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## ACADEMIC EXPLORATION

# Differences in the Origin of Philosophy between Chinese Medicine and Western Medicine: Exploration of the Holistic Advantages of Chinese Medicine\*

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**ABSTRACT** To explore advantages of Chinese medicine (CM) by analyzing differences in the origin of philosophy for human health between CM and Western medicine (WM). Methodologically, a distinctive feature of CM is its systems theory, which is also the difference between CM and WM. Since the birth of CM, it has taken the human body as a whole from the key concepts of "qi, blood, yin-yang, viscera (Zang-Fu), and meridian and channel", rather than a single cell or a particular organ. WM evolves from the Western philosophic way of thinking and merely uses natural sciences as the foundation. The development of WM is based on human structures, or anatomy, and therefore, research of WM is also based on the way of thinking of decomposing the whole human body into several independent parts, which is the impetus of promoting the development of WM. The core of CM includes the holistic view and the dialectical view. Chinese herbal medicines contain various components and treat a disease from multiple targets and links. Therefore, Chinese herbal medicines treat a diseased state by regulating and mobilizing the whole body rather than just regulating a single factor, since the diseased state is not only a problem in a local part of the body but a local reflection of imbalance of the whole body.

**KEYWORDS** Chinese medicine, Western medicine, philosophy differences, integration

Chinese has made use of Chinese medicine (CM) to work for human life sciences for a long time. CM has been progressing rapidly hand in hand with Western medicine (WM) that develops under the banner of modern sciences. The essential difference between CM and WM lies in the way of thinking. Philosophically, both have their own advantages in view of life, disease and medicine. Both regard human health as their ultimate goal, but how to obtain health remains an issue that needs discussion, especially when the criteria for health have transited to the bio-psycho-social medical model, which defines health as a good state in physical, psychological, moral and social functions in addition to being free from diseases and pains. The bio-psycho-environmental-humanities medical model appears, laying more emphasis on environmental pathogenic factors. According to these medical models, CM has always recognized health as a holistic unity from the human physiopathology, which is undoubtedly more in line with the needs of human health.

### Philosophy of CM

CM is built on the traditional Chinese philosophy, which regards humanities and natural sciences as an integration. This system has been developing from the ancient time to the present in the same strain without

losing its essential character. CM regards life as a holistic, dynamic, spiritual and functional unity and regards the development of disease mainly as the result of a disordered state of the human functional balance, which favors the idea of prevention first by maintaining health and wellness before diseases occurs. Since the birth of CM, it has adopted a comprehensive, macroecological and macrolife medical model, and uses the way of harmony thinking that health is a state of dynamic balance, stability and harmony. Therefore, the essential principle of treating diseases in CM is "following the example of yin and yang and living in harmony with the arts of divination," i.e. treating diseases mainly by regulating and mediating the imbalance state to dynamic balance and yin-yang harmony. CM is an independent system

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by integrating the ancient Chinese philosophy as a unity and using it as the guidance. The philosophy of "primordial qi theory" in the early Qin Dynasty is the starting point of Chinese traditional sciences, regarding the primitive world as a holistic unity of qi.

Methodologically, a distinctive feature of CM is its systems theory, which is also the difference between CM and WM. Systems theory is mainly characterized by its holistic, associative, orderly and organizational natures, all of which have vivid and corresponding concepts in CM. It is the early systems theory in human history. Since the birth of CM, it has taken the human body as a whole from the key concepts of "qi, blood, yin-yang, viscera (Zang-Fu) and meridian and channel", rather than a single cell or a particular organ.

### Philosophy of WM

WM has evolved from the Western philosophic way of thinking and merely used natural sciences as the foundation. It originated from the atomic theory and is still using this theory in practice, believing that all things are composed of their own components. The development of WM is based on human structures, or anatomy, and therefore, research of WM is also based on the way of thinking of decomposing the whole human body into several parts, which is the impetus of promoting the development of WM. Therapeutically, WM advocates the part-against-part method by using some physiochemical mechanisms to explain the development, progression and evolution of a disease. Therefore, WM tends to explore human diseases from their material structures at local and static levels. Compared with CM, it is advantageous in explaining life phenomena from a microscopic view, and more accurate in understanding the etiology and pathology of a disease, and in locating the position and making quantitative analysis of a disease. With the development of medical sciences, WM has been transiting from the single biomedical model to the biopsychosociomedical model, thus forming the idea of resistance as the main way of thinking, i.e. hoping to obtain a healthy state by killing pathogenic factors through allopathy, or removing extra tissues out of the body.

### The Core of CM

#### The Holistic View

The holistic view is the most distinctive character

of CM in terms of both holistic theoretical system and medical science, believing that the human body is an organic unity, and Man and Nature are identical, and believing that multiple factors operate to work on the human body to maintain the balance of life. Man has paid more attention to environmental factors. First of all, Man belongs to Nature, and is closely related to Nature and natural environments. Man and Nature are a unity. At the same time, Man also belongs to society, and therefore psychological and social influences on the human body should also be considered. This is consistent with the criteria of health defined by the WHO as true health is not just lack of disease or pain; it is also a good state in the physical body, psychology, morality and social functioning. CM undoubtedly plays a more advantageous role in achieving these criteria of health by always placing the holistic view in the first place in the diagnosis and treatment of a disease. CM uses the patient-centered model, because it keeps the holistic view in mind and mobilizes positive factors of the body to treat disease. For example, WM uses surgical means to remove a tumor, indicating that it emphasizes more on locality. There is no doubt that WM has also gradually paid more attention to holism. WM and CM are therefore coming closer in the aspect of holism.

#### The Dialectical View

The dialectical view in CM refers to treatment of a disease based on syndrome differentiation, which is a reflection and implementation of the holistic view of CM. The dialectical view is the most concise summary on the principles of diagnosis and treatment in CM, i.e. the treatment principle of "differentiating" syndromes to cure the "underlying cause", "donating the body resistance to regenerative ability" by means of self stabilization, self-organization and self-regulation. According to this principle, an individual patient with different disease states should be treated differentially by using different therapeutic methods. This is so-called a dialectical view. The same disease can be treated with different methods, and vice versa. More importantly, verifiability and reproducibility of CM pharmaceuticals are not simply reflected on a single formula or a single medicine but on the "syndrome" obtained through differentiation and on the principle and method based on the syndrome thus obtained. Thousands of years of practices in CM pharmaceuticals have demonstrated that they have remarkable objectivity and reproducibility. It is on

this theory that the practice of "treatment of different diseases with the same method and treatment of the same disease with different methods" emerges.

### **Integration of CM and WM**

Transformation of the medical model is a reflection of the holistic concept of WM by laying more emphasis on the natural and social environments as the cause of disease.

CM and WM have the same purpose of curing disease and maintaining human health. Both CM and WM are medical science. With the development and gradual acceptability of WM in recent several decades, modern CM also contains meteorology and environmental science. It has been increasingly recognized that the environment has influences on human health, which is called a holistic view in CM, or harmony between Man and Nature, admitting that human life is affected by natural environments. It is this idea of "harmony between Man and Nature" that arouses an argument saying that CM is not pure medicine, and looks so mysterious that it is by no means scientific. Undoubtedly, this view is incorrect, because whether CM is scientific or not is an indisputable question. We say that CM is scientific, because science can stand the test of practice. CM has been verified by practice for thousands of years. In 1977, George Engel, an American psychiatrist and physician, first officially put forward the "biopsychosocial model",<sup>(1)</sup> which retains the positive meaning of the biomedical model and at the same time fully considers influences of psychological and social factors on human health, thus expanding the horizon of awareness about health and disease and greatly promoting the progress in the diagnosis and treatment of diseases. Since the mid 20th century, human scientific practice and awareness about science have made rapid development and progress, especially in the awareness about coordinated development of the environment, ecology, Man and Nature, which has reached an unprecedented level. With the tremendous progress in science and technology and rapid development of society, the "biopsychosocial model" has gradually exposed its limitations. As it does not take into full consideration the effect of the environment on human health and disease, nor does it fully beware the fact that environmental pollution and ecological damage have become essential factors endangering human health and restricting future development, the "biopsychosocial model" cannot reflect the latest

achievements obtained in environmental and ecological sciences. A new medical model that reflects bio-psycho-environmental-humanities interrelationships and organic integrity has emerged. This new medical model fully reflects the concept of harmonious development of humanities, Man and the environment by laying more emphasis on the environment and humanities. The environment is the place, situation and condition on which human life depends, including nature, society, politics, economy, law, education and family. From the aspect of medicine, the environment includes all non-genetic factors before, during and after birth, such as temperature, atmospheric pressure, food, customs and habits, education. Humanities refer to various cultural phenomena of human society, and cultural property is one of the essential attributes of medical science. The core of the bio-psycho-environmental-humanities model believes that human health refers not only to a good physical, spiritual and social state but to harmonious development between Man and Nature. This new model is human-centered, correctly deals with the relationships between man, nature, society and ecology, and advocates integrity of "science and humanities" for the sake of establishing a medical model with human and cultural characteristics. This is the reason why this bio-psycho-environmental-humanities model is also called the bio-psycho-social-spiritual health model.<sup>(2)</sup>

CM especially emphasizes the relationship between Man and Nature. Modern medicine has revealed that tumors and cerebrovascular disease are multi-gene diseases. They are not caused by a single gene but are the result of joint effects of genes and environments. It is therefore impossible to cure these diseases simply by the research method of WM reductionism at the molecular level. CM's understanding about pathogenesis from the environmental and emotional aspects should be emphasized. The transformational course of the medical model also reflects that the understanding about pathogenesis in CM has also be widely accepted by WM.

### **The Advent of Systems Biology Has Created a Good Platform for CM-WM Integration**

"Systems biology" emphasizes that life phenomena should be studied and understood in a systematic and holistic manner, symbolizing that international research on life science begins transition from simple analysis to a systematic and

comprehensive approach. On September 30, 2003, the National Institutes of Health (NIH) officially initiated systems biology research, in an attempt to finally reveal the nature of some major problems and diseases in life phenomena by establishing theoretical models on the basis of the research achievements in functional genomics to study the complex biological networks, including transcriptional regulatory networks, metabolic networks and signal transduction network. In 2001, Ideker T, et al<sup>(3)</sup> published the theory of "systems biology": systems biology studies biological systems by systematically perturbing them (biologically, genetically, or chemically); monitoring the gene, protein, and informational pathway responses; integrating these data; and ultimately, formulating mathematical models that describe the structure of the system and its response to individual perturbations. Many ideas about human disease in this theory are the same as CM.

CM is characterized by differential diagnosis and treatment of a disease, and emphasizes personalized treatment throughout. It makes judgment and treatment on the basis of a comprehensive understanding about various factors and conditions contributing to pathological changes and individual constitutions. The personalized treatment system according to an individual person, time and place is the distinctive feature of CM, which is also consistent with the pharmacogenomics of systems biology.<sup>(4)</sup> Systems biology predicts and prevents disease by integrating experimental data and establishing models, the ultimate goal of which is to realize personalized treatment. CM lacks the analytic method of reductionism, while modern medicine lacks the ideas and way of thinking of holistics. For this reason, it is possible for CM and WM to find what their respective needs are by integrating with each other in the context of systems biology. Prof. Jeremy Nicholson,<sup>(5)</sup> the founding father of metabolomics from Imperial College in London says that metabolomics studies the human body as a holistic system and laws of change in the metabolic network under the condition of disease and medical intervention, which is consistent with the philosophy of CM. Metabolomics not only conducts toxicological analysis of drugs but plays an important role in quality control of Chinese herbal medicines. In addition, metabolomics will prove to be a powerful tool for Chinese herbal medicines to make breakthrough progress and enter the world market.

### **Modern Science and Technology Is the Bridge of CM-WM Integration**

With the development of science and technology, CM has also been progressing with the times. Science and technology can be used by both CM and WM. Some people think that once CM is integrated with WM, CM would lose its pure color. Integration of CM and WM, or CM modernization, is the people's expectation along with the development of the times. The development of WM needs to depend on the development of science and technology, so does CM. CM is developing with the development of science and technology. With instillation of the systems theory ideology into CM research, the goal of modern CM of using the systems theory to reveal the mysteries of human life science and explore human health and disease will come true.

