

# **Paul U. Unschuld (1998) Chinese Medicine. Paradigm**

**translated from German by Nigel Wiseman.**

[Here in this .pdf file: Chapter 5, Use of Drugs and Pharmacology; Chapter 6, Chinese Medicine in the Modern Era and Present; Chapter 7, The Long March West].

## **CHAPTER FIVE: USE OF DRUGS AND PHARMACOLOGY**

### **1. The validity of systematic correspondence**

Historical consideration of traditional Chinese ophthalmology directs attention to one important, if not central, question in the evaluation of Chinese medicine, namely the relationship between theory and practice. This question touches on the comprehensive validity of the doctrines of yin and yang and the five phases.

Ancient Chinese physicians distinguished between eye diseases that arose from external causes or hazardous use of the eyes, such as reading without sufficient illumination, and others attributed to the consequences of internal disturbances. The theoretical foundations of traditional Chinese medicine, as we have already stated, were only applied in the latter category of diseases.

The doctrines of systematic correspondence were not adduced to clarify why reading without sufficient light damages the eyesight; nor were they adduced to explain the infectiousness of a particular ailment, or how in certain cases a patient once affected could gain life immunity. In the wealth of medical theory literature that accumulated over the imperial age, we know of no texts whose authors reflected on the selective theoretical elucidation of problems of this sort. We can therefore offer no statement as to whether the doctrines of yin and yang and the five phases were unsuited to incorporating such problems, or whether such problems were quite simply not considered by the writers in question to be worthy of theoretical substantiation.

Indications as to the validity of traditional theories are found only by considering numerous facets of Chinese medicine. The history of leprosy in China, for instance, suggests that systematic correspondence may have been hard pressed to explain real pathological processes. For over a thousand years, the description of afflictions that closely fit the modern definition of leprosy were left unexplained by yin-yang and five-phase theories. In the 14th century, finally, two authors in quick succession attempted to incorporate all the possible manifestations of this disease that had been observed over the centuries into a framework of systematic correspondence. Their promptings were not taken up by subsequent writers, and leprosy—or those afflictions that either actually constitute leprosy or that take a similar course—was left, after a short interlude of theorization, to a purely pragmatic approach and treated with pharmaceutical procedures, without apparent need of theoretical underpinning.

Given the dominance of the doctrines of theoretical correspondence since Chinese antiquity in explaining the physiological and pathological processes in the healthy and afflicted organism, the comparison with leprosy suggests that yin-yang and five-phase theories preserved their validity over two millennia essentially in areas that lay beyond empirical scrutiny and that, unlike leprosy or blindness, cannot be regarded as trans-culturally valid realities.

Such trans-culturally valid realities can be seen in certain functions of drugs, that is, in all pharmacological effects that bring about tangible or visible changes in physical states. Whether a substance reduces a fever, produces diarrhea, or relieves a headache can be empirically demonstrated and—unlike "kidney yang weakness"—is not a cultural construct. The cultural explanation of the effects of drugs are, therefore, a further test case for the validity of traditional Chinese doctrines.

## **2. The theoretical substantiation of drug effects**

Surprisingly, historical analysis shows that in China two medical traditions were practiced without any mutual contact (with the exception of one author in the 3rd century A.D.) for an almost unimaginably long period of 1,500 years. On the one hand, there was the medicine of systematic correspondences using needle therapy and dietetics fed on the yin-yang and five-phase theories, and on the other, the pharmaceutical healing tradition, which attempted to harness the effects of drugs to relieve innumerable manifestations of disease without recourse to the laws of systematic correspondence.

The medicine of systematic correspondence defines internal afflictions in terms of yin-yang and five-phase doctrines as "kidney yang weakness," to take up once more an example already mentioned, and makes it a central concern that each patient should be seen as an individual problem. In contrast, the pharmaceutical prescription literature of China applied, in almost the same way as modern Western medicine, label-like disease concepts such as "fever" or *nüe* (malaria), which were imposed on patients without consideration of their age, constitution, or sex and which required treatment largely independent of their individual conditions.

It was only beginning with the 12th century A.D. that the situation in the general history of ideas led to an approximation of the two lines of tradition. A thousand years earlier, in European antiquity, Galen had linked the empirically highly developed medicine of the eastern Mediterranean with theories that had previously been limited to interpreting etiological, physiological, and pathological processes in the body, thereby creating the first European pharmacology in the sense of a stringent theory explaining the way drugs affect the body. With very similar goals, Chinese medical scholars from the end of the Song attempted to create a pharmacology based on systematic correspondence. The problem facing the Chinese writers was largely identical with Galen's. On the one hand, there was a refined theory available, and on the other, a rich body of pharmaceutical knowledge. In China, the theory to which drugs were to be linked was obviously that of the doctrines of systematic correspondence.

Since antiquity, the qualities of edible substances had been determined by their flavor and temperature. In theoretical literature, these qualities had been discussed as abstractions and in their significance for dietetics. The Inner Canon of the Yellow Thearch states, "In the case of a heat disease, cooling (*qing*) is used; in a cold disease, heat is used." In contrast, the materia medica literature referred to the flavor and temperature of drugs only to identify them.

In the late Song, authors forged a bridge between the flavor and temperature qualities of particular drugs on the one hand and the effects of these qualities in the organism on the other.

Flavor was defined as a yin quality and temperature a yang quality. Warm, hot, and balanced temperatures of a drug were considered strong qualities and hence as yang in yang; cold and cool temperatures were considered weak qualities, and hence yin in yang. Sour, bitter, and salty were considered to be strong flavor qualities and rated as yin in yin; acrid, sweet, and neutral were interpreted as weak flavor qualities, and therefore characterized as yang in yin.

In this way, scholars postulated for the first time that particular drugs and drug effects empirically defined in terms of yin and yang, i.e., heating (a yang-in-yang effect), dispersion (a yin-in-yang effect), draining (a yin-in-yin effect), and penetration (a yang-in-yin effect), had certain affinities with yin or yang categorizations of the organs, particular diseases, or the time (day or night) when drugs were effective.

Flavor and temperature qualities of drugs were of course also categorized according to the five phases. Salty taste and warm temperature were seen as qualities of wood, sour taste and hot temperature as qualities of fire, sweet taste and balanced temperature as qualities of earth, bitter taste and cool temperature as qualities of metal, and acrid taste and cold temperature as qualities of water. In this way, certain affinities were established, in particular for the functional spheres categorized according to the five phases, i.e., liver and gallbladder (wood), heart and small intestine (fire), spleen and stomach (earth), lung and large intestine (metal), and the kidney and bladder (water).

Many authors derived the effects of a drug directly from its flavor quality without recourse to the yin-yang categories. They were convinced that acrid substances dissipate and promote movement, that bitter substances drain and dry, and sweet substances supplement and moisten, that sour substances astringe and prevent or halt the flow of fluids, that salty substances clean and soften, and that substances of neutral flavor drain dampness and disinhibit urination.

Agreement between all writers on the evaluation of drug qualities was never achieved, and possibly never even sought. The Inner Canon of the Yellow Thearch, for example, identified acrid and sweet as yang and therefore as dissipating, sour and bitter as yin and therefore draining, and neutral flavor also draining but as yang. Similarly in partial contrast to later categorizations, The Inner Canon of the Yellow Thearch established: "Sour flavor enters the liver. Acrid flavor enters the lung. Bitter flavor enters the heart. Salty flavor enters the kidney. Sweet flavor enters the spleen."

Such differences were never settled. The fact that some writers of the Song-Jin-Yuan period described categorizations other than those of The Inner Canon of the Yellow Thearch did not affect the authority of this classic. From a Western perspective, this might seem surprising since the consequences of such contradictions were considerable if the various categorizations had any effect on the clinical application of drugs. In fact, it is of course not known whether practitioners actually applied theory in practice, or whether these categorizations were merely intellectual mind games based on fashionable tendencies of the time. Probably, the whole theoretical framework that was extended, mainly by Song-Jin-Yuan scholars, to the use of drugs on the basis of systematic correspondences was irrelevant since the systematic categorization of organ functions and functional spheres only rested on ancient speculation.

Possibly because of the differences of opinion between individual authors over the flavor and temperature qualities of individual drugs and hence over the definition of yin-yang and five-phase

categorizations of individual substances and their effects, Zhang Yuansu (12th century) completely evaded the problem and attributed functions not to qualities, but directly to particular drugs. He emphasized that the effect of a substance depended on which conduit it entered. This conduit approach gave rise to the notion that particular drugs are capable of leading other substances to specific places in the body and hence of enabling them to produce their effect there. Zhang Yuansu also emphasized the effect of drugs on particular organs, stating for example, that huang lian (Rhizome Coptidis) drained heart fire and that chuan xiong (Radix Ligustici Wallichii) dissipated liver qi.

The association between drugs and organs or particular functions has since become the most important classification of drug action. Liu Wansu (1110-1200), for example, through the five-phase association that he ascribed to each substance, saw direct relationships between these substances and the possible climatic influences, which penetrate the body from outside and cause damage there. Accordingly, a drug classed as wood is best suited to expelling wind, the evil associated with wood, from the body. No explanation is given anywhere in the literature as to how a principle of "like repels like" comes into play, i.e., why a drug associated with the wood phase should act against wood, rather than having a wood-strengthening effect in the way that heat drugs do not eliminate heat but increase it.

In the 14th and 15th centuries, with the end of historical trends that had favored an approximation between Confucianism and Daoism as much as the approximation between the medicine of systematic correspondence and pharmacy, the search for theoretical understanding of drug effects on the basis of systematic correspondence came to a standstill. No further impetus in this direction followed.

Authors and users of the following centuries were free to choose from the various approaches that the Song-Jin-Yuan left for posterity the one that suited them best.

Later developments in the classification of drugs were innovative to a varying degree and centered mostly around empirical effects. In the 18th century, several authors stressed the eight patterns (ba fa): sweating (han), vomiting (tu), purgation (xia), harmonization (he), warming (wen), cooling (qing), and dispersion (xiao).

Characteristic of the poor ability of the premises of systematic correspondence to gain long-term acceptance, and, hence, indicative for an evaluation of the corresponding theories is the enumeration of indications attributed to individual drugs from the dissolution of Song-Jin-Yuan trends to the present. The primary indications of drugs were conditions such as insomnia, poor appetite, uterine bleeding, urine retention, irritability, water accumulations, fatigue, diarrhea, vomiting, and many others. Statements such as "fortifies the spleen," "supplements the middle burner," "warms the kidneys and invigorates yang," had a rather rhetorical character, unless, as in the case of kidney yang depletion, for example, they were to be equated with indications. Kidney yang depletion, for example, is a fixed formula for a syndrome including impotence, spermatorrhea, cold and weak legs, as well as lumbar pain.

### 3. Pharmaceutical processing of crude drugs

Over the whole of its history, Chinese pharmacy has used both individual drugs for particular afflictions and prescriptions composed of several substances. The arsenal of drugs, which over the last two millennia has continually been developed and has been published in a variety of monographs and prescription literature, is very impressive. In terms of the variety of content and the scope of the text, the Ben Cao Gang Mu ("Materia Medica Arranged According to Drug Descriptions and Technical Aspects") represents the acme of materia medica literature. This work, compiled by Li Shizhen (1518-1593) and published posthumously in the year 1596, contains detailed descriptions of over 1,800 different drugs.

The oldest extant prescription text, the Wu Shi Er Bing Fang, "Prescriptions for 52 Diseases," unearthed from the Mawangdui tomb, which was sealed in 167 B.C., indicates that a refined pharmaceutical technology had already developed by this time. The methods for the collection and processing of crude substances from plants, animals, and minerals, and their preparation into a variety of drug forms, that by the time of the Mawangdui text had already reached a high level, were continuously further developed over the centuries, as testified by not only special technical literature, but also general materia medica and prescription texts.

From antiquity, Chinese pharmacy held the notion, which is intelligible from a modern viewpoint, that drugs from particular geographical regions showed better effects than the same drugs from other regions. The development of a drug's effects was seen in conjunction with general processes of maturation in the course of a year. Literature instructed pharmacists that the subterranean medicinal parts of plants should be harvested before they reached full maturity and their strength moved to the upper areas of the plant. Flowers were to be harvested before they opened, the whole plant in later summer or autumn.

Apart from the mechanical methods such as grating, pulverizing, and cutting, drug-processing methods largely made use of water and heating to enhance or modify the known pharmaceutical effects. The most commonly used processes used today are as follows:

1. zheng, steaming, followed by sun-drying.
2. zhu, boiling in clear water, rice water, liquor, vinegar, boy's urine, or other liquids.
3. ao, reducing a decoction to a syrup.
4. zhi, roasting with fluids. Roasting with wine increases the ability of a substance to open blocks in the conduits, relieve pain, and dispel wind. Roasting with ginger juice decreases the tendency of certain cold bitter drugs to irritate the stomach. Roasting with vinegar enhances the astringent and pain-relieving abilities of certain substances.
5. pao, brief heating to a high temperature until brown. This method reduces poisonous constituents.
6. chao, stir-frying. With salt, it directs the effect of the drug to the kidney.
7. hong, slow drying of flowers and insects.

### 4. The preparation of drug forms

Drugs processed in any of the various ways usually have to be transformed into drug forms in a further stage before they can be taken. The most common form is decoction in water, and less often

in other fluids. Different instructions are given in the literature as to the duration of decoction and size of flame; there are numerous possibilities of varying the decoction process for different drugs. Powders, pills, and pastes of Chinese pharmacy are similar in their preparation and their purposes to corresponding drug forms in traditional European pharmacy. In their applications, however, there are some significant differences. For example, "point ointments" are unknown in European pharmacy. These are pharmaceutical preparations in ointment or paste form, which are supposed to be able to produce very different effects on the body depending on which acupuncture points they are applied to.

## 5. The synergism and hierarchy of drugs in prescriptions

The earliest pharmaceutical literature from the first centuries A.D. captures the experience of doctors in the simultaneous administration of different substances. Seven social metaphors serve the description of the seven possible interactions between substances within one formula:

1. xiang xu, "one helps the other," means the mutual enhancement of similar effects of different drugs when administered together.
2. xiang shi, "one endows the other," means the mutual enhancement of different actions of different drugs when administered together.
3. xiang wei, "one fears the other," the reduction of undesired effects of a drug by another drug with which it is administered.
4. xiang sha, "one kills the other," the elimination of undesired effects of a drug through another drug with which it is administered.
5. xiang wu, "one hates the other," means the mutual reduction of desired effects of different drugs when administered together.
6. xiang fan, "one clashes with the other," means producing undesired new effects through simultaneous administration of different drugs that are not produced when the drugs are administered individually.
7. dan xing, "one goes alone," means administering a single drug without being influenced by other drugs administered simultaneously.

Metaphorical names are also given to hierarchies of substances within a prescription. The main constituent of a prescription, from antiquity to the early years of communist China, was called the "ruler" (jun). In the cultural revolution, writers substituted the word zhu from zhu xu, "chairman." The "sovereign," or "chairman," is responsible for the therapeutic aim of the formula. He is flanked by several "ministers" (chen), or, since the cultural revolution, "assistants" (fu), which support the effects of the ruler. Furthermore, a balanced formula has a number of "helpers" (zuo), who provide various services: they may serve to soften the strength of the main drug, or help the sovereign/chairman and ministers/assistants by, for example, supporting the cooling main drug of a prescription with a warming action. Finally, there are the "messengers," who either have a calming, harmonizing effect, or serve as conductor drugs ensuring that the expected effect of the other substances reaches the desired place.

## 6. Proprietary drugs and individual preparation

Like their European counterparts, Chinese physicians in antiquity recognized that certain substances or combinations of substances always have the same effect on different patients with the same affliction. At least since the 13th century, China has had a broad network for the manufacture and marketing of ready-to-use drugs. In Europe, the same development took place in the 19th century with the rise of the pharmaceutical industry, which is now a major component of the health-care system. Not least, marketing strategies with the aim of customer retention, product loyalty, and corporate identity point to clear parallels between the procedures of Chinese producers of traditional proprietary drugs over the last centuries and the advertising methods of the modern pharmaceutical industry.

Alongside proprietary medicines, there has, since the Song-Jin-Yuan period, existed the desideratum derived from the doctrines of systematic correspondence to examine the personal condition of each patient and design a prescription accordingly. This approach was restricted socially to the level of educated physicians who applied the theoretical premises of systematic correspondence consistently in drug therapy. Their intentions were served best by decoctions. The need posed by the theories to reevaluate the condition of the patient as far as possible every day and the individual consideration of different patients even when presenting similar disease conditions call for frequent adjustment of the constituents of a prescription to address depletion or repletion, blockages or excessive flows. The dose of a decoction is always that required for one day; the composition of the prescription can be altered the following day.

## 7. Modern research

Drug therapy has been the focus of Chinese medicine for over two thousand years, especially in the treatment of acute conditions. Countless substances have been tried over the centuries, and, for reasons seldom clear today, adopted into the arsenal of drugs. The encounter with Western science in the 20th century has led to a scientific investigation of drug effects.

Many drugs have been found to contain pharmacologically active agents. The question as to whether the effects that can be demonstrated today are the same as those postulated in the past has only rarely received a satisfactory answer. Particularly problematic and largely unresolved is the question as to how to evaluate traditional prescriptions. Modern pharmacology possesses all the possibilities to investigate the constituents of individual substances and the mechanisms of their effects, but the synergistic effects of combinations of several substances create difficulties.

For decades Western drug companies have conducted large-scale screening programs to investigate China's arsenal of materia medica in search of new drugs for Western medicine. However, barely a handful of Chinese drugs have found their way into modern medicine, the most important of these being ma huang, *Ephedra sinica* Staph., from which ephedrine is extracted.

Also for decades, countless Chinese and Japanese investigations have been made to determine the effect of traditional formulas. The methods used in these studies are rarely in keeping with the strict requirements of modern pharmacological research. As a result, reports regularly appearing in the Chinese press of drugs being "over 90% effective" defy unequivocal interpretation, and so far have

not led to any enrichment of the international pharmacopoeia to speak of. Despite this, a large number of traditional drug producers in China manufacture proprietary brands for sale at home and worldwide to a receptive clientèle of largely Asiatic origin.

## **CHAPTER SIX: CHINESE MEDICINE IN CHINA IN THE MODERN ERA AND PRESENT**

### **1. The political context**

Traditional Chinese medicine in China exists no longer as an independent healing system with its own ideas and practices. The loss of the not only conceptual but also diagnostic and therapeutic independence is the result of a policy of the People's Republic of China geared to this end. It is also, however, the result of a long historical process, whose causes were present long before encounters with the West.

Just as the traditional political world view lost its unity from the 17th century and crumbled into numerous individual views that the various schools of thought recommended to solve the many political problems of the Chinese empire, so Chinese medicine after the end of the age of Song neo-Confucianism never again recovered any kind of unity. The splintering into various etiological and therapeutic principles that had begun in the 12th century continued in the Ming and Qing.

When Western medicine was systematically and extensively introduced into China by Protestant missionaries at the beginning of the 19th century, it did not encounter a homogenous system, but a disparate conglomerate of very different ideas and practices characterized in part by systematic correspondence, in part by speculation and superstition, in part by religious doctrines, and in part by the experience and economic interests of wandering healers.

Western medicine was immediately convincing at least to Chinese doctors who were willing to learn. Quite a number of representatives of traditional medicine who were denied access to Western medicine expressed themselves defensively for obvious reasons. For Chinese doctors and students who had the possibility to get to grips with the theory of Western medicine from the end of the 19th century, there opened a world that was both familiar and new.

What seemed familiar to the Chinese was the new bacteriological view that had recently swiftly risen to dominance. The demonological healing of China with its notions of evil powers, which, taking no account of the moral condition of their victims, penetrated the body to cause damage there, could easily be likened to the modern Western notions of pathogenic agents, as could the naturalistic medicine of China, which was based on the notion of "evils," which in various forms "occupy" the body, move within it, and settle at a particular spot where they then give rise to disease and which have either to be killed or driven out if the patient is to be cured. Chinese pharmacy had overcome the short theorising interlude of the Song-Jin-Yuan period and had returned to an empiricism that was hardly any different from the direct symptom-medicament relationship of European medicine.

The only thing that was new for Chinese men of medicine was Western medicine's belief in progress. Science seeks fulfillment in a future golden age; traditional medicine, including traditional Chinese medicine, always proceeds from the assumption that the golden age of medicine lies in the past. The basic cultural challenge in China's encounter was that of exchanging the authority of antiquity for

faith in an as-yet-unwritten future. The fact that this challenge presented no insuperable obstacles is shown by the first decades of the encounter, when all social forces committed to China's renewal considered Western science and technology alone to offer a way forward, and were prepared to make room for traditional Chinese medicine only in memory of the "bankrupt feudal age" of the empire. Nobody in the West wishing to assess traditional Chinese medicine as inadequate could find such hostile and hurtful words for this form of medicine as came from the full spectrum of political decision-makers and reformist or even revolutionary intellectuals of the first two or three decades of the 20th century in China. The nationalist forces united in the Guomingdang (Kuomintang, KMT) as well as the communists since that time were acting in accordance with political, economic, and social pressures when they appeared to give up their reservations about Chinese medicine. In actual fact, neither of these two forces, one of which rules only in Taiwan and the other holding political responsibility for the mainland, has ever accorded traditional Chinese medicine a future as an equal alternative to modern Western medicine, even if the rhetoric on the mainland might at first sight suggest the opposite.

The general neglect of traditional Chinese medicine in Taiwan over the last decades corresponds in mainland China to the gradual and inescapable infiltration of the old corpus of ideas with those of modern science. Just as the PRC government is effecting the transition from the socialist planned economy to the capitalist market economy not abruptly, but with skillful long-term planning, it has chosen to deal with the question of traditional medicine not by confrontation, but by modest change.

## 2. Phases of change

Traditional Chinese medicine is comparable with a tree that has lost its roots. The wood is still available and can be put to many meaningful uses, yet nourishment and further development no longer spring from its own forces. Chinese medicine has been in this situation since it lost the philosophical and political environment that had once given it plausibility and acceptance and allowed it to survive for two thousand years.

It was not clinical validity that gave the conceptual construct of Chinese medicine its longevity, but its abiding plausibility. In Europe, the frequent changes in medical systems from the beginnings of medicine in Greek antiquity were the result of frequent fundamental changes and shifts in sociopolitical and philosophical conditions. Greek city states, Hellenism, the Roman empire, late antiquity and early middle ages, high middle ages, Renaissance, the pre-modern, and modern age replaced each other every three to four hundred years. They created diachronic and synchronic upheavals in existential conditions, which deeply influenced the view of the body and sickness.

In China, by contrast, the basic framework remained largely the same over the whole of the imperial age, irrespective of any internal dynamics. The changes within this basic framework, as seen in the era of Song neo-Confucianism, left their marks on Chinese medicine, but were incapable of changing its fundamental features.

It was the encounter with the West that prompted the first basic questioning. In the beginning, a small number of medical reformers who were defenders of Chinese culture deluded themselves in the belief that the adoption of Western techniques and drugs would suffice to give Chinese medicine new

strength. Tang Zonghai (1862-1918), Mao Jingyi (fl. end of Qing) and others made comparisons between Chinese and Western medicine, and pointed the way into the future with symbioses of various kinds. The aim of their plans was to ensure the enduring dominance of Chinese medicine. A product of this era was the catch-phrase "Chinese medicine treats the root; Western medicine treats the symptom," which is still occasionally to be heard to this day.

From the 1930's on, the direction changed. The few writers who thought about how Chinese medicine could be saved began to see thorough-going scientific research as the only possibility of wresting meaningful and still usable elements from what was evidently a medley of viable and outmoded ideas and practices. This approach is the program that has been followed by the Chinese communists, with a short interruption during the Cultural Revolution. It sees on the horizon a scientifically founded medicine in which as many elements of traditional Chinese medicine as possible are to be included.

Development in this direction requires no force; it comes of its own accord. Each new generation in China finds the ancient philosophies increasingly alien. The doctrines of yin and yang and the five phases have lost their rank as the obvious way of understanding reality; they are no longer part of school or family education, and have to be painstakingly learned. The medicine these doctrines serve is today cognitively isolated. In contrast, the modern sciences and technology, physics, and mathematics are part of the education of every Chinese child. They have made their imprint over the whole of private and professional life, making modern medicine automatically, as it were, appear to be true.

### **3. Administrative measures**

Quite a few countries of the third world have attempted to enter the modern world by prohibiting traditional healing practices. The government of the People's Republic of China has taken a different path. It has instituted a series of measures that have supported the inevitable dominance of Western medicine. It has taken the wind out of the traditionalists' sails by giving them far-reaching equal rights in the command of diagnostic and therapeutic techniques and drugs. It propagates the existence of the three paths, that is, allowing modern medicine to develop according to its own laws, allowing traditional Chinese medicine to seek its own development, and where meaningful and possible, allowing the two systems to be combined.

Chinese medicine is allowed to seek its "own development," but not without guidance. An unending succession of regulations has meant that the term "Chinese medicine" refers no longer to the tradition in its former entirety, but to a small fragment of it that from the modern viewpoint clashes neither with scientific knowledge nor with Marxism's rejection of any remaining elements of feudalism and metaphysics.

Volker Scheid, an ethnologist who is intimately acquainted with the practice of Chinese medicine, has shown, through the example of changes in the treatment of stroke, the subtle way in which Western concepts have influenced Chinese medicine, possibly even before the 20th century. As the name *zhong feng*, "struck by wind," which is still used to this day, suggests, stroke was interpreted in Chinese antiquity as being caused by wind. With the propagation of various etiological principles

through diverging schools since the late Song, attention shifted to what is called "internal wind," which, however it arose, was to be eliminated from the body. Perhaps as a result of the Western association between stroke and blood circulation, Chinese writers at the end of the Qing Dynasty were explaining stroke in terms of the traditional concepts of "blood stasis" and were recommending substances from Chinese pharmacy which since time immemorial had been accorded "blood-quickenning" or "stasis-dispelling" effects.

While quite a few Western adherents of traditional Chinese medicine in Europe and the USA reject any relationship between the Chinese concept of xue and the notion of blood in Western medicine, and either refuse to translate xue as blood or, at least in English, write it with a capital letter to highlight the fact the Chinese understand something entirely different by blood than Westerners do, such scruples are unknown in China. Although the Chinese are well aware that antiquity assigned the blood other properties and functions than the modern age does, this does not prevent ancient statements about the blood from being interpreted in a new way, and the whole gamut of hematological diagnosis and therapy of modern medicine from being carried over to Chinese medicine and vice-versa.

Every textbook published in China on Chinese medicine contains an introduction to the doctrines of systematic correspondence, yet the research on Chinese medicine that has been demanded by the government is based only on modern scientific methodology.

In 1995, the Gansu Province Science and Technology Press published A Practical Manual of Combined Chinese and Western Medicine. The editor responsible for the book, the vice-director of the Medical Academy of Gansu, and a nationally recognized authority on the integration of Chinese and Western medicine, presented in the book the findings of studies conducted over a period of thirty years. A key point in his recommendations is that a condition should be diagnosed on the basis of Western procedures, and if necessary treated using traditional Chinese medical methods and drugs. The book contains a long list of internal diseases with Western diagnostic parameters and the correspondences in traditional terminology.

The effect of such advice on actual practice cannot be foreseen. Over the past decades in China, as in other countries where a population enjoys the choice between modern and traditional medicine, a relatively stable pattern of demand by patients has formed. Traditional medical care is sought particularly by patients with chronic diseases that from the Western medical viewpoint are resistant to treatment. The general preference for Western medicine which is today also found in China as in other countries rests on factors of time and economy.

The book published in Gansu furnishes evidence, however, of how traditional medicine is gradually being encircled by modern science. Therapeutic techniques, above all acupuncture, are being increasingly removed from their traditional background and integrated into modern medicine. In 1982, the Chinese government commissioned the compilation of a catalog of pharmaceutical raw materials in China, which was to contain all substances of animal, vegetable, and mineral origin used as drugs in traditional Chinese medicine. After ten years, the catalogue listed more than 11,000 plants, 1,500 animals, 80 minerals, and a list of some 100,000 applications and prescriptions.

In 1986, the government promulgated a law for the management of traditional Chinese pharmacy, which laid down standards for the identification of Chinese medicinal plants and gave each plant a specific name with a view to solving the problem of different names for the same substances in many parts of the country and that of different substances having the same name.

On January 1, 1995, uniform criteria for diagnosis and efficacy in traditional Chinese medicine were introduced. All institutions of teaching and scientific research are to apply the new standards. Since the name and explanations of traditional concepts were also included in English, this enactment points to a bid by the Chinese authorities to influence the international development of Chinese medicine.

The standardized terminology is supposed to facilitate scientific and economic exchange.

Also in 1995, a committee for medical science composed of experts of traditional Chinese medicine and members of the Department of Medical Research of the British Wellcome Institute was formed.

The aim of the committee is apparently to promote research between Chinese scientists of traditional Chinese medicine and researchers of the Wellcome Institute in the field of medicine and pharmacology.

One measure after another serves to integrate traditional medicine into modern medicine and to create an unmistakably Chinese variant of modern medicine, which with an extended diagnostic and therapeutic framework, is hoped will be more attractive than "pure" Western medicine and hence marketable worldwide. In 1994, China's exports to Europe and the USA of proprietary drugs of Chinese medicine reached a total value of US \$400 million; and as the president of the National Administration of Chinese Medicine stated in 1995, a yearly increase of 5 percent is expected.

#### **4. Prospects**

Chinese medicine has lost its original roots and consequently its modern clinical practice has largely forfeited its conceptual independence. That does not of course mean that Chinese medicine as a cultural heritage will disappear in China.

First, the historical knowledge accumulated over the course of the centuries and contained in an extremely varied literature is preserved to the extent that the literature is still available. The number of pre-1911 titles is estimated to be 13,000 to 15,000. Facsimile copies of pre-Republic original texts as well as more or less carefully edited and commented new editions of old texts, which Chinese publishers are putting out in ever larger numbers, provide for the unforeseeable future inexhaustible ground for a whole variety of research.

Second, the PRC government supports efforts to preserve the knowledge of older doctors. In October 1990, the authorities selected 700 young doctors to enter an apprenticeship of several years to 464 renowned veteran specialists of Chinese medicine. In October 1994, a first group of 600 of apprentices finished their course, and it was immediately announced that a further 500 known old Chinese doctors should assist with the training of future generations of practitioners. Although there is no guarantee that the older physicians are willing to fully initiate younger doctors assigned to them by the state in all aspects of their skills, these initiatives at least document the attempt to save what can still be saved.

Present-day practice in China is characterized by great variety, much as it probably was in past centuries. Although the state is at pains to guide development in a particular direction, doctors espouse all manner of interpretations of old and new approaches. To this extent, it is quite justifiable to assert that the tree of Chinese medicine is still alive and will continue to live on. This is only possible because it draws the strength needed for adaptation from another root, i.e., from a new system of thought.

## **CHAPTER SEVEN: THE LONG MARCH WEST**

In the historic change in Chinese politics in 1976, relations between China and the West began anew and swiftly increased in intensity. This gave Westerners interested in Chinese medicine previously almost unimaginable opportunities to see Chinese medicine in practice in China itself. Countless laypeople, healers, and physicians have taken advantage of the new situation to gain knowledge and practical skills in China and apply them to patients in their homeland on their return. In the meanwhile, national societies and private training centers have sprung up in all Western countries to meet the requirements of the increasing professionalization of these groups.

At the same time, Western interest in acupuncture and traditional drug therapy has stimulated efforts in China itself to sell Chinese medicine to Europe and the USA. Chinese practitioners with very different qualifications practice in all Western countries, making incomes that with their abilities they could never make in China itself. Manufacturers of traditional pharmaceutical products in China and Japan are developing strategies to market their products on the international markets, and the Chinese authorities are contributing by steering the reception of acupuncture in the West along lines that suit their interests.

With all these developments, it is easy to forget that the attention Western physicians are now paying Chinese medicine is merely another high point in an interaction between the two bodies of medicine that has been going on for a long time.

At least since the time William of Rubruk described his Journey to the Land of the Mongols between 1253 and 1255, news of China's own medicine reached Europe again and again. Marco Polo (1254-1324) reported on the "famous natural doctors who knew all the secrets of nature." Details about the nature of Far Eastern medicine however, were first provided by Europeans who spent longer periods in China, Japan, and Indonesia, and for various different reasons fastened their attention on healing, thereby gaining the opportunity to acquire a broader knowledge.

### **1. Portuguese Jesuits**

Since the beginning of the 16th century, Jesuit missionaries from Portugal were trying to establish a foot-hold in East Asia. The Chinese authorities showed no interest in such contacts and turned the foreigners away; some neighboring countries, though, were more open, at least in the beginning. In 1549, the Jesuits were given permission to set up missions in Japan. The combination of missionary and medical activity proved especially helpful in convincing Japanese natives of the sense and value of the Christian doctrine. Consequently, Portuguese doctors practiced together with converted

Japanese doctors in hospitals and leper colonies. Thus they inevitably had a chance to acquaint themselves with the Japanese variant of Chinese medicine.

For this reason, it is not surprising that the earliest reports about acupuncture and moxibustion from East Asia reached Europe in a letter from a Portuguese priest to an abbot in Coimbra: "In general, the Japanese are very healthy because of the climate, which is very temperate and healthy, because they eat little and because they do not drink clear water (fresh, unboiled water), the cause of so many diseases. When they fall ill, it is their custom in all diseases to stick silver needles into the abdomen, arms, and back, etc. At the same time they use fire buttons made of herbs."

What are here described as "fire buttons" are clearly the small balls of mugwort floss that the Japanese burnt on many spots of the body surface, much to the astonishment of European eyewitnesses. In a *Vocabulario da Lingoa de Iapam* ("Vocabulary of the Language of Japan"), published by the Jesuit college in Nagasaki in 1603, the herbal preparation used in this kind of cauterization was first given the name *mogusa*; in the year 1679, a book entitled *Het Podagra* on the subject of gout by the minister Hermann Buschof (died 1674) introduced the term "moxa," which is still commonly used today, for the cones of mugwort used in moxibustion. During a long stay in Batavia (now Djakarta), Buschof, having experienced the healing effects of moxa, that is moxibustion, on his own condition of gout, learned the technique and used it in the treatment of other patients.

The dictionaries compiled by the Portuguese Jesuits in Japan also provide a useful index of early knowledge about acupuncture. The Japanese-Latin Lexicon of 1595 included eight entries on acupuncture and moxibustion; the *Vocabulario* of 1603 includes 50 terms for various needles made of different metals and various techniques by which needles were inserted by turning or tapping. The missionaries did not only learn about the practical aspects of Sino-Japanese medicine; the dictionaries show that they also strove to penetrate the philosophical foundations of this medicine. Consequently we find in the *Vocabulario* of 1603 the earliest attempts to define concepts such as yin and yang, the five phases, the five depots and six palaces, and, above all, qi in a European language. We can no longer determine to what extent, judged from our modern historical and philological viewpoint, inaccurate interpretations of the missionaries were based on a deficient understanding of the Chinese concepts by the Portuguese, by the Japanese counterparts, or both. The Chinese concept of qi (Japanese: ki) was described by the Portuguese as "a disposition, a quality of the thing, generally with a perjorative undertone, as in disease." They gave *xie qi*, literally "evil qi" (Japanese: *jaki*), the meaningful interpretation of "spoilt breath or pestilence." The conduits and network vessels (*jing luo*) that were never unequivocally defined in Sino-Japanese medicine as being vessels of qi and/or blood were identified by Joao Rodrigues in his *Arte da Lingoa de Iapam* of 1604 as "veins." The early Portuguese attempts to understand the Sino-Japanese body of knowledge concerning nature, man, and medicine were serious. They nevertheless failed to pave the way for a continuing investigation of the theoretical foundation and the language of East-Asian medicine of Chinese origin: in 1612, the inspector Francisco Pasio forbade missionaries to acquire and apply medical knowledge; even the possession of medical literature was no longer allowed.

With this, the first intensive, and what might have been long and fruitful, contact between European and East Asian medicine was interrupted out of considerations of missionary strategy. Although several decades after the missionaries had withdrawn from medical practice in Japan, a second phase of transmission of East Asian medical knowledge to Europe began, all subsequent transmission attempts up to the middle of the 20th century lacked consistent effort to go beyond medical practice and penetrate Chinese medicine's own theoretical system.

## **2. European physicians as eye-witnesses in the Far East**

The second phase of Western reception of Chinese medicine, which was largely concerned with its practice, began in the year 1658 with the posthumous publication of a six-volume *Historia naturalis et medicae Indiae orientalis* by the Danish physician Jakob de Bondt (1581-1631). Bondt had served for a long time in the Dutch East India Company in Batavia on Java and through his work informed his European readers that the Japanese treated headache, obstructions of the liver and spleen, and pleurisy using styli of silver or steel, not much thicker than the strings of a zither, which were inserted into the body and made to penetrate the affected organs so that they came out on the other side. This technique, so he claimed, he had seen performed with his own eyes!

Whether Bondt had actually witnessed the penetration of the liver and spleen in an acupuncture treatment is not known. There is no evidence of such drastic interventions in the history of Chinese medicine. Bondt's statements were nevertheless followed quite literally 150 years later in experiments conducted in France; the inevitable catastrophic consequences of the treatment for the patients were seen by the opponents of acupuncture as tangible evidence of the harmfulness and nonsensicality of needle treatment.

In the late 17th and early 18th century, Bondt's work was followed by five other books by European eyewitnesses, including Buschof's report on gout of 1675. The *Secrets of Chinese Medicine* published in French in 1671 may have been written by one of the Jesuits who in the latter half of the 1660's was under house arrest in Canton, China. The basis for the book was, for the first time, an original Chinese text, the *Mai jue*, an older writing of uncertain origin, possibly from the Song period, on pulse diagnosis.

In 1683, the Dutchman Willem ten Rhijne (1647-1700) published a *Dissertatio de arthritide: Mantissa schematica: De acupunctura* after a two-year stay from 1674 to 1676 as a station physician in the services of the Dutch East India Company. Although the Japanese authorities had forbidden the Dutch to gain any knowledge of Japanese culture, a fruitful exchange with natives nevertheless took place. Japanese doctors, for example, would visit Dutch settlements in the guise of servants in order to find out about Western medicine. Ten Rhijne questioned his colleagues and even the official interpreters about indigenous healing methods. In his comments about the practice of Japanese needle therapy, referred to for the first time by the name *acupunctura*, ten Rhijne reported a broad spectrum of indications, including headache, dizziness, grey cataracts, apoplexy, rabies, epilepsy, hypochondria, melancholy, dysentery, and diseases caused by winds in the intestines. He recognized that acupuncture would remain unintelligible without the circulation system of Chinese physiology;

nevertheless he never gained the opportunity to learn more about this system, or even to elucidate it for his European readers.

He summed up his observations as follows: "Cauterization and acupuncture are the two outstanding methods of the treatment of the Chinese and Japanese. They apply them to free themselves of pain. If these two peoples (and especially the Japanese) were robbed of these techniques, the sick among them would be in a miserable state, without any hope of cure or relief for their condition."

However, most writers of this time concentrated their attention not on these spectacular treatments, which were completely unknown in Europe, but rather on pulse diagnosis. Pulse diagnosis as the key to understanding the processes in the healthy or afflicted interior of the body evidently attracted the attention of Europeans much more strongly than a previously unknown opportunity to influence the interior of the body. For this reason, two further texts from this time were devoted primarily to Chinese pulse and tongue diagnosis (that is, diagnosis on the basis of changes in the coloring and surface structure of the tongue). In 1682, the German doctor Andreas Cleyer (1615-1690), after serving in the Dutch East India Company in Batavia, published in Frankfurt a collection of writings of unknown authorship under the title of *Specimen medicinae sinicae, sive opuscula medica ad mentem sinensium*, a large portion of which is a translation of the pulse text, the *Mai Jue*, but which also contained references to Chinese pharmaco-therapy. The great interest in such texts is evidenced by the broad distribution of this book, which is still to be found in many libraries stocking books from this period.

The *Clavis medica ad chinarum doctrinam de pulsibus* by the Polish Jesuit Michael Boym (1612-1659), which was published posthumously in 1686, took the *Mai Jue* as the focal point and concentrated exclusively on pulse diagnosis.

In 1712, after returning from his employment in the Dutch East India Company in Japan, Engelbert Kaempfer (1651-1716) presented what was so far the most detailed description of the technique of acupuncture as regards the clinical application of the needle technique. However, he only reported on its use to treat the ominous *senki* sickness of the Japanese, which is a generic term for afflictions of the abdominal area, including colic. Kaempfer saw the manipulation of vapores (vapors) in the body as the object of therapy.

It is, therefore, perhaps not surprising that as early as 1718 Lorenz Heister (1683-1758) raised the question, "why such clever nations (like the Chinese and Japanese) prized their wondrous remedies. Since this operation (acupuncture) is not used or considered to be of any use by Europeans, we do not think it necessary to describe it at length. Anyone wishing to learn about it can read the amazing descriptions given by ten Rhijne and Kaempfer." One of the people who did read ten Rhijne was Georg Stahl (1660-1734), who formed the opinion that "acupuncture served to evaporate subtle flatus with needles." The possibility inferred by advocates of acupuncture of draining off intestinal winds in patients suffering from colic by sticking needles into the intestines appeared to Stahl as proof of the capacity of individual fantasy, not as an indication of a serious therapy.

The list of books from Bondt to Kaempfer might seem impressive in retrospect, but the impact of these writings was marginal and soon disappeared. Pulse diagnosis and acupuncture triggered a transient discussion, yet none of the participants in the discussion had any reliable grasp of original

Chinese knowledge. Even the Latin translations of the Mai Jue failed to provide illumination owing to their lack of good commentary and adequate philological skill. Hence, the debate eventually died out.

Although during the 18th century writers would again and again mention acupuncture, either to criticize it or to stimulate further research in it (for example, Gerhard van Swieten [1700-1772] in the year 1755), interest remained anecdotal. Attentive and well-read physicians knew of certain characteristics of healing in Japan and China, but the impetus was lacking to investigate them.

### **3. Early interpretations in electrobiology**

What factors finally triggered a new wave of interest at the beginning of the 19th century are open to conjecture. The promptings by the Dutch surgeon Isaac Titsingh (fl. 1794) after his return from East Asia may have provided the external cause. Titsingh first served for 15 years in Japan in the Dutch East India Company, and after 1794 acted as the Dutch ambassador in Peking for some time.

As a doctor, Titsingh showed similar interest in the medicine of his host countries as his predecessors. Unlike other colleagues, however, he went further. He collected material evidence of the practice of Chinese medicine, including an acupuncture figure. In 1775, a Chinese merchant had by chance brought a bronze acupuncture figure with him on a visit to London, but Titsingh was the first, in his collection catalogue, to describe such a figure and present it in its medical and theoretical context, and in so doing he attracted the attention of some colleagues.

Titsingh also presented a translation of a book, allegedly of Japanese origin, about acupuncture. The sum of his promptings fell on fertile soil.

European physiologists at the beginning of the 19th century focused interest on unravelling the mystery of the supposed "divine spark," by which the living organism differed from a dead body. In this context, the 1791-1792 research by Luigi Galvani (1737-1798) in Bologna received much attention. After fierce debate especially with Alessandro Volta (1745-1827), it transpired that the electricity that Galvani had measured in the hind-legs of frogs came from the instruments used to conduct the experiments. Nevertheless, the idea of animal electricity had a lasting influence on European physiology and formed the basis for the development of electrobiology. It was inevitable that some doctors immediately presumed that the key to understanding the effects of Chinese needle therapy also lay in supposed electrical currents with the body.

France was the center of the new interest. It was here that in 1774 Francois Dujardin in his history of surgery had recommended the application of needles for painful parts of the body. The translation of a Japanese acupuncture book that Titsingh had introduced into the European debate gave the French physician Sarlandière the impetus to engage in a detailed investigation of acupuncture. Sarlandière in turn prompted Louis Berlioz (1776-1848), father of the composer Hector Berlioz, to conduct clinical experiments. Sarlandière was the first to experiment with the strengthening of the effect of the needle through electrical currents. Several physicians in France, Britain, Italy, and Germany followed this lead and published their findings.

One German doctor reported about the healing of two serious cases of dropsy through a combination of acupuncture and galvanism. This prompted the ministry in Berlin responsible for health care to

order the effects of the therapy to be systematically examined in the Charité hospital in 1829. The report on the experiment is a protocol of terror. Two platinum needles with eyes were inserted a quarter to half an inch into the abdomen and other parts of the body. The ends of the needles were attached to the two plates of a galvanic pile.

This immediately produced in patients violent, tugging, and tearing pain, which made them scream and jerk involuntarily so that quite often the needles would fall out. The muscles closest to the insertion point contracted vigorously, a phenomenon that could most clearly be seen in the abdominal and facial muscles. Round patches of inflammation formed around the insertion points. . . . Soon a lymph gland would appear around the first needle, bright at first, later turning dull, while the epidermis around the needle, which led to the copper pole of the pile, would rise like a blister, and on withdrawal of the needle would let out a kind of gas with a crackling sound.... The pulse would become larger and more frequent, and sometimes irregular, this latter phenomenon evidently being the result of the violent pain. The increase in vessel activity was most vigorous in the uterine system, this being the clearer the closer to the genitals the needles were inserted.

This description makes it understandable why subsequently all the patients in a Paris hospital rose in revolt against the application of acupuncture.

Despite the torments inflicted on test patients, participating doctors were able to announce some successes with a 24-year-old girl suffering from amenorrhea. Needling produced no success in ascites. The treatment of general dropsy "proved so terrifying that there was no thought of repeating the attempt."

Experiments to understand the effects of acupuncture and to rule out chance successes continued for half a century. In the USA, for example, the physician and chemist Franklin Bache, a grandson of Benjamin Franklin, published the findings of his experiments with acupuncture on prisoners suffering from rheumatism and neuralgia. He had come to the conclusion that the most meaningful application of the needles lay in pain relief.

The ability to reduce pain in the short or longer term is in fact probably the only point of agreement between the majority of physicians in the evaluation of acupuncture in first half of the 19th century. The publications of the research of the time offer a long list of other indications from paralysis to asphyxiation, from gout to abdominal inflammation, from early cancer to blindness. However, the arbitrary nature of the treatment pointed a different way to each observer and permitted no standardizable conclusions.

Even in this third phase of the encounter with Chinese medicine, Europeans were left entirely to their own fantasies to turn the needling therapy into a sensible and reliable form of treatment. When finally a book was published under the title of *La Medecine chez les chinois* ("Medicine among the Chinese") in 1863, in which the author, Pierre Dabry de Thiersant, a former infantry officer and later French consul in China, included detailed quotations from one of the major Chinese works of acupuncture, the *Zhen Jiu Da Cheng* of 1601, the "acupuncture mania" referred to by the Berlin surgeon Johannes Nepomuk Rust in his *Handbuch der Chirurgie* ("Manual of Surgery") of 1830 had already blown over. In Britain and the USA, no physician concerned for his own reputation could afford to have any truck with acupuncture for precisely the next hundred years.

Only in France did the odd few physicians keep up the interest. Their willingness to view acupuncture as an effective healing procedure was nourished mainly by reports of military physicians

returning from the French colonies in Indochina, where they had observed Chinese doctors practicing needle therapy and been impressed with the apparent results.

European interest in acupuncture, to sum up this third phase of reception, was mainly concerned with its effect. Needle therapy, it seemed, was a technique, like massage or other physical healing methods, that had no theoretical basis and that deserved attention only because it at first awakened the expectation that it achieved a number of therapeutical effects by influencing recently discovered vital electrical currents in the body. Neither of these assumptions provided a long-term solid basis for its acceptance. The alleged electrical currents proved to be not so important for medicine after all, and did not provide physiologists with a definitive solution to the problem of the nature of life that was associated with interest in them, and the therapeutic effects of needle therapy remained anecdotal and unstandardizable. The developing natural sciences with their emphasis on a new approach in drug therapy and on effective surgery saw to it that only a handful of enthusiasts remained under the spell of acupuncture.

#### **4. George Soulié de Morant and energetic acupuncture**

The multivolume work *L'Acupuncture chinoise* by George Soulié de Morant, published over the period from 1939 to 1955, is also to be seen against the background of the French colonial involvement in Indochina. This work is still to this day one of the most impressive contributions of a single Western author to the explanation of the theory and the clinical applicability of acupuncture. Soulié de Morant was born in Paris in 1879. His childhood friendship with the daughter of Théophile Gautier led him into the house of the poet, where he became acquainted with a highly educated Chinese man who taught him Mandarin. Soulié de Morant received his formal education from Jesuits, and planned to study medicine. However, the early death of his father forced him into a career that would bring earlier economic rewards. Because of his unusual knowledge of Chinese, he was sent by a bank to China, where he was soon afterwards engaged by the French diplomatic service.

Soulié de Morant remained in China until 1917. He wrote many books and essays on virtually every aspect of Chinese culture, and, as hardly any other European, gained access to the highest circles of Chinese society. It was essentially because of this that the most eminent Chinese physicians consented to instruct him in acupuncture during the twenty years of his stay. His own therapeutic achievements won him the greatest respect of his Chinese hosts, for which he received the highest civil order of the Chinese government.

After his return to France, Soulie de Morant attempted to promote acupuncture among the French medical profession. Because he was not a physician and since acupuncture had sunk to the level of an almost frivolous pursuit in the latter half of the 19th century, the immediate reaction of the medical world was one of skepticism and scorn. Against this background, Soulie de Morant considered it most helpful to publish original Chinese texts in French translation. An essay by him, published in the renowned journal *Science médicale pratique* in 1931, finally aroused the interest of two doctors, who invited Soulié de Morant to take part in collaborative research in their respective hospitals.

In 1939, the first volume of *L'Acupuncture chinoise* appeared, and in 1941, the second. Soulié de Morant sought to use available knowledge of Western medicine to understand acupuncture.

However, his approach was exactly the opposite of attempts being made in China today to reduce the Chinese tradition to the essence that would allow it to be explained in terms of Western medicine (or at least not contradict Western medicine). Soulié de Morant tried to show that Western anatomy, physiology, and pathology could be interpreted anew, and could even be better understood, in terms of traditional Chinese principles.

It was probably because of this attempt to incorporate Western knowledge into the theoretical Chinese system that the publication of his book provoked a wave of hostility, which deeply hurt him personally. Soulié de Morant died shortly after completion of the third volume of his work on May 10, 1955. His collaborator for many years, the physician Thérèse Martiny, posthumously compiled volumes four and five from his notes and translations.

Soulié de Morant distinguished between different kinds of acupuncture:

One kind is simplistic and primitive. It consists of puncturing the place of pain without considering any other knowledge. Except for conditions of recent, acute pain, such treatment gives only partial, short-term relief.

Another method, somewhat better, uses points in memorized formulae. Problems are treated with little attention given to the patient or the action of the needles; i.e., in order to tonify or disperse such and such an organ, such and a point is used; for this particular symptom, that particular point is used. This method allows moderate regulation of the organs, but does not treat the underlying cause of the problem, nor control the vital energy.

The truest form of acupuncture, which we describe here, enables the practitioner to evaluate imbalances of the vital energy, the basis of all functional illness. This is achieved above all through the study of the pulses. True acupuncture is founded on the relationship between organs, based on the circulation of energy, a system which often differs from the Western anatomical physiological model. ..

Noting the variations of an illness among individuals, true acupuncture from its beginning has tended to place greater emphasis on the patient. It is not the microbe that is important, but the terrain. Dr. Nakayama, a Japanese practitioner, thus states: "The illness is not the invasion itself, but the weakness that attracts the invasion."

Chinese Acupuncture, p. 3

Soulié de Morant was the first to list the effects attributed to each acupuncture point according to organs affected. These lists, unlike anything that had appeared in Chinese literature before, enabled the practitioner to apply a type of prescription acupuncture by combining points to be needled not on the basis of knowledge of the internal condition but merely on the basis of the therapeutic goals.

Soulié de Morant introduced "energy" as his interpretation and translation of the Chinese concept of qi since he was convinced that science would one day be able to demonstrate the effects of acupuncture on energetic currents within the body. Since then, most literature written for European and American practitioners of acupuncture have interpreted the effects of the needles in terms of energetic processes.

For the supposed pathways of qi deep in the body, Soulié de Morant coined the term "meridian," which despite its lack of faithfulness to the underlying Chinese concepts, has been retained by nearly all authors writing for a Western public.

Under the heading of "What can acupuncture cure?" Soulié de Morant wrote as follows:

1. First, it is advisable to point out that acupuncture can be used with little risk; it does not introduce poisons—foreign elements—into the body; nor does it conflict with any other treatment. In fact, it is often reported to augment the effect of chemical or homeopathic medicine, and dosages may often be reduced. The only risk in these conditions is the possibility of failure that leaves the patient in exactly the original state.
2. Lesions, defined as physical changes in part of the structure of the organism due to injury or disease, are not directly affected by acupuncture treatment. However, this method may temporarily reduce or nullify the pain or trouble caused by the injury.
3. Functional problems constitute the true domain of acupuncture. . . The meticulous observers of the Far East have suggested that except in the cases of accidents, there are no lesional illnesses that are not preceded by somatic, function troubles. These problems first manifest in moral and mental changes, so the first changes of personality constitute, in fact, the beginnings of illness. If used at this stage, acupuncture is most effective and is sometimes said to be capable of curing anything. All energetic therapies must be considered as first line, preventive measures which avoid progression of an illness toward a lesion which is more difficult to cure.

We should bear in mind that these lines were written in the 1920's and 30's; that is, in an age before the introduction of antibiotics. The advantages of acupuncture which Soulié de Morant had focused on would hardly awaken the interest of modern physicians for what had up to that time been an unfamiliar, exotic form of treatment.

Nevertheless, Soulié de Morant contributed greatly to paving the way for the fourth and present phase of the reception of acupuncture in the Western world. He is not responsible for this phase; the actual stimulus for contemporary enthusiasm of a section of the population for needle therapy lies in a new *Zeitgeist*. However, by referring to the systematic-functional approach in Chinese medicine and by being the first to interpret qi as energy, Soulié de Morant placed two catch-words in currency, which were to become quite decisive for the plausibility of the underlying theories. The fourth and present phase of reception is characterized not by the significance of the effects of acupuncture, but by the power of conviction of its theoretical background.

Finally, two further French writers, whose works have exerted considerable influence in Europe and the United States, also deserve mention here. Albert Chamfrault had already studied acupuncture before he was enlisted as a naval officer in Vietnam, where he was then able to deepen his knowledge. Between 1954 and 1969, he published a six-volume work that was devoted in particular to the implications of the qi circulation system, an aspect that Soulié de Morant had not really dealt with. Nguyen van Nghi, a Vietnamese of Chinese origin living in France, was the first Asian acupuncturist of significance for the development of needle therapy in Europe and the USA. He taught and wrote just at the time when interest in Chinese medicine and acupuncture was developing among peripheral groups and achieving general significance in health-care politics.

## **5. The turning point: from marginal to political**

By the beginning of the 1990's, there was barely a town, let alone a city, in the Western industrialized countries without physicians or healers offering acupuncture treatment. Training courses in Chinese medical thought and practice had been developed by various societies in all European countries and the USA. One of the biggest of these in Germany is the Deutsche Ärztesgesellschaft für Akupunktur (DÄGFA), whose courses are attended by 20,000 people each

year. These figures of course do not include those who receive instruction elsewhere or who already practice acupuncture without undergoing further training.

Apart from doctors and healers who practice acupuncture in private practices, numerous hospitals have started to include acupuncture among their services. The spectrum includes special clinics with Chinese practitioners, spas offering a range of "alternative" health-care procedures, and pain clinics such as in the Grosshadern teaching hospital of Munich University's medical school. Many health insurers have found ways of covering the costs of such treatment.

This development seems paradoxical at first sight and therefore requires some explanation. In the 18th and 19th century, at a time when modern medical science was still in its beginnings, Chinese medicine failed to gain acceptance in Europe despite the vigorous efforts of numerous recognized researchers. In the latter half of the twentieth century, in competition with a highly developed, scientifically based, and in many ways outstandingly effective form of medicine, Chinese medicine is receiving such lasting affirmation from broad sectors of the population that physicians and healers are providing Chinese medical therapies, not least for economic reasons.

In actual fact, this development is not so puzzling as it seems at first sight. Some important parameters of the situation are more conducive to transcultural transfer and acceptance of Chinese healing at the end of the twentieth century than they were in past centuries.

Encouraged by colleagues in France, physicians interested in acupuncture in West Germany founded their own society in the early 1950's. It was only in the 1970's, though, that a process began whose consequences still cannot be foreseen even today. On July 26, 1971, an American journalist, James Reston, who had accompanied the US table tennis team on their historic visit to the PRC, wrote an article that appeared on the front page of the New York Times on how his post-operative pain had been eliminated with three acupuncture needles after an emergency appendectomy in China.

This report was played up by the whole of the Western press, and as a result the existence of China's evidently unique needle therapy, effective for reasons unknown, became a focus of public attention. Three months afterwards, a team of reputable American physicians travelled to China to observe the application of acupuncture in various hospitals. A report on the trip, which was unreservedly positive, was published in The Journal of the American Medical Association.

When in the following year, 1972, Richard Nixon went to China, the US President's personal physician witnessed several operations under acupuncture analgesia; on his return, he confirmed the reports of earlier doctors.

The interest of the Western world at the time was directed to the pain-relieving effects of acupuncture in surgical operations. At the beginning of the 1970's, hardly any organ of the media missed the opportunity to report on this phenomenon, most often with large colored photographs. The alleged exoticism of Chinese mentality toward coping with pain and the inscrutable, scientifically barely explicable effects of needles even in complicated surgical operations produced, against the background of decades of Chinese insularity, a blend of journalism that evidently fascinated large sectors of the public.

With the end of the Cultural Revolution and the beginning of political and economic reforms in the late 1970's, the Chinese leaders swiftly disassociated themselves from what were in reality

unsatisfactory effects of surgical acupuncture analgesia (the concept of acupuncture anesthesia is completely inappropriate). With this, Western interest in this application of acupuncture disappeared. What now came into focus was the general therapeutic use of acupuncture.

Especially in the countries that had been colonially involved in East and Southeast Asia, such as the USA, Britain, France, and the Netherlands, numerous Asian immigrants who had treated patients of their own ethnic groups more or less out of public sight ventured out into the open, offering their services to local populations in general.

The first scientific studies suggested a connection between acupuncture analgesia and the effects of endogenous opioid peptides and biogenic amines in the central nervous system. This opened the possibility for serious discussion about the potential of acupuncture, even among scientists who would have had to fear for their reputation if they joined debates on the movement of qi, or the existence of yin and yang conduits.

## **6. Chinese medicine in the Western world at the end of the 20th century: Interplay of market and fears**

Acceptance of acupuncture in the industrialized countries of the West over the last twenty years, as would appear now, has primarily been an acceptance of the notions of the nature and appropriate treatment of illness that allegedly underlie it. Only secondarily has this acceptance rested on clinical successes. In the 1960's, certain attitudes changed among a sector of the population in Western industrialized countries. Chemistry and technology, which previously had only positive connotations, now began to lose their attractiveness, despite the fact that almost any aspect of daily life was almost unthinkable without chemistry and technology.

Regular media reports about the negative effects of chemistry on the cleanliness of air, soil, and water, on animal life, and hence on the human body and its health, as well as equally regular reports about chemical disasters in Bhopal or Seveso, in Frankfurt-Hoechst, and many other places, caused chemistry to be seen in a new light, and provoked fears that extended to modern medicine. Chemical drugs come from the same factories whose products burden the environment—chemotherapy is the pride of modern medicine. It is easy to understand how the increasing detachment from the positive effects of chemistry were associated with a sense of alienation from a form of medicine that had closely relied on chemistry.

The same process of change is seen in attitudes toward technology. The impact of technology on daily life, once celebrated in world exhibitions as the solution to the millennia-old problems of humanity, now came to have a pale after-taste for a certain section of the population. Technology is felt by many to destroy nature and also to destroy relationships between human beings. The picture of the railroad and freeway is no longer associated principally with communication between distant regions; it is equated with the carving up of stretches of land once intact.

Technology, and not least nuclear technology, is viewed as a threat, and this evaluation is carried over to medicine, whose whole pride rests on the application of technology in diagnosis and therapy. Technical diagnosis, though, can provoke fear and drive a wedge between patient and doctor. Many patients have the feeling that inexorably neutral machinery produces the diagnosis and informs the

doctor with paper print-outs or computer images. These patients wonder whether the dominance of technology in these areas allows any room for the perception of individual distress.

The advertising for Chinese medicine focuses precisely on these fears. The fuzzy concept of "natural healing," which in actual fact is barely applicable to Chinese medicine, offers an impression of security that their bodies will not be polluted with chemicals and suggests that the personal application of the needles guarantees a traditional doctor-patient relationship with the promise of sympathy and empathy. The diagnosis of inspection, listening and smelling, inquiry and pulse-taking aims to evaluate the suffering of the individual, not to compare the patient with standard values, any deviation from which is a priori considered morbid.

Important for the success of acupuncture and Chinese medicine has been the notion of qi.

Acupuncture and Chinese medicine became attractive and plausible in Western countries overnight when shortage in oil supplies from the oil-producing countries in the 1970's made the Western world aware of the energy problem. Since those years, energy supply has come to be the most important existential problem of the industrial nations of the West. Securing energy supplies has repeatedly led to international conflicts culminating in military action. Domestic energy policy and the controversy about the best forms of energy for the future have led to violent squabbles in national politics. Even for the private household, concern about availability and affordability of energy since the energy crisis of the 1970's is not to be under-estimated.

Against this backcloth, "Chinese healing," as interpreted by Western writers, at least serves to solve the issue of the energy problem within the individual's own body. By explaining disease in terms of energetic disturbances, Chinese medicine gains plausibility, but a plausibility that arises out of conceptual adaptation to Western fears, not out of the historical reality of Chinese thinking.

A further conceptual adaptation to the concerns of a section of the population enhances the attractiveness of Chinese medicine. Many metaphors of killing, defense and attack, which have become prevalent since the 19th century with the development of bacteriology and more recently in the realm of popular descriptions of immunology, have been taken for granted in China since ancient times. This brand of figurative use of language, however, does not appear in the version of Chinese medicine propagated in the West.

For the population of Europe increasingly disquieted by the threat of war, reports about the latest developments in immunity research in Western medicine presents a picture of war in the body in often quite drastic metaphors. The mass media report on "daily massacres, frightful carnage, and secret acts of sabotage," "hidden allies and the search for wonder weapons" in the battles between killer cells, and viruses, and so forth, on the one hand and antibodies supported by biochemistry and surgery on the other.

This kind of war reporting from the inner life of the body is understandable to some and frightening to others. Anyone afflicted by disease seeking rest and harmony finds it hard to come to terms with the fact that modern drugs are engaged in a belligerent struggle to destroy the enemy in the organism. Largely as a result of ruthless TV reporting, the general public is aware of unavoidable undesired side-effects on the civil population in real war, just as it is aware of the side-effects of drastic chemotherapy.

In contrast to reports from the battlefield of modern immunology, the theory of Chinese medicine freed of its martial metaphors gives the impression that it can lead patients back to the harmony of the great whole. It offers solace where modern medicine offers only the uncertainty of a murderous battle.

Quite a few patients experience modern medicine as a super-market of possibilities, in which many specialists each investigate the organism from their narrow angle and recommend appropriate remedies based on their narrow view. The loss of a central authority guiding the patient toward an existentially meaningful understanding of his or her illness parallels the loss of "central meaning" within society in general. In daily life, a lack of central meaning, though enjoyed by those who are able to take full advantage of individual freedom, is bother-some for the many who find life hard to cope with and need guidance. Similarly, if modern medicine, which as any form of medicine is a reflection of the spirit of the times, fails to offer many patients any deep, innermost reason for their suffering—at least, this is what a certain sector of the population feels.

The systematic-functional approach of Chinese medicine fills this gap. Of the heterogeneous mixture of different approaches that have arisen over the past two thousand years, the only approach to have found its way to the West is the one that appears to have been neglected by modern medicine or, to put it more accurately, one which is taken for granted in modern medicine at a theoretical level, but which neither the general practitioner nor the specialist appears to be able to put into practice, and which for the patient might as well not exist at all.

The systematic approach in Chinese medicine and hence also in acupuncture interprets the body as a unity and the individual organism as a part of the whole universe. Chinese natural philosophy appears as an attractive alternative at a time when many people, consciously or unconsciously, suffer from the lack of reference to a whole, and are unable and unwilling to experience the whole in explanation models offered by the traditional churches. The notions of yin and yang and the five evolutive phases suggest answers to many questions and solutions to many problems that seem pressing today without having to resort to conventional religions.

The notions of the necessary harmony between man and his environment on the larger scale, and between the individual functional spheres of the body on a smaller scale address the doubts of many who cannot escape the impression that traditional politics and theology are either unable to adequately deal with the threats to future life or actually actively encourage the catastrophes in store.

The systematic and at the same time non-metaphysical approach of Chinese medicine, with regard to both the individual body and the universe, answers the needs of these people and has its primary justification in these needs.

Nonetheless, this attractive systematic approach is only a child of our times. It has secured for Chinese medicine and acupuncture a certain amount of popularity because it addresses the existential needs of a sector of the population at the end of the 20th century. The coincidence between the systematic approach and the existential needs has provided an initial push that has brought acupuncture into the limelight, yet for acupuncture to gain long-term recognition and avoid homeopathy's fate of being the eternal outsider, it requires substantiation, which in our Western civilization means the stamp of approval of science.

For a large proportion of users of acupuncture, it is of course of no direct consequence whether the application of acupuncture achieves scientifically demonstrable effects. The systematic approach is attractive because a preliminary cure for a wounded soul is achieved through its integration in a system of ideas that gives meaning to an individual illness, that traces the problems of the head or back, skin or mouth to an underlying cause in the body, and that relates, if necessary, the underlying cause in the body in turn to an underlying cause in the existential environment of the patient.

Given the multiple morbidity that ails our society in the eyes of a growing section of the population, it is reassuring to know that there exists an explanatory model at least for the multiple morbidity in the body that is capable of pinpointing the central problem and perhaps even of treating it. The fact that this central problem is expressed in unusual terms such as "kidney yang depletion" lessens fears, since such terms evidently cannot be construed as referring to biochemical or biophysical disturbances, which would have to be treated with chemical or technical methods that have increasingly fallen into discredit. Concepts such as kidney yang depletion refer to a deviation from an equilibrium in the great world plan that can be reversed.

All these factors alone might be reason enough for Chinese medicine even if it only fits this description in part—to be viewed as a meaningful complement, if not an alternative, to conventional Western medicine. It should also be added that, in contrast to the unsuccessful efforts in the 18th and 19th centuries, Chinese medicine in China has now come to be recognized as a lucrative export product, and in the Western commercial world is seen as a profitable investment.

It is particularly from this side (i.e., from the commercial world) that idealizing reports with cliché-coining titles such as "Healing from the Far East" are promoted in large-circulation magazines. This kind of reporting generates continuing interest among patients who originally may have had no affinity with such therapies, but who as a result of negative experiences in their dealings with contemporary biomedicine or as a result of unsatisfactory treatment in the past are now willing to give an allegedly Chinese alternative a chance.

The short air flights that have drawn Europe and America closer to China have brought more and more visitors into contact with Chinese medicine on its home ground. Chinese tourist managers have developed routines to show foreign travellers Chinese medicine in practice, especially Chinese drug therapy, which was hitherto only of marginal interest in the West, but which, for economic reasons, is a more viable export product. Tourists are given free diagnoses, which inevitably end with therapeutic suggestions. A considerable turnover is generated in this way. To what extent the medicines provided contain admixtures of highly effective substances from modern medicine not declared on the labels can scarcely be evaluated. The effects achieved cause many to seek Chinese medical health care on their return.

## **7. The spectrum of supply**

Not all, but most of the books on acupuncture written for MD and non-MD students of acupuncture and general lay-audiences in Western countries place the systematic-functional approach of Chinese medicine in the foreground. They begin with an explanation of the doctrines of yin and yang and the five phases with lists of their correspondences. They show the system of the supposed meridians that

for two thousand years provided the basis of needle therapy. The meridian system illustrates the way in which the functional spheres of the body are interlinked, providing a graphic representation of the holistic view of Chinese medicine.

In this way, Western literature presents those elements of Chinese medicine that have a chance of providing a conceptual alternative to contemporary biomedicine and a complementary method of treatment. It would be impossible for Chinese medicine to be brought to the West in its entirety or in some purely original Chinese form. First, there is no Chinese medicine as a finished, closed healing system. Chinese medicine developed dynamically over two millennia much as medicine in the West did from its Hippocratic beginnings around the 500 B.C. The development of Chinese medicine within the framework of its traditional theoretical system came to a standstill long before the end of the cultural environment that made this medicine possible and made its conceptual basis plausible. None of the major areas—theory, acupuncture, and pharmacy—have undergone any significant innovation since the beginning of the 17th century.

In particular, acupuncture, after a peak that was reached with the publication of the "Great Encyclopedia of Acupuncture and Moxibustion" (zhen jiu da cheng) in 1601, gradually degenerated to a folk medicine, prompting the famous physician Xu Dachun (1693-1771) in a detailed survey published in 1754 to speak of the "loss of a tradition" and the non-existence of able acupuncture practitioners. In 1822, the Chinese government classed acupuncture as a method of treatment that learned men should not be exposed to and forbade the imperial medical college to instruct students in its practice.

Against this background, the question arises as to what "Chinese medicine" should be transmitted to the West. The practices and theoretical conceptions that in the political climate of the People's Republic of China have been chosen from the heterogeneous heritage as meaningful? The varied practice free of political influence, based on personal interpretation of traditional opinion and techniques among representatives of Chinese, for example, on Taiwan? The pragmatic approach relatively free of theory that is widespread in Japan? Or any of the various Chinese approaches of the last two millennia? In trying to answer this question, one problem lies in the fact that there is no criterion for judging any one of these approaches in relation to another. They all have their effects. Practitioners of each of them can point to satisfied patients. Failure is of course also common to all. Time and time again, each practitioner sees the astounding effect of the needles, but no explanatory model that would convince and completely satisfy at least a majority of practitioners is in sight. So far, the scientific approach to acupuncture has not followed satisfactory methodologies. Studies producing negative conclusions have no influence over practice, since such evaluations strengthen the conviction of those who would deny science the right to judge procedures whose conceptual basis lies outside scientific thought structures.

In this context, we should also consider the difficulties faced by medical faculties of universities confronted with demands to introduce Chinese medicine into the curriculum. Neither the theoretical basis, diagnosis or even the theory of Chinese medicine can be standardized. Graduates of modern medicine, even though they may later attain different levels of proficiency as physicians, have at least all had roughly the same training to the highest possible contemporary standards and have proven

their knowledge through officially supervised examinations. This is not possible in Chinese medicine.

A medicine school or faculty that decides to include acupuncture in its curriculum has no criteria for the selection of teaching staff. If it has the idea to take on Chinese practitioners, it must decide first of all if preference is to be given to traditional practitioners who have no university education, who have learned their skills through self-study or a long teacher-student relationship, and who practice "classical" Chinese medicine, or to graduates from modern teaching institutions in the People's Republic of China who are trained to varying degrees in Western medicine, but who are no longer capable of practicing traditional medicine uninfluenced by modern anatomical, physiological, and pathological ideas.

Whichever option a medical school chooses, there are no objective criteria for evaluating the knowledge of prospective teachers in either group. Students attending one clinic in southern Germany are astounded to hear the therapies there are not spoken of flatteringly in another clinic in southern Germany, and vice versa. The reason for this is that the doctors in the one come from Peking, whereas those in the other are from Shanghai. Each group practices its own version of "Chinese medicine," and denies the other version any legitimacy even though it has no empirical or scientific grounds for doing so. The fact that these clinics are subject to no state or technical quality control is only one of the many ramifications of this situation.

Quite apart from the absence of an objective method of finding a skilled doctor in one or another group, the medical school, should it have reached the conviction that it has found a suitable candidate, cannot, given the nature of Chinese tradition, be sure that the candidate will be willing to pass on all his knowledge. Secret knowledge, to which only the mastermind has access, is still an important part of the prestige of an outstanding doctor in China. Even today, the best doctors refuse to pass on all of their knowledge either in medical colleges or to individual students assigned to them. If the administration gives preference to Westerners, there would be a large number of different groups to choose from, most of which contest each other's competence. There are groups who, without any scientific evidence, say that getting the feeling of qi (de qi) at the needle insertion point is the *conditio sine qua non* for the effectiveness of acupuncture treatment; other groups maintain precisely the opposite. There are groups who regard a strong electrical impulse as a prerequisite for successful treatment (which raises the question as to how acupuncture could have survived for two millennia without artificial electricity), while other groups of equally successful acupuncturists produce their effect through shallow needling whereby the needles penetrate the skin barely a millimeter. There are groups who state, again without any scientific proof, that acupuncture can only produce effects when ancient Chinese notions are followed, and these fundamentalists formulate their allegedly classical notions in a way that the ancient Chinese could not even have heard of. Other groups would rather discard all ancient Chinese concepts, believing that acupuncture's legitimacy can only be based on modern neurological or endocrinological theories.

It is not possible to make a reasonable choice from this plethora of options. Wherever a choice has been made, it has rested on local availability and personal recommendations. The students taught by such staff cannot be sure what quality of training they are getting since the chances are that in the

nearest medical bookstore they will pick up a "standard work" of acupuncture that represents a completely different approach, or that they will come across an introduction to Chinese medicine whose terminology follows a completely different system of interpretation, translation, or transcription from the one to which they are accustomed. In either case, they will be confused. The same insecurity also affects patients.

The impossibility of objectively determining which of the old or modern approaches is the best and of standardizing this approach in theory and clinical practice is of course only one of the difficulties facing attempts not only to transfer Chinese medicine to the West, but also to anchor it in the Western academic framework. A second difficulty is closely related to this one, and is often overlooked.

Irrespective of whether Western supporters of Chinese medicine take their notions of Chinese medicine from the older or more recent history of Chinese medicine, however hard they devise a purely Chinese alternative to Western medicine, they always fail because of the difference in attitude between Chinese and Western traditions to the stringency of thought systems.

The Western preference for thought systems that are free of internal contradictions and that constitute truth until a new truth provides better explanations with fewer contradictions is diametrically opposed to an East Asian tradition that judges thought systems by how well they prove themselves to be in practice rather than by how true they are. The yin-yang and five-phases doctrines are in many respects mutually exclusive, as when, for example, one assumes the existence of six and the other the existence of five depots in the body. The Western solution to the problem, which is to open the body and see whether there are five or six organs, stands in contrast to the Chinese tendency to reckon with six organs in the yin-yang doctrine and with five organs in the five-phase doctrine. The yin-yang doctrine is legitimized by its being a logical system of correspondence and by proving itself capable of evaluating and influencing numerous processes in the body and hence in the human organism. The five-phase doctrine is legitimate for precisely the same reason: it too is logically derived from the notion of systematic correspondence and proves itself by being capable of evaluating and influencing numerous processes in the body and hence in the human organism. Consequently, traditional Chinese medicine bases itself on both doctrines, and sees no contradiction between them.

Another example is offered by pulse diagnosis. For those who are still capable of thinking in purely traditional categories, the various schemes for feeling the wrist pulse that are presented in ancient literature represent no contradiction. The physician has the choice of either feeling the pulse with three fingers or with one finger. Using three fingers, light pressure with the index finger above the imaginary line level with the styloid process allows him to feel the state of the lung and heart, greater pressure with the middle finger on the imaginary line enables him to feel the state of the spleen, and greater pressure still with the ring finger allows him to feel the liver and the kidney, which similarly lie in the depths of the body. Also in accordance with the doctrines of correspondence the physician can apply a little pressure to feel the lung and heart, a little more pressure to feel the spleen, and still greater pressure to feel the liver and kidney. According to a third (and certainly not the last) variant, he can, with one finger, apply a pressure equal to the weight of three beans to feel the lung, a pressure of six beans to feel the heart, a pressure of nine beans to feel the spleen, a pressure of

twelve beans to feel the liver, and finally a pressure that brings the fingertip almost to the bone, to feel the kidney.

All three procedures are logically justified in themselves, since they are all based on systematic correspondence. Nevertheless, they go against Western thinking, which in the face of a "this-as-well-as-that" framework naturally poses the "is-it-this-or-that?" question. Authors writing for a Western public have no choice but to answer the "is-it-this-or-that?" question with regard to the number of organs, the pulse diagnosis schemes, and many other details.

Consequently, in all descriptions of Chinese medicine written for Western users, what is perhaps the only real alternative that Chinese medicine offers in comparison with Western thinking is adapted to the usual patterns of, precisely, Western thought. When one further considers the fact that the Western variant of Chinese medicine, by explaining the central concept of qi as energy and by selecting only those elements from the heterogeneous tradition that do not appear obsolete or scientifically absurd, is divorced from the original Chinese tradition, then it is easy to understand that the reception of Chinese medicine is not a mechanical, but a creative act, whose further development is conditioned more by the expectations and demands of a Western population than by the marshalling of scientific evidence.