a distance, it is often difficult to distinguish one person from another. Normally, people have a head and a trunk, two arms and two legs, and apart from body height and circumference there is no way to see a person's individuality without being close enough to perceive the diversity of facial features, hair colours, etc. With ailments the situation is similar. At first glance, there is pain, an ulcer, or diarrhoea. It requires a closer look to distinguish between different types of pain, ulcer, or diarrhoea. In health care, attempts at healing ailments have, since antiquity, oscillated between a more distanced position and a closer look. That is, health care has developed along the lines of, first, concepts of illness grouping together many ailments that appear to look alike, and therefore require similar therapies, and, second, concepts of illness as individual ailments, each requiring an individual therapy. The history of medicine in China offers rich and fascinating data on a cultural discussion concerned with the issue of categorisation and individualism, and provides ample evidence of diverging solutions suggested by physician-intellectuals in the course of the past two millennia. A better knowledge of these discussions and diverging solutions will contribute to a more sober assessment of the role of theory in traditional Chinese medicine, and of differences and parallels between European and Chinese medicine.

Health care, medicine, and natural science

The so-called Mawangdui tomb manuscripts (tomb closed 168 BCE), unearthed from a Han-era (202 BCE–220 CE) tomb near Changsha in Hunan, constitute the earliest reliable documents available to retrace the development of individualistic *versus* categorisational

* Opening Plenary Lecture: International Congress on Traditional Asian Medicine, Austin, Texas, 27 April 2006.

approaches to illness in Chinese medicine.[1] Strictly speaking, the contents of the Mawangdui manuscripts offer a glimpse at a pre-medical state of conceptualisation in Chinese health care. Leaving conventional paths in the historiography of medicine, I have come to distinguish medical from pre- or non-medical forms of health care in that the former aims at exclusively relying on natural sciences, or natural law, in the interpretation and manipulation of health and disease. In contrast, pre- or non-medical forms of health care do not take into regard natural laws as ultimate guiding forces of existence. Instead, they rely on notions of metaphysical impact as can be exerted by entities such as gods, demons, ancestors, and the likes, or simply on evidence without theoretical underpinning.[2]

In ancient China, the doctrines of systematic correspondences formed the basis of natural science. Yin and Yang, and the Five Agents represented concepts of natural law regarded as valid independent of time, space, and persons (be they physical or metaphysical).[3] The Mawangdui manuscripts document early morphological

[1] Harper 1998.

[2] The distinction between medical and pre- or non-medical health care was introduced by the author as an analytical tool. It helps to understand the significance and common grounds of the new types of health care developed in ancient Greece beginning with the fifth/sixth century BC, and in China only a few centuries later. It is also useful to examine the social and ideological processes shaping the continued co-existence of medical and non-medical approaches to health care ever since both in Europe and China. One of the consequences of this new view on the history of medicine is to redefine the Asklepios cult of ancient Greece and Rome as a non-medical type of health care. I have introduced this new approach in detail in Unschuld 2003a.

[3] I am aware of numerous definitions of 'natural science' that would not cover ancient Chinese notions of laws underlying the course of nature, such as the five-agents and the Yin-Yang-doctrines, especially so as these doctrines include explanations of social processes. Nevertheless, historiography of science requires a label covering some basic parallels in the early development of logos in ancient Greece and China. The commonality to be observed in both arenas appears to lie in the recognition of an existence of laws independent of time, space, and persons (metaphysical or not). I consider this recognition to be the most significant revolution in the documented history of human world views. The formation of a distinctly new type of health care, that is 'medicine' in the narrow sense defined above, was one of its consequences. Hence it appears legitimate to consider the doctrines of systematic correspondences as forming the basis of a Chinese variant of natural science. The fact that this Chinese variant of natural science never developed some of the tools characteristic of the European variant, and the inability of the Chinese variant to eventually bring forth airplanes, cellular phones, and antibiotics does not conceal the fact that the original step from *mythos* to *logos* was as decisive a step in ancient China as it was in ancient Greece.

units designated with Yin and Yang terminology. Here Yin and Yang are limited to their early topographical meaning, referring as they do to the inner and outer surfaces of the body. For example, the author of the *Yin yang shi yi mai jiu jing* 陰陽十一脈灸經 wrote of the 'great Yin vessel. This is a stomach vessel. It goes alongside the stomach, emerges at the lower edge of the Yin part of the fish-thigh and . . .'[4] There are, however, no signs of an integration of natural laws in the interpretation of health and illness.

The designations of ailments recorded in the Mawangdui manuscripts, where identifiable, are straightforward references to uncomfortable feelings noted by patients themselves or third party observers, such as 'tendency to belch',[5] 'inability to raise the head skyward',[6] 'urine retention',[7] and 'infant convulsions'.[8] In some cases, insects or larger animals are named as causes of wounds or injuries. These include snake bites, as well as lesions generated by more hypothetical entities such as the bugs *gu* 蠱 and *ming* 蜮. Demons were considered to be causes of ailments too. Thus, the Mawangdui manuscripts document understandings of illness prior to the development of a strictly medical conceptualisation. Apparently, attempts at interpreting health and illness on the basis of the natural sciences of systematic correspondences were initiated only shortly after the authors of the Mawangdui manuscripts had written down their views and knowledge. Of course, as in Europe, medicine in China has never been able to replace non-medical approaches to health care. In fact, the sharp division between medical and non-medical types of healing as evidenced by the two mutually almost exclusive traditions of acupuncture medicine and pharmaceutical healing from the Han to the Song (960–1279 CE) era shows the antagonism between the 'new' and the 'old', and its ideological legitimation, in a much greater clarity than in Europe.

All relevant sources available today indicate that a fundamental, we might even say, revolutionary, turn took place in the conceptual history of Chinese medicine in the second or first century BCE. We do not need to discuss the causes of this turn here and today; I have hypothesised elsewhere, in sufficient detail, that changes in the fabric

[4] Harper 1998, p. 208.
[5] Ibid.
[6] Ibid., 209.
[7] Ibid.
[8] Ibid., 233.

of Chinese politics and society were sufficient stimuli for the development of a new image of man and a new view of health and illness in the late Zhou and early Han eras (202 BCE–220 CE).[9] Here we shall simply look at the results of these changes. For the first time we find a conceptual differentiation emerging between ailment or illness that eventually entered into medical technical terminology. Terms began to distinguish on the one hand between an illness or ailment immediately apparent to physician or lay person 'at first glance', and on the other to disease as a conceptual construct accessible through expert diagnosis, and considered to be underlying the manifest illness or ailment.

Underpinning the new medicine of the Han era was the idea that 'conduits' or 'vessels' formed the media of physiological exchange between various semi-independent functional units that together constituted the human organism. Disease was a state where the movement in the conduits became blocked, reversed, or in some other way abnormal. There were numerous potential causes of this pathology: the presence of intruders (e.g. wind or dampness) that settled in the conduits, or problems in the organs involved in the intra-organism give-and-take exchange of resources. The point is, this 'vessel' theory represented a new view of the human organism. This new view identified certain dynamics of inner physiology and pathology of the human organism as responsible for secondary phenomena of illness, such as pain, bloating, impairment of vision, etc. As a consequence, it became possible to trace a number of individual forms of illness to one single disease. The large diversity of individual forms of illness could then be reduced to a small number of underlying diseases. Ailments that manifested in a variety of different ways could be treated as symptoms of one single underlying disease, requiring identical treatment.

The therapy of choice discussed and recommended in the texts that propagated the new medicine was acupuncture. Acupuncture continued its ancient, and apparently trustworthy, approach of blood-letting for the next two millennia, well into the twentieth century. However, blood-letting represented a decidedly mechanical approach aimed at removing from the conduits what was considered harmful, alien, or superfluous, and, thus, responsible for illness. It never required

[9] Unschuld 2003a and 2003b, pp. 319–349.

a subtle theoretical underpinning, and may therefore be neglected here. More significantly, acupuncture was introduced to manipulate the flow of blood and *qi* in the conduits.

Interestingly, the number of points on the body identified in Han-era texts, as so-called holes, *xue* 穴, where needles could be inserted to achieve physiological effects was identical with the number of pharmaceutical drugs identified as useful in the treatment of illness in contemporary *materia media* literature. However, the practicality of 360 pharmaceutical substances differs from that of 360 insertion holes.

A small but apparently sufficient number of natural pharmaceutical substances have physiological effects that are so obvious (e.g. emetics, laxatives, purgatives, or those drugs that stem diarrhoea) that a belief emerged that many more could exert similar effects on the human body. Thus, *materia medica* literature and early recipes included substances whose immediate effects appear obvious even today, and others which, at best, may show only long-term effects. Numerous combinations of such substances permitted the treatment of a large variety of ailments, with similar or even identical formulae used to treat seemingly identical illnesses. Underlying concepts of disease therefore played no role in early Chinese pharmaceutical therapy.

At first glance, the situation in acupuncture appears little different. The body apparently offered, on the grounds of considerations we can no longer identify, 360 holes to insert needles. Changing combinations of these holes have been selected, for two millennia, to treat illness. One question here is where a confidence may have emerged to be able to generate therapeutic effects through such needling. If we consider the results of serious, non-partisan evaluation of acupuncture therapies available today, the list of proven effects is rather limited. Fibromyalgia, gonarthrosis, back pain, and tennis elbow are the only indications where acupuncture has shown definite effects. In addition, needling is considered 'helpful' in the treatment of conditions following endoscopic interventions, nausea and vomiting following surgery or chemotherapy, and during pregnancy, and also in the case of toothache.[10] Countless, ever-increasingly sophisticated tests conducted in recent decades by believers in acupuncture have failed to prove further effects.

The question therefore remains as to how there was sufficient confidence two thousand years ago in the ability of acupuncture to

[10] Federspiel and Herbst 2005, p. 71.

generate therapeutic effects through the insertion of needles at one or numerous points on the body. After all, in the Han dynasty practitioners had no access to sophisticated studies based on ever more subtle statistics. Records of needling offer virtually no hint as to how the effect of the 360 or so insertion points could have been deemed similar or even superior to that of the observable effects of pharmaceutical substances. Various levels of evidence provided practitioners with knowledge of the therapeutic potential of ingesting natural substances. We have noted the immediate physiological effects, but there was also the evidence of correspondence magic: the shapes of leaves, for example, suggested a relationship with similarly shaped human organs. In contrast, the acupuncture holes spread all over the human body offer little or no such evidence. Early literature does not record instantly observable changes, apparent in vomiting, sweating or diarrhoea.

There is no evidence that observation of the efficacy of individual insertion points hinted at the therapeutic potential of a larger group of points. One may also doubt that, even if a few practitioners had been impressed by the results of needling, a construct as sophisticated as vessel theory could have been formulated on such a flimsy basis. Vessel theory, historical circumstances suggest, followed changes in the structural reality of Chinese society, which, in turn, stimulated the attribution of a similar structural reality to the human organism. It cannot, we hypothesise, have been legitimated by the expressiveness, to use a term introduced by Kuriyama, of the human organism.[11] Chinese healers in antiquity may have observed, for instance in the practice of blood-letting, that piercing the body at certain points helped to alleviate pain either proximally or remotely. In consequence they may have imagined links connecting the different regions of the human body. But the leap from such observations and conclusions to the type of physiology and pathology expressed in vessel theory is too great to have had its origin in such practical experiences and observations alone. Based on vessel theory and an innovative image of semi-independent functional units that constituted the human organism, the illness model used in acupuncture served, on a meta-level, a meaning reaching far beyond the treatment of individual illness.

