

# 2000 years of medical exchange

Part 4: The 19th and 20th centuries

**By Gunter Neeb**

## The Hui-Tong School in Chinese Medicine

During the exchange of ideas with European traders, missionaries and scholars some of the ideas about anatomy and other concepts became also known among Chinese doctors.

Wang Qing-Ren (1768-1831) was one of the doctors who, similar to Paracelsus, criticised blind belief in the authorities and tried to verify medical theories with anatomical studies. He emphasised that for a doctor knowledge of anatomy was of great importance. His later contemporary Tang Zong-Hai (1861-1912) also attempted to prove Chinese medicine with scientific methods and wrote a book including anatomical drawings of internal organs. He and Wang were members of the society of integration (hui tong) of Western and Chinese medicine, which attempted to speed progress in Chinese medicine by integrating knowledge from Western science.

Some of their later members were Zhang Xi-Chun (1860-1933) and Yun Tie-Qiao (1878-1935), who also had some interesting approaches. Zhang was of the opinion that integration was not difficult, since many Western theories were implicit in Chinese medicine theory. He boldly combined Western pharmacy with Chinese herbs, i.e. aspirin with cooling herbs, and stated that the result of the integrated theories should be applied only when proven clinically effective. He created many

new formulas and combinations and was very popular from 1930 to 1940.

Yun Tie-Qiao, on the other hand, took the position that Chinese medicine and Western medicine belonged to two different systems that should be studied equally, as he himself had done thoroughly, and noted that Western doctors put their attention to specific internal parts like bacteria, local pathology and detailed anatomy, while Chinese doctors paid more attention to the body-mind system as a whole, as well as climatic, social and external influences. He emphasised similarities and differences and never tried to force a combination where it was not easily possible. Although he was the latest member of the Hui-Tong School and his integration failed to be achieved during his time, his ideas were fundamental to the new school of Integrated Chinese Medicine which was founded in the 1950s.

Besides this, research was carried out on ancient works, such as the *Shen Nong Ben Cao Jing* (Classic of Shen Nong's Materia Medica), which was re-edited by Gu Guan-Guang in 1884. This included a summary of the experience on the use of herbs, new achievements in differentiating pharmaceuticals and researching their effects, especially under the influence of Chinese medicine and Western thought; quite a few physicians attempted to create effective compositions of Chinese medicinal herbs with modern scientific methods. Considerable achievement was attained in adapting Chinese medicine pharmacology and folk prescriptions, proven and secret recipes, such

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as *New Collection of Proven Recipes* (1846) compiled by Bao Xian-Gao.

### Homeopathy and naturopathy

As a counter-movement to the reductionist and materialistic view of contemporary medicine in Europe, the German doctor Samuel Hahnemann (1755–1843) developed the view that the strong treatments of this time, like blood letting, chemical medication and surgery, were more harming than helpful. Instead, the body's own life force should be strengthened in order to cure itself, similar to the “fu zheng” (support the normal qi) idea in Chinese medicine.

Hahnemann's therapy was based on the view of a life force and definitely also took some ideas from the vaccination theory, which he viewed positively like surgery and hygiene. His idea to cure was not to attack the disease with its opposite force, but instead with a weak dosage of an “artificial disease” with the same symptoms, in order to stimulate a reaction of the life force against the original disease.

Although bacteriology was not yet discovered, he believed that cholera was spread by tiny animals and that the disease could be destroyed by heating the clothes of the sick.

Once he took quinine without having malaria, which caused a fever-like condition, and concluded from this that a medication that caused similar acute symptoms to the chronic disease could cure this chronic disease as a reaction to this stimulation. According to this principle “cure the same with the same” he tested many substances on himself, or took the known symptoms of poisoning as image for the medication, which he made in increasingly weaker dilutions. Some dilutions were even so weak that no more molecules of the original substances could be found in the dilution. But – as Hahnemann stated – the working principle of homeopathic therapy is energy, not substance. This therapy found its way from Germany to England, India and America and is nowadays one of the most applied unorthodox therapies in Western countries, used even on animals and little children.

For a long time homeopathy was mocked by modern physicians, called placebo-therapy and unscientific, but its reputation of being soft, cheap and without side effects helped to keep it alive. More and more theories for its principle were produced, but so far none could prove or deny its effects.

Naturopathy, another movement started in the 1830s looking for natural treatments, followed the ideas of the French philosopher Jean-Jacques Rousseau (1712–1778). He criticised humanistic ideas for neglecting the feelings for reason, leading to failings of civilization like envy, dishonesty

and hypocrisy. Man must find his way “back to nature” to become good again. In his philosophy he was very close to the Daoist and Mohist philosophers like Mo-Di, Lao-Zi and Zhuang-Zi.

The naturalist therapies promoted by the German priest Sebastian Kneipp (1821–1897) and his countryman Vincenz Prißnitz (1799–1851) were based on the principle that, instead of attacking the disease, the body's own strength must be supported by water cures, dietetics, breathing and a healthy way of living and exercising. This movement began to regain strength more than 150 years later in the 1970s, when “back to nature” became a new motto again, while many young people also became interested in Daoist calisthenics and Eastern philosophy.

### Cellular pathology and bacteriology

With the industrial revolution between 1820 and 1850 many younger people left the countryside and looked for work in the cities. This led not only to new poverty in the rural areas, but also brought an increase of crime, prostitution and faster spread of epidemic diseases like cholera, tuberculosis, diphtheria, typhus and influenza in the crowded cities, due to lack of hygiene.

The reactions of governments were reforms for stricter hygiene, improvement of hospitals and an increase in biological and medical research of cells and bacteria, since the new micro-pathological concepts of Rudolf Virchow (1821–1902), Louis Pasteur (1822–1895) and Robert Koch (1843–1910) had shed light on this situation. Their new concepts of the understanding and improvement of the therapy of bacterial diseases led to the improved asepsis in surgery and obstetrics, and finally to the development of serology, which laid the foundations for improved vaccination and immunology. These were the basis for Paul Ehrlich's (1854–1914) experimental research into the treatment of bacterial diseases with sulfonamides and of Alexander Fleming's (1881–1955) discovery of penicillin in the 20<sup>th</sup> century.

In diagnostics, the inventions of the x-ray photography by the German Conrad Wilhelm Roentgen (1845–1923) in 1895 and electrocardiography by the Dutch Willem Einthoven (1886–1946) were other breakthroughs of modern Western medicine.

### Medical progress in the 20<sup>th</sup> Century

In chemical diagnosis, the American Folin (1867–1934) and the Chinese Wu Hsien (1893–1959) developed new methods in blood analysis. The electronic microscope (1935), the development of virology, discovery of chromosomes and later the DNA led the medical development from cellular to molecular biology.

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Diagnostics developed from x-ray to the more detailed computer tomography and from there to nuclear magnetic resonance.

Surgery developed from organ surgery to tissue surgery, to microsurgery, where even the finest structures could be connected or separated. Implantation of DNA material by microscope enables cloning and expanded the influence of medicine to the smallest levels.

Biology was also moving from classification of species to organisms, and organism to cell, from cell to cell particles. From there organic chemistry took over and divided proteins to amino acids and amino acids to smaller organic particles. Finally physics neatly fitted in to analyze and divide molecules into atoms, and atoms into electrons, neutrons and protons, and then those into subatomic particles like mesons, photons and quarks. Mathematics provided the formulas to measure and analyze it all. The linear scientific approach was always straight and aimed directly at one parameter of the whole complex system of the body.

But while medical research became more and more specific and small, the importance of the individual became less and less important. An increasing number of machines were put between patient and therapist, leading to the coining of the term “machine medicine” and an increasing number of critical patients. The search for new or old medical systems different from orthodox Western medicine began at the end of the 1960s and is still continuing until the present day.

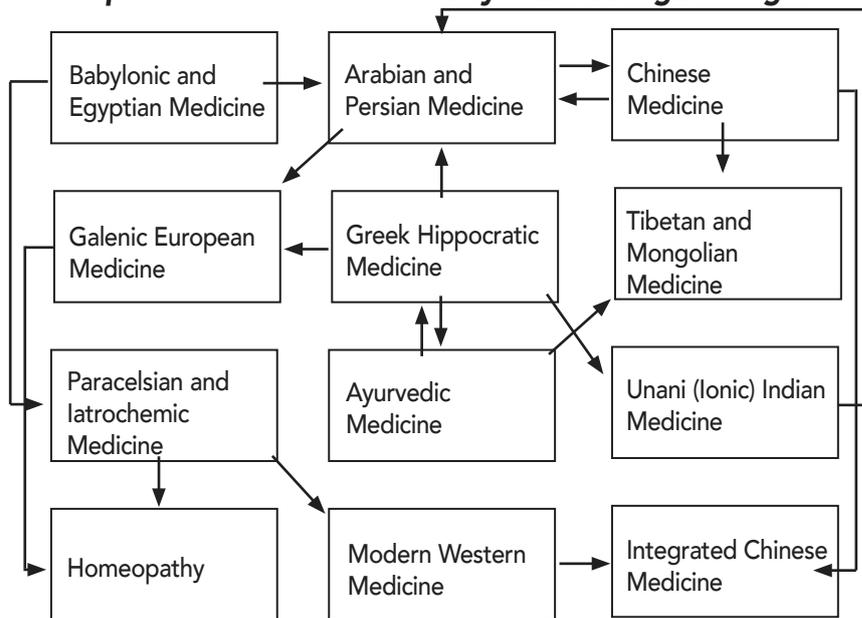
### Chinese medicine in the ROC and PRC

Under difficult conditions, some people of foresight in Chinese medicine circles founded Chinese medicine schools, such as the Shanghai Institute of Chinese medicine set up by Ding Gan-Ren and Xie Li-Heng in 1915, the Lan Xi School of Chinese medicine in Zhejiang Province by Zhang Shan-Lei in 1920, the Correspondence School of Chinese Medicine by Yun Tie-Qiao in 1925 in Shanghai, the Shanghai Chinese Medical College of Chinese Medicine by Lu Yuan-Lei and others in 1930, the Correspondence School of Chinese Medicine by Zhang Xi-Chun in Tianjin, Beijing College of Chinese Medicine by Xiao Long-Yong, etc.

They made efforts to safeguard and develop traditional Chinese medicine and pharmacology, compiling teaching materials, organising academic societies, publishing periodicals and magazines.

After founding the Republic of China in 1911, the new government changed the course of medical development in the direction of Western medicine and discouraged traditional medicine. This almost led to the prohibition of Chinese

### Development of different medical systems through the ages



medicine in 1939, which, after a protest of all schools and scholars of traditional medicine, was finally aborted. In 1934 acupuncture with electrodes was invented and some new research on the existence of channels began.

After the founding of the PRC, a promotion of traditional medicine study at universities, as well as research on its principles and therapies led to a new understanding of its value in China and later in the West.

In Taiwan, after some famous teachers like Master Dong brought their knowledge with them, Chinese medicine began to flourish at first, but due to the lack of government support became a folk medicine as an alternative to the official Western medicine. This led to a decline of its knowledge until the China Medical College in Taichung was founded in the 1960s, which offered eight years of academic education including Western as well as Chinese medicine. Chinese medicine is still very traditional in Taiwan, emphasising pulse diagnosis and the Classics. Since the 1980s it also has government support, and more recently a lot of scientific research in Chinese medicine is performed in Taiwan.

One of the more common forms of Chinese herbs that began to emerge in Japan and Taiwan are the so-called “scientific” Chinese herbs (*ke xue zhong yao*) — dried granulate extracts from herbs, that do not need to be decocted.

Typically, in Taiwan, Hong Kong and especially Chinese communities in Singapore, Malaysia and other East Asian countries, Chinese medicine is practised in small private clinics by doctors that often learned their skill from their parents and pass on family prescriptions running in the family for generations. By contrast in China, Chinese medi-

cine is rarely practised in small private clinics but rather in hospitals where the emphasis is on scientific research and university education.

However, the works of the traditional ENT specialist Ding Gan-Ren *Hou Sha Zheng Zhi Gai Yao* (About Tonsillitis) and *Ding Gan-Ren Yi An* (Case studies of Ding Gan-Ren) emphasised the importance of classical works, which led to a renaissance of classical scripts in the educational programs of Chinese medicine doctors.

Since the 1950s, many discoveries have been made in Chinese medicine scientific research and the integration of Chinese and Western medicine. The unique effect of Chinese traditional acupuncture and moxibustion therapies for many common and complicated diseases and the achievements of clinical experiments in acupuncture analgesia and anesthesia have been a focus of world attention since 1971.

The effect of traditional medicine on the environment has also been noted. For example, significant results have been obtained in both synthesis of cow-bezoars (*Calculus Bovis*) and musk (*She Xiang*) in order to protect these species.

Biologist Zhu Zong-Xiang, among others, has initially confirmed the general existence of channel transmission in human bodies, as has long been systematically stated in the *Huang Di Nei Jing* (*The Emperor's Classic of Internal Medicine*).

Since acupuncture and moxibustion boomed in the 1970s, international medical circles have taken a new view of Chinese medicine. Traditional medicines of different cultures, which had faded from the people's memory, have gradually obtained a place in the World Health Organisation. At the beginning of the 1980s, the UN program for traditional medicines, working hand in hand with UNDP, conferred upon institutions that had a foundation of considerable achievement in traditional medicines in various parts of the world the title of "Co-operating Centres of Traditional Medicines under WHO". Of the first 21 co-operating centers, seven were set up in China.

### Reception of Chinese medicine in the West

In Germany, Franz Hübötter, a physician educated in Sinology, wrote in 1929 about acupuncture, and in France Soulie de Morant attempted to introduce acupuncture in 1934. But although his predecessors Roger de la Fuye and the Vietnamese physician Nguyen van Ngh, who translated some parts of the *Huang Di Nei Jing* from Vietnamese into French, made further attempts to promote it, acupuncture remained a fringe therapy until the 1970s. Another Frenchman, Paul Nogier, invented a new ear-acupuncture system based on traditional acupuncture.

In Germany, the doctors Bachmann and Sti-

efvater also wrote about this topic since electro-acupuncture was used there since 1956, and introduced chrono-acupuncture (Zhi Wu Liu Zhu) in 1970, when about only 300 physicians and health therapists applied acupuncture and moxibustion in Germany.

The above-mentioned boom began after 1971, when an American journalist watched acupuncture analgesics during surgery and reported how his own pains after appendectomy were treated with acupuncture. In 1972 tonsillectomies were performed in Vienna, Austria, and in the USA with this method, which found many more applications in many German university clinics as the search for physiological explanations began. One of the important ones was the endorphin release theory by the Canadian neurophysiologist Bruce Pomeranz. In 1999, the German doctor Julia Kleinhenz invented the "placebo needle" which enabled placebo studies to take place with acupuncture. Presently acupuncture has been introduced to more than 100 countries and regions.

Since publications of the German Sinologist Manfred Porkert in 1978, Chinese herbs became also a focus of interest in Europe, while Chinese traditional doctors had introduced them to the USA a few years earlier. Erich Stöger, an Austrian pharmacologist with education in Sinology, has been translating monographs from the PROC Pharmacopoeia since 1991. The German G. Eisenbrand and the director of the Shandong Institute of Marine Materia Medica, W.C Tang, translated a similar work with 150 species and 3000 single substances in 1990. The Chinese Ding and the German Paulus wrote a small handbook on Chinese herbs sorted according to botanical classifications in 1982. In 1986 the official German pharmacological collection contained a monograph about ginseng. In 1991 the first TCM Hospital, treating patients with herbal decoctions, acupuncture and qi-gong, was established in Bavaria. Since then seven other hospitals or departments that apply Chinese medicine have been created in Germany.