### **Prospects**

Owing to the holistic idea and differential treatment of disease, CM has exhibited its incomparable advantages in clinical practice, especially in the clinical treatment of some major difficult and refractory diseases. For instance, surgical resection of a tumor can be a cure, but there is still likelihood of postoperative recurrence, indicating that simple surgical tumor resection is a therapeutic means of curing the secondary aspects of a disease without curing the primary cause. Years of practice has demonstrated that chemo- and radiotherapy as important means of tumor treatment cannot cure tumors. More researchers have been increasingly aware that tumor occurrence is the result of multiple factors and channels. According to CM, all diseases result from human yin-yang imbalance, which leads to microenvironmental changes within the body, and these changes in turn causes more severe yin-yang imbalance. Anti-tumor treatment is of course necessary in tumor treatment, but yin-yang balance and microenvironmental regulation should not be neglected.<sup>(6,7)</sup> Practices have demonstrated that a tumor-bearing person can still survive for a long time with Chinese herbal medicine to improve quality of life effectively.<sup>(8-11)</sup> It often needs a long time for Man to understand disease, because some diseases cannot be understood clearly in the beginning. For example, the causative pathogen of severe acute respiratory syndrome (SARS) is a "coronavirus", but simple anti-viral treatment was not satisfactory. The practice of using CM-WM integration by taking the advantage of CM in particular in the treatment of SARS has

demonstrated that this integral treatment not only raised survival of SARS patients but greatly reduced the sequelae.<sup>(12-18)</sup>

As the starting point of WM is away from the direct life experience, there is a mechanical tendency in the epistemology and methodology of WM. Generally speaking, WM regards the human body as a machine and neglects the existence of vital energy in the individual living body and the direct or instant pathological state that acts on the human body. This limitation in epistemology and methodology results in a major defect in the therapeutic system of WM: inability to diagnose the existence of objective abnormalities in the energy state. A commonly seen example is that the patient may be told that everything is normal after a series of pathological examinations even though he/she really feels some obvious discomforts, where the realistic objective symptoms are distorted as a subjective illusion. The modern concept of disease is not only referred to as a pathological state. As is defined by the WHO, health is not just lack of disease or pain; it is also a good state in the physical body, psychology, morality and social functioning. This definition about health has several meanings: (1) It changes the negative view of health. The negative view of health emphasizes the disease or pain, while the positive view of health emphasizes health itself. (2) The positive view of health uses the modern medical model as the guiding principle. Through long practice and research, the modern medical model has established its biopsychosociomedical model, which, starting from the perspective of modern medicine, explores influences of biological, psychological and social factors on human health, disease and life expectancy in all directions. (3) The positive view of health not only considers the individual but the group, knowing that individual psychological and social activities are part of group activities.

Chinese herbal medicines contain various components and treat a disease from multiple targets and links. Therefore, Chinese herbal medicines treat a diseased state by regulating the unity rather than just regulating a single factor, because the diseased state of a person is not only a problem in a local part of the body but a local reflection of imbalance of the whole body. For example, Parkinson's disease is a degenerative disorder of senility. Usually, the symptoms of the disease appear after 80 years of

age, but now appear even in people aged 50 years or younger. After treatment with Chinese herbal medicines, the patient often feels relaxed and reduces the use of WM. More importantly, the patients' quality of life is improved.<sup>(19)</sup> The mechanism of action may be due to improved local circulation and increased secretion of dopamine, or increased sensitivity of the receptor, thus enhancing the effect of medical treatment. Another example, treatment with Chinese medicinal herbs may alleviate chemotherapy-induced short-term side-effects.<sup>(20,21)</sup> Sect of Integration of "Chinese and Western Medicine" came into the world four hundred years ago when CM contacted WM at the beginning of the 17th century. It collected historical experiences showing that the cooperation of CM and WM is more efficient for the cure and prevention of disease than each of them separately.<sup>(22)</sup> To take advantage of CM and WM and avoid their respective shortcomings, it is necessary to integrate CM with WM, knowing that it is beneficial not only to the development of CM but to a better understanding about the pathology and pathogenesis of a disease and to the awareness of deficits in treating the disease.

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