The obvious purpose underlying the creation of Chinese medicine was to prevent and cure illness. Yet in the logical consequences of

[11] Kuriyama 1999.

vessel theory, unconsciously, the originators of the new health care system helped to fulfil the promise of the world view underlying the social order of the newly established empire. This world view was grounded in the belief that moral norms and laws were necessary prerequisites of a harmonious society. An existence in conformity with moral norms and laws, the promise went, guaranteed social stability. The acknowledgment of the universal validity of laws, we learn from late Zhou, Qin, and Han sources, was required first in society. It was then projected onto the universe.[12]

In the arena of human health and disease, Chinese medicine, based on the early natural science of systematic correspondences, became a metaphor for the claim that all existence and all change followed certain natural laws, and that it was best for man to know and adapt his lifestyle to these laws. Even natural phenomena, which might seem as unpredictable as daily weather, were believed to be ruled by natural laws. In the theory of *wu yun liu qi* 五運六氣, 'Five Periods and Six Qi', and the 'Seven Comprehensive Discourses', *qi da lun* 七大論 (as set out in *Su wen* 67–71, 74, 75) we find documentation of attempts to reveal order in what at first glance appears to be chaos.[13]

Chinese medicine, as a result, was unable to acknowledge the role of demons in the generation of illness. The presence of demons, or of any other metaphysical being, in the generation of illness was not acknowledged by the new medicine for the simple reason that it contradicted the etiological primacy of a violation of moral norms and natural laws. To appease demons to prevent illness, or to exorcise demons to treat patients in the event of illness, would have constituted a serious threat to the universal validity of the claim that only a life in compliance with certain moral norms and natural laws guaranteed health, and in cases of illness offered ways to regain health.

With the emergence of medicine, as we have defined it, the belief in demons did not entirely vanish from Chinese health care. It continued in the *materia medica* tradition, which, for an entire millennium, remained outside of the framework of early Chinese natural science. We shall return to Chinese *materia medica* shortly, but first it is essential to point out the parallel existence of two antagonistic traditions

[12] Lewis 1990; Unschuld 2003a, pp. 22–36.
[13] Unschuld 2003b, 387 ff.

of health care in a period lasting from the Han well into the Song dynasty. These two traditions coincided with two antagonistic social philosophies, and it should not come as a surprise that they developed different approaches to the issue of categorisation and individualism in the understanding of illness.

Disease, moral norms, and natural laws

Vessel theory was the first known attempt in Chinese medical history to conceptualize a level of disease underlying individually experienced discomfort. With vessel theory it became possible to trace ailments to a malfunctioning of the organism. As the organism became an integrated part of the universe, with all its activities following certain natural laws as defined by the science of systematic correspondences, ailments were interpreted as the outcome of a violation of moral norms resulting in punishment dictated by these laws.[14] For example, to entertain excessive emotions may, in the understanding of the new medicine, cause a 'depletion' of resources in a specific 'depot' organ. An evil agent nearby may exploit this depletion and avail itself of the empty space. Intruding into a sphere where it does not belong, it causes a state of 'repletion', which represents disease framed in the new terminology and may cause a number of different ailments.

This is a consequence of violating moral norms, and of the mechanism of natural laws. Excessive emotions constitute a moral issue in that they violate the doctrine of the mean. The consequences of such a violation are dictated by natural laws. For example, the laws of the Five-Agents-doctrine inform us that excessive joy causes an outflow of *qi* leading to a depletion in the heart; excessive pondering results in a depletion in the liver, and so forth. The exploitation of this depletion and the subsequent intrusion into the vacuity by neighbouring forces is, once again, a violation of standard moral norms. The concrete mechanics of such an intrusion, for example of kidney *qi*, rather

[14] Statements reflecting, or at least hinting at, parallels between social and physiological legality may be found in medical literature beginning with the *Su wen*. For example, *Su wen* chapter 3 has 謹道如法長有天命, 'If one carefully follows the Way as if it were a law, the heavenly mandate will last long'. That is, those who act against the Way, they will lose their 'heavenly mandate', i.e., life, in the same way as they would if they were punished for transgressing certain patterns (*fa* 法) of behaviour as required by in criminal law.

than heart *qi*, availing itself of a depletion in the liver, are dictated by natural laws.

Disease, then, is a deviation, in the depth of the organism, from normality resulting in individual ailment. The practitioner is required to see beyond individual suffering and interpret individual ailment as belonging to a specific category of states representing violations of moral norms punished in accordance with natural laws. The doctrines of Yin-Yang, and of the Five Agents provided the necessary framework to identify the details of such violations and punishment. Disease served to turn one's attention from the apparent individual symptoms of suffering to the more general underlying issues. The etiology of Chinese medicine categorised suffering as the outcome of a limited number of transgressions of norms and the likely reaction as determined by natural law. By specifying these transgressions, it became possible to give advice about how to behave to prevent suffering, that is, how to prevent 'punishment' by nature of ways of life considered to be unlawful or immoral. By defining a limited number of underlying disease categories, individual illness was given a meaning in terms coinciding with the basic tenets of a Confucian-Legalist social ideology.

Ancient texts representing the new medicine, such as the *Huang Di nei jing Su wen*, 黃帝內經素問 (hereafter *Su wen*) document different groups of diseases, ranging from what we have called nosological facts, such as malaria, to what constitute nosological constructs, such as block and recession.[15] The former are ailments that have been known to exist for time immemorial and that required, in the course of the formation of the new medicine, an explanation according to vessel theory and the science of systematic correspondence. *Su wen* 35 and 36, for example, document two different attempts at coming to terms with malaria. In contrast, nosological constructs are disease entities that were not previously known or given a specific label. These disease entities were the result of categorising various individual forms of ailment under a new label under the new theory. 'Recession' (*jue* 厥), for example, was a disease leading to cold feet and sudden unconsciousness. Such individual symptoms had presumably been known before. They were subsumed under the new label, 'recession', on the grounds of vessel theory. Thus new theoretical explanations

[15] Unschuld 2003b, 206—227.

sustained old ailment labels (such as malaria) and new labels (such as recession) served to establish the general validity of the new world view. The science of systematic correspondences, including the Yin-Yang and Five-Agents-doctrines, and vessel theory provided the means of categorisation.

While the dynamics guiding the elaboration of the new medicine, as described so far, may be transparent to the researcher today, the actors two millennia ago were most likely unaware of them. Judging from the contents of the *Su wen* 素問, the *Nan jing* 難經 (c. second century), and the *Shang han lun* 傷寒論景 (c. late-second to third century), numerous authors were involved in the process of conceptualising etiology and disease categories. Apparently, a tacit challenge induced people to reflect on the terms set by the new world view. The *Su wen,* in particular, is a collection of multiple attempts at building something new, often on foundations inherited from the past. Authors not only had to embrace the established labels of illness, such as *nüe* 瘧 for malaria. They also felt compelled to integrate old notions of 'evil', *xie* 邪, into the new etiology thereby offering an alternative to the lasting influence of demonological thought. Nevertheless, regardless of the many and varied solutions suggested by individual authors, the general direction taken by proponents of the new medicine was always the same: to identify a set of standard categories of norm violations and legal reactions as underlying the great diversity of individual suffering.

Substances, recipes, and individual illness

Not everybody followed the new lead. *Materia medica* and prescription literature did not fall prey to the new ideology. Continuing the pre-medical empirical tradition exemplified in the second century BCE tomb manuscript, *Wu shi er bing fang* 五十二病房 'recipes for 52 ailments', an ever increasing number of substances was recognised to have therapeutic effect on the human organism. As a collection of recipes the *Wu shi er bing fang* focuses on indications and is organised around ailment categories, naming single substances or a composition of several drugs as suitable remedies. In contrast *materia medica* texts from the first century CE chose individual substances as the privileged nosological indices. Following each substance named, there was a long list of alleged pharmaceutical effects. For example,

dang gui 當歸 was associated with an ability to cure 'coughing [because of] rising *qi*, warmth malaria, [spells of] cold and heat'.[16] *Qin jiao* 秦艽 was said to 'master [spells of] cold and heat, evil *qi*, cold dampness, wind block, pain in body members and joints, as well as to make water move down and to maintain urine flow.'[17] Reading further on, one encounters many different indications and it becomes clear that many indications are repetitive. For spells of cold and heat, *dang gui* is not the only substance recommended. *Qin jiao*, as we have seen, and also *shao yao* 芍药, *ma huang* 麻黄, *xuan shen* 玄参, and others more are associated with this particular indication. The same applies to indications such as *huang dan* 黄疸 (jaundice) and *ke ni shang qi* 咳逆上气 (cough with rising *qi*), to name but the first two of a long list.

Pharmaceutical drugs may have exerted obvious effects on spells of cold and heat, on jaundice, and cough. But in many cases there was a choice of different therapies for a single symptom. Cough may be caused by different diseases in the organism, each of them requiring a different approach. Yet *materia medica* therapy itself was unconcerned with such differentiations. Records of Chinese pharmaceutical health care show the indications of a large number of individual substances and provide evidence that these substances were combined in ever more complex formulae to cope with individual suffering. The principles behind the composition of recipes were already formulated in early *materia medica* literature and the shared imagination of appropriate interpersonal relationships in the ideal society structure the recipes.[18] They also took into account the condition of a patient and, most importantly, the unique nature of the illness concerned. *Materia medica* therapy abstained from categorising illnesses as symptoms of an underlying disease; rather, it focused on the condition manifest in the individual patient and on finding the right substances, or combination of substances, to treat the condition. While pursuing the same goal, that is, to rid a patient of his illness, *materia medica*, in contrast to acupuncture medicine, failed to identify violations of moral norms or natural laws set in motion by such violations. The *materia medica* approach was concerned with each illness as a case of its own.

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[16] Okanishi Tameto 岡西爲人 (ed.) 1964, p. 195.
[17] Ibid., p. 196.
[18] Ibid., 28–43.

Early *materia medica* was squeezed into a framework of 365 substances, classified as upper, middle, and lower rank.[19] For the authors of this system, the number of days in a solar year, as well as the three echelons of the universe (heaven–man–earth), and of bureaucracy (ruler–minister–assistant/messenger), may have appeared as the ultimate borderlines within which all necessary substances were to be found. However, within a short time the framework was broken—despite its association with Shen nong 神農, the ancient culture hero of pharmaceutics. While the number of 365 acupuncture insertion holes remained the same for two millennia to come, the number of 365 substances listed in 'Shen nong's *materia medica*', *Shen nong ben cao jing* 神農本草經, of possibly the later Han dynasty, was expanded over the centuries to reach a first apex in the Song dynasty when some *ben cao* texts described up to 1700 substances.[20]

Not only did the numbers of drugs found useful in the treatment of illness continuously increase, the trend towards treating individual conditions in *materia medica* therapy was the driving force behind the compilation of ever larger collections of recipes. From the two hundred or so formulae in *Wu shi er bing fang* (early second century BCE) to the 5300 recipes of Sun Simiao's 孙思邈 seventh-century *Qian jin yao fang* 千金要方 and Wang Tao's 王燾 *Wai tai mi yao* 外臺秘要 (752 CE) with its more than 6000 recipes, the increase cannot be interpreted solely as a sign of a dissatisfaction with available recipes, leading to ever more new combinations of substances to improve the healers' therapeutic skills. Authors like Sun Simiao appear to have believed in the efficacy of all their recipes. They accumulated thousands of them possibly because these recipes had shown their effects in individual cases, but not in others. Physicians and authors were forced to develop new strategies continuously in order to deal with each new individual case they faced. Through medieval times they did not accept the principles acknowledged in acupuncture medicine that one could trace individual suffering to an underlying disease. They failed to acknowledge the violation of certain norms, and the punishment meted out by the natural laws, that lay at the basis of acupuncture medicine.

Acupuncture could be eternally satisfied with 365 insertion holes, while *materia medica* scrambled for ever larger numbers of drugs and

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[19] Unschuld 1976, pp. 19–41.
[20] Ibid., 63 ff.

recipes to deal with the multitude of individual states of suffering. With a drug or recipe effective in one case, and not in another apparently similar case, pragmatic therapy may have driven the ongoing search for further remedies and the notion that each case of illness required its own specific medications. It has been acknowledged in Chinese intellectual historiography that it is impossible to clearly distinguish between two well-defined groups of Confucians and Daoists. Nevertheless, in Chinese intellectual history, an ideological rift existed between two (among others) sharply conflicting social ideologies. One of these expressed a belief in the power of moral norms and social laws. The other was unable to appreciate such man-made constraints. This social-ideological rift supported an antagonism between two currents in health care for an entire millennium. A bridging of the rift in health care was possible only when the social and ideological environment changed, as eventually happened during the so-called Song-Jin-Yuan epoch from the twelfth through the fourteenth century.[21]

Song-Jin-Yuan pharmacology and disease

By the Song period, the *materia medica* had grown to enormous dimensions. *Kai bao xin xiang ding ben cao* 開寶新詳定本草 (973 CE) documented the effects of 983 pharmaceutical substances. *Jia you bu zhu Shen nong ben cao* 嘉祐補注神農本草 (1061 CE) listed 1,084. A short time later, in *Jing shi zheng lei bei ji ben cao* 經史証類備急本草, the number jumped to 1,744 substances. This almost doubling of known pharmaceutical drugs may have resulted from a broadening of the sources consulted; the author of the *Jing shi zheng lei bei ji ben cao* prided himself on having searched the Confucian classics and historical works, the Daoist canon, as well as Buddhist scriptures.[22] Eventually, in the sixteenth century, the *Ben cao pin hui jing yao* 本草品彙精要 recorded 1815 drugs, and, finally, Li Shizhen 李時珍 (1518–1593), in his *Ben cao gang mu* 本草綱目, raised this number to almost 1900—a total never

[21] I have pointed to this rift in Unschuld 1986. More recently, I have introduced the *Huang Di Nei Jing Su Wen* as a text characteristic, at least prior to its revision by the Tang physician Wang Bing 王冰, of the belief in the power of norms and laws, and as such as being close to Confucian and Legalist social ideology. See Unschuld 2003b.

[22] Ibid., pp. 52–72.

exceeded in imperial times. Prescription literature took a parallel course. The authors of the *Sheng ji zong lu* 圣济总录 of 1111–1117 CE collected close to 20,000 recipes.

We have hypothesised elsewhere in more detail about the social and ideological stimuli during the Song-Jin-Yuan era that led to the formation of a pharmacology of systematic correspondences. For the *materia medica* it meant the explanation of drug affinities to diseases, and of drug activities in the organism, by means of Yin-Yang- and the Five-Agents-doctrines.[23] The present paper may add further arguments to explain why after more than 1,000 years—an incredibly long time—the two traditions of *materia medica* and the sciences of systematic correspondences eventually merged. Imagine if, in nineteenth and early twentieth-century Europe, the new biological sciences had been applied only to explain physiology and pathology, while pharmacology had to wait until the year 2900. But this is exactly what had happened in China. The Yin-Yang- and Five-Agents-doctrines of systematic correspondences served the formation of a pharmacology only ten centuries after they had been employed to generate a new physiology and pathology during the Han dynasty. Why this occurred in the Song-Jin-Yuan era is quite obvious now. However, medical history is a most complex phenomenon; the formation of medical theories is the result of multiple stimuli. Thus, the formation of a pharmacology of systematic correspondences beginning with the twelfth century cannot be traced to one single cause. The deeper we dig, the more we find.

With thousands of pharmaceutical substances, each attributed numerous and often overlapping therapeutic effects, and tens of thousands of pharmaceutical recipes, drug therapy was out of control. Individualism in therapy had reached its limits. No single practitioner could survey the entire data. To find, in this ocean of substances and recipes, the appropriate cure for each patient must have appeared an insurmountable task. The pharmacology of systematic correspondences pathed the way out of the dilemma. All the building blocks from which Song-Jin-Yuan pharmacology was constructed had been available during the Han era, but they were assembled only more than 1,000 years later. Each substance came to be identified as occu-

[23] Unschuld 1972 and 1977, pp. 224–248; Unschuld 2003a, pp. 159–163.

pying a specific position in the universe of correspondences. Flavour and thermoqualities were the links through which an association between a substance and a Yin or Yang quality, and one of the Five Agents was established. Once conceptualised, the associations facilitated identification of specific conduits that would come under the influence of a particular substance, the exact times that the substance would manifest its effects in the organism, and other strategic relationships useful in framing therapy.

Practitioners turned away from treating individual forms of suffering to diagnosing underlying disease modules. *Materia medica* was, once again, aligned with acupuncture. Theorists of Song-Jin-Yuan pharmacology, like Kou Zongshi 寇宗奭 (c. 1116 CE), Zhu Zhenheng 朱震亨 (1281–1358 CE), and Wang Haogu 王好古 in the thirteenth century, reduced the *materia medica* to small numbers of substances. Kou Zongshi's *Ben cao yan yi* 本草衍義, published at the same time as the huge recipe work *Sheng ji zong lu* with its 20,000 recipes, concentrated on only 500 drugs. Zhu Zhenheng's *Ben cao yan yi bu yi* 本草衍義補遺 recorded only 153 substances. In his *Tang ye ben cao*, Wang Haogu regarded 224 drugs as sufficient. The idea behind this dramatic shrinkage of *materia medica* was that through flavour and thermoqualities, all disease modules imaginable in the context of Yin-Yang- and Five-Agents-pathology could be covered.

If we take Wang Haogu's *Tang ye ben cao* as an example, it begins by elucidating how to treat 'repletion' and 'depletion', then 'fire in the five depots and six palaces'. Numerous ailments may be traced to the categories 'repletion', 'depletion', and 'fire'. Song-Jin-Yuan pharmacology permitted, like acupuncture more than a millennium previously, to leave the individual phenomenon of illness behind and focus on the underlying category of disease instead. Physicians of Chinese medicine begun to have a choice. When confronted with ailments identified as signs of 'repletion', they could choose a pharmaceutical approach, or turn to acupuncture. The disease categories addressed by the two approaches were identical. Similarly, a thousand years after Zhang Zhongjing 張仲景 (c. 200) had—albeit without lasting success—attempted to tie the effects of drugs in the organism to the laws of the systematic correspondence, during the Song-Jin-Yuan era diseases in the individual conduits came to be regarded as legitimate modules through which one could explain a manifold of individual ailments. Drugs were identified now as moving specifically into well-

defined conduits, to tackle the problems there. The connection between a substance and, for example, the major Yang conduits was achieved through their respective links via Yin Yang theory.

So we can view the Song-Jin-Yuan era *materia medica* as representing a turn away from individualism. By accepting a theoretical basis that was also the basis of acupuncture, *materia medica* became part of the categorisational approach to illness. As a result it could return to numbers of pharmaceutical substances close to the number of needle insertion holes known to acupuncture.

The limited success of pharmacology

As it is difficult to assume that an entire intellectual elite took an ideological turn *en masse*, Song-Jin-Yuan pharmacology remained a conceptual reorientation that appeared necessary and plausible to some, but not to others. Hence large scale *materia medica* works continued to emerge well into the Ming dynasty, and it is no coincidence that the author of the final quantitative apex in *ben cao* literature, Li Shizhen 李時珍 (1518–16939), also included about 11,000 recipes in his *Ben cao gang mu* 本草綱目. Cai Liexian's 蔡烈先 *Wan fang zhen xian* 萬方針綫, (Needles and Thread to a Myriad Recipes) represented an attempt to ease the path of practitioners through this maze of data.[24] With *Ben cao gang mu* the cumulative phase in the individualistic approach to illness ended at the turn of the seventeenth century, yet there is evidence that the approach itself continued. *Ben cao gang mu* may not be a proper indicator of this continuation; it is a monumental collection of data, but we do not know to what degree its contents found application in daily clinical work of practitioners.

In elite medicine of the second millennium, of which *materia medica* was then a part, there was a tendency to move away from recipes based on one or two effective pharmaceutical substances to larger formulae meant not to attack a disease but to reorganise human physiology. This was not necessarily an immediate consequence of Song-Jin-Yuan pharmacology, but the new culture facilitated interpretation of the multitude of health care crises. Xu Dachun 徐大椿 (1693–1771 CE) complained of this development repeatedly in his

[24] Unschuld 1976, p. 143.

numerous writings, and he vehemently and repeatedly criticised what he considered an unwarranted neglect of ancient recipes. In his *Shen ji chu yan* 慎疾芻言 'he gave air to an aversion to Song-Jin-Yuan categorisation of illness and mocked those who 'clad their medical practice in a few general conventional phrases, such as depletion and repletion of Yin or Yang, or [mutual] generation and destruction of the Five Agents, and assume that [medicine] is an arena to employ [nothing but] warming and supplementing [drugs]. The literati and learned scholars will be cheated most easily [by such an approach], because when they see that someone talks about Yin and Yang and the Five Agents, they believe this to be a well-founded learning.'[25]

In his *Yi xue yuan liu lun* 醫學源流論 of 1754 CE, Xu Dachun questioned the legitimation of vessel theory, the very core of Song-Jin-Yuan pharmacology:

> Beginning with people like Zhang Jiegu,[26] each drug was given a commentary specifying that it would enter a particular conduit only. That is nothing but farfetched rhetoric, not supported by any sufficient evidence. Someone might say: If that is so, is it absolutely unnecessary to distinguish between conduits and network [vessels] and between depots and palaces in the application of drugs? [My] answer would be: That is not the case, because man's diseases all appear at specific locations [in the body], and drugs when they are used to treat a disease, do of course show effects that are based on their specific abilities. . . . Because these drugs are able to cure diseases in specific conduits, people in later times pointed them out as drugs of specific conduits. Who would know that the effects of those [drugs], in reality, do not enter merely into the minor Yang, the major Yang, or the Yang brilliance [conduits, respectively]? . . . To say, for [the treatment of] a disease in a particular conduit one must use a particular drug, is quite possible. But to say a particular drug does not enter into other conduits also, that is impossible.[27]

In an even more direct attack, Xu Dachun criticised Song-Jin-Yuan reasoning in a comparison of ancient and contemporary *ben cao* works: 'Indeed, it is not at all necessary in the treatment of illnesses to make any sort of distinction among various conduits, depots, or palaces.'[28] To make his point, Xu Dachun joined those who strove

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[25] Xu Dachun 1969, pp. 85–86.

[26] Zhang Jiegu 張潔古, i.e., Zhang Yuansu 張元素 (ca. 1180), one of the driving forces behind the conceptualisation of Song-Jin-Yuan pharmacology.

[27] Xu Dachun 1969, *Yi xue yuan liu lun* 医学源流论, p. 58.

[28] Ibid., 85–86.

to restore the integrity and position of the 'original classic', *ben jing* 本经, that is the empirical *materia medica* allegedly compiled by Shen nong—if only in spirit. However, the rejection of Song-Jin-Yuan pharmacological categorisation and the renewed attention to ancient *materia medica* did not mean that Xu Dachun supported the limitless proliferation of *materia medica*. Like other proponents of a renaissance of pre-Song-Jin-Yuan pharmaceutics, he decreased the number of pharmaceutical substances significantly—going farther than anybody else. He focused, as the title of his *materia medica* states, on 'One Hundred Drugs from Shen nong's Classic of Pharmaceutics', *Shen nong ben cao jing bai zhong lu* 神農本草經百種陸錄.

Thus, the opponents of the pharmacology introduced by Kou Zongshi, Zhang Yuansu, Wang Haogu, and Li Gao 李杲 argued for a rescinding of the basis of illness categorisation eventually achieved in the Song-Jin-Yuan era. They cannot serve, however, as witnesses of an unconditional return, in elite circles, to therapeutic individualism. Xu Dachun's carefully phrased conclusion was:

> When *ben cao* drug knowledge is discussed, [the work of] Shennong must be used as a foundation. Other statements can be followed only after thorough examination. Also, they should be tested clinically before being relied upon. In addition, one should investigate which drugs were already used in the prescriptions of antiquity. These can be utilized. All others are only suitable for application as individual drugs or for external use.[29]

Not a single author still felt motivated to gather thousands of substances and tens of thousands of recipes in a single book. And yet, therapeutic individualism did not disappear. First of all, the large recipe collections of the Song dynasty and earlier were reprinted numerous times well into the twentieth century. At the beginning of the Qing dynasty, the *Pu ji fang* 普濟方, compiled by Zhu Xiao 朱橚 et al. in the early fifteenth century, was amended and edited in the collection *Si ku quan shu* 四庫全書 to document more than 61,000 recipes. In the course of the Qing dynasty, many further recipe collections were published, albeit no longer of the size of the *Sheng ji zong lu* 聖濟總錄 or *Pu ji fang* 普濟方. The persistent demand for such collections tells us something about the significance of Song-Jin-Yuan theories in general and pharmacology in particular at that time. We do not know

[29] Ibid., 86.

how many practitioners designed their prescriptions on the basis of parameters suggested by the Song-Jin-Yuan theorists. There appears to have existed a large enough number of healers, who made it appear worthwhile to publishers to reprint the older and even issue newer collections of fixed recipes that were believed to have proven their value in individual cases. If medical practice was to conform to Song-Jin-Yuan ideals, such recipes collections should not have survived the era. Practitioners were assumed to know several hundred individual substances with their flavour and *qi* qualities, and to be able to combine these substances in ever varying prescriptions to address the therapeutic needs of all their patients.

Patent recipes and cure-all formulae

The reality was different. Innumerable fixed recipes were available in printed collections. Their indications were described in the literature, and practitioners were free to select what they considered suitable. The selection and application of these recipes did not require any theoretical knowledge. Also, from the eleventh century at the latest, pharmacies began to produce on a large scale patent remedies based on proven recipes.[30] These medications, too, did not require any theoretical considerations. Their indications were published by the pharmacies in scriptures advertising their preparations, and often enough they were written on the containers in which they were dispensed. Such practices opened a third avenue situated between the categorising and the individualistic approach to therapy. Patent remedies were categorisational in that they were directed at 'eye disease', 'white outflow', etc. They focused on the illness, and were not concerned with the underlying disease as defined by the medicine of systematic correspondences. At the same time, patent remedies continued to offer the possibility of an individualistic approach in that they permitted trial-and-error. If one recipe did not work, another might. As each illness was at least a little different from another, it might be necessary to try several recipes before finding the one that could help. There was, at any rate, no attempt to find the one cause in the organism responsible for the presenting symptoms. So there was a persisting

[30] Unschuld 2000, p. 54.

demand for large collections of recipes. A small number would not have sufficed to tackle all the individual variations of illness.

Itinerant physicians and folk healers came to use yet another approach. Core recipes were formulated to deal with certain categories of ailments, such as the gynaecological. However, to adapt treatment to individual cases, the core formulae could be modified in two ways. First, one could add or omit individual ingredients to comply with the condition of individual patients. Secondly, the core formula could be taken with different liquids to achieve different effects. Folk medical manuscripts contained long lists of dozens, occasionally more than one hundred, variations as to how to adapt core formulae to individual cases. Examples are the 'black gold pills', *wu jin wan* 烏金丸, and the *nei fu mi shou qing ning wan fang* 内府秘授清寧丸方 'recipe for pills to cool and pacify, secretly received from the inner palace'. The main indications for the former were female disorders: irregular menstruation, pre- and post-natal illnesses. Its historical origin is unknown. The latter was first listed in the *Mi zhi da huang qing nin wan fang* 秘制大黄清寧丸方 'Secretly prepared rhubarb pills to cool and pacify'. The author of this text is not known, although the *Quan guo zhong yi tu shu lian he mu lu* 全国中医图书联合目录 lists it as *nei fu chuan* 内府傳, 'handed down in the *neifu* 'inner palace'' in 1811 CE.[31]

This book, as well as titles such as *Qing ning wan fang yin* 清寧丸方引 'Guide to [the use of] the recipe for cooling and pacifying pills', attests to the fact that such formulae found some entrance into elite medicine. My preliminary impression is, however, that the individualisable cure-all formulae were especially attractive to folk healers and itinerant physicians. In these circles, the theories of Song-Jin-Yuan pharmacology had little resonance. It was in this environment that practitioners gathered countless recipes and where individualised cure-all formulae were transmitted from generation to generation, often through private medical manuscripts.[32] In particular they proliferated in rural areas where there were no regular pharmacies to offer a wide range of pharmaceutical substances and patent reme-

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[31] See *Quan guo zhong yi tu shu lian he mu lu* 全国中医图书联合目录, entries, 03131 and 03213. The reference to a *nei fu* 内府, 'inner palace', may be a claim to official status unsubstantiated by any factual relationship with the *nei fu*, i.e., Office of the Palace Treasury, of the Qing government.

[32] For a detailed discussion of literary documentations of cure-all formulae see Unschuld and Zheng in preparation.

dies. Itinerant physicians and others attending to the health needs of the population must have found it very comfortable to carry with them, or store in their house, a limited number of medications, and yet to be able to treat a seemingly unlimited number of ailments. The core recipes could be prescribed for most illnesses encountered, and the liquids to adapt them to an individual case were easily available anywhere: natural juices and fluids, as well as decoctions of foods and fruits.

The individualisation of disease

The multiplicity of therapeutic avenues corresponded to a diversity of illness concepts. The ideas of pathoconditions, *zheng* 症, and disease, *ji bing* 疾病, entertained by the medicine of systematic correspondences supposedly guided acupuncture as well as Song-Jin-Yuan-style pharmaceutical therapies. To what extent this system of ideas and practice did in fact inform clinical therapy in pre-modern China is not known. Books were published continuously on these issues, and one may assume that a sizeable number of elite physicians at least attempted to follow the criteria established by the ancient *Nan jing*, the *Su wen*, the *Ling shu*, the *Mai jue*, and the Song-Jin-Yuan authors. Xu Dachun and other proponents of a Han school of learning in medicine, though, had played their part in the containing of a widespread theorisation of *materia medica* and disease.

The dynamics of disease, as conceptualised during the Qing dynasty, took a new turn. In the *Su wen*, the treatises 35 and 36 are devoted to *nue* 瘧, a disease label we may comfortably translate as malaria. Treatise 35, Nue lun pian 瘧論篇, 'On Malaria', speaks of a single disease affecting the entire organism. The following treatise 36, Ci nue pian 刺瘧篇, 'To Pierce Malaria', speaks of organ-based malaria, and therefore distinguishes as many different malarial diseases as there are conduits, or functional units, in the organism. One and a half millennia later, in medical manuscripts of the Qing dynasty, a further development is visible. Not one, or twelve types of, malaria are treated but long lists of different malarias. Apparently, folk healers found it difficult to see 'the disease' behind the numerous individual shapes malaria could take. Presumably, if diagnosed with today's knowledge, many patients diagnosed with one of the many types of malaria were not really suffering from malaria but from something

else. But this is not my point here. Malaria is only one example of several diseases where, during the Qing era, a disease label was no longer attached to a wide range of individual expressions of a common disease, requiring one identical therapy. Rather, the old label was given numerous modifiers to designate a wide variety of different forms of the disease, indicating that each individual appearance required its own and rather distinct treatment. A development that was implicit in Zhang Zhongjing's 張仲景 *Shang han lun* 傷寒論 of around 200 AD, eventually bore fruit 1,500 years later.

Corresponding to the notion of core formulae to be modified either by omitting or adding ingredients, or by ingestion with different liquids, was the notion of core diseases. In a way, we see here, in the final centuries of the imperial era a perfect compromise between categorisation and individualism in disease conceptualisation and therapy. Both core formulae and core disease were legitimated by categorisations. Behind the Black Gold Pills, *wu jin wan*, was the assumption that female disorders somehow all belonged together, and could be treated with one recipe. At the same time, female disorders could take many individual courses. To be able to address these individual courses a modification was considered essential. Similarly, labels such as *sha* 痧 ('sand disease';[33] referring to cases of cholera and similar afflictions), *fan* 翻 ('transformation', referring to instances of severe cramp), and *feng jing* 風痙 (wind-tetany), to name the most prominent ones, referred to a category of diseases, all considered somehow to belong together. In folk medical manuscripts, one finds long lists of individual courses taken by these diseases, and each of them was to be treated with a different recipe.

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[33] A rendering as 'sand disease' appears justified because the character *sha* 沙 is commonly used in Chinese writings as an alternative to 痧. To offer only two examples, see for instance ms. 8012, Staatsbibliothek Preussischer Kulturbesitz Berlin, where one finds expressions such as 治一切霍亂旺沙烏沙陰陽沙絞腸沙神效方, 'Wondrously effective formula for the treatment of all types of cholera, raging sand [disease], black sand [disease], yin Yang sand [disease], sand [disease] twisting the intestines' (the latter nowadays identified as 'dry cholera'). Similarly, ms. 8031 quotes a 'recipe for sand [disease] disturbing the intestines', 攪腸沙, allegedly copied from the *Dongyi baojian* 東醫寶鑒.

Conclusion

Reading through today's accounts of 'Traditional Chinese Medicine' (TCM) both in Chinese and in western languages is often a saddening endeavour. Little is left of the multi-faceted expression of a Chinese quest for an appropriate reaction to illness as it has evolved over the past two millennia until the late nineteenth century. Western laypersons and practitioners in particular are misled to believe that TCM is Chinese traditional medicine, and that Chinese traditional medicine was as simple a product of thought as it is depicted now.[34]

The review, offered above, of the antagonism between a distant and a close look at illness, between a categorising and an individualising approach, opens only one small window at the great diversity inherent in Chinese traditional medical and health care culture. Nevertheless, it may be seen as an example of solutions developed in the Chinese context to issues that were faced in European history as well. The historical approach permits to evaluate the past of Chinese medicine; it provides us with insights enabling a comparison with the European tradition, and it shows where the real differences lie.

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[34] Kim Taylor 2005, offers a most detailed analytical review of the dynamics in the early years of the People's Republic of China that led to the formation of a so-called Traditional Chinese Medicine (TCM).

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