### Discussion

Medical systems on the Eurasian continent and even Arabia and India seem to be closely related in their development. As we can clearly see from the historical comparison, distance was never a problem for the exchange and spread of knowledge between Europe and Asia — promoted by traders like the Arabians or Marco Polo, missionaries like the Buddhists, Nestorians or Jesuits, or even military invaders like Genghis Khan and European colonists.

Books were translated into other languages and information was spread by tale telling, sometimes adopted to new cultural backgrounds or



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Rare in drought  
Or with wind about.

Round or thin  
Don't reach in  
Or if you do, don't fall out

A poet's end, without a doubt.



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changed according to the needs of the time. But it is very hard to say where some ideas originally came from and where it spread to later, like pulse diagnosis, or alchemy that could have come from Babylon, Egypt, China or Arabia, but which on its arrival definitely influenced men like Paracelsus to follow a completely different direction in the treatment of diseases.

During Paracelsus' time the use of herbs and many medical ideas in Europe and Asia were probably closer than ever. But it was after that time, in the 17<sup>th</sup> and 18<sup>th</sup> century, that medicine in Europe began to develop its own system, by reducing the body, its functions and its diseases to materialistic principles of the early natural sciences and analyzing them according to mathematics, physics and chemistry.

Choosing such a specialised road proved to be very successful and enabled the treatment of diseases for a large number of people due to choosing a generalist view of disease over an individualistic view of the diseased. This emphasis made diagnosis and treatment much faster and easier for the therapist, who had only to classify the patients according to the standard rules of known diseases and their treatments, and did not need to change or adjust the direction of the therapy after it had started.

While patients were treated wholesale, rather than individually as before, progress in medical research followed an ever increasing precision from body to organ to tissue to cell, to biochemical substance and at present to the DNA itself, thereby shifting the attention away from the subjective symptoms of the individual. The treatment of tiny components became allied to large general principles, in which the disease was no longer seen as part of the body but as an alien independent enemy that had to be attacked and destroyed in order to cure.

As a reaction to this, some "unorthodox" systems such as homeopathy and naturopathy emerged, which emphasise individuality and self-strengthening, and the neglected non-substantial part of the body, the mind and its emotions became gradually more important. While Western health systems became increasingly expensive due to the introduction of more technical equipment, many patients felt more alienated from the therapist by the lack of human contact.

Interestingly, the recent development of the so-called wellness treatments where people spent large sums for relaxation, massage, bathing and similar health related therapies, seem to offer what medicine cannot give them. The methods remind one of Roman bathing culture at the end of the Roman Empire in the 3rd century, with bathing, food and bodily pleasures, and also seem similar to the bathing and relaxing culture of the 13th century in medieval Europe. Both occurred

before big changes in society.

Changes in natural sciences began already in the 20th century with paradigm changes from isolated to a systemic view of the world, like complex mathematics and fuzzy logic, quantum physics and chaos theory, non-dissipative structures in biology and non-homeostatic systems in biochemistry. So far no change in the development of medicine can be seen in the West.

In China, Western medicine was introduced and adopted well, but it did not supplant traditional medicine. In fact, the opposite is true: Chinese medicine has adapted and integrated methods and views from Western medicine as it did with influences from other medical systems many times before. While the West is still following the linear road to smaller and smaller parts of the whole, Chinese medicine, which always grew and survived with inclusion of even contradicting theories, can be compared to a circle that grows larger with new information rather than a line that grows longer.

But the need for changes in biomedicine is growing stronger: in fact, it could be that very "outmoded" systemic view of body, environment and disease from Chinese medicine that provides the impetus for such a necessary paradigm shift. Like cultural exchange of ideas which have always sped progress and development in ancient times, it might be time now for Western medicine to open to approaches different from the one it has applied since the 17th century.

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