

## **Western and traditional medicine in China: competitive or complementary?**

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Spring 2009

*When Wang Yu was a young teenager, she came down with a mysterious stomach ailment. It persisted for some time before her mother took her to one of the local public hospitals in Nanjing, China. After contacting the appropriate connections and the payment of a “gift”, Wang Yu was able to see a doctor. Her young western-style physician was also puzzled by the illness, which evaded a concrete diagnosis. Unsure, he sent her home with some broad spectrum antibiotics. Her mother faithfully administered the medication for the appropriate time period; however, to their dismay the stomach condition worsened. When it was clear that the western pills were not helping, Wang Yu’s mother took her to see a traditional practitioner. The old, wizened man spent a long time extensively examining her appearance before recommending a treatment. He gave her medicine in a powder form and instructed her to take one spoonful every day for one month. Even though she was disgusted at what she thought to be parts of an insect inside the bottle, Wang Yu dutifully followed the doctor’s orders. After one month the prescription ran out, and her stomach illness also had disappeared<sup>1</sup>.*

### **Introduction**

According to statistics, as much as one quarter of all medicine practiced in China today is traditional rather than western. Traditional Chinese medicine, or TCM, has a significant place in the health of China’s population. Unlike western medicine, which was originally imported from Europe, the principles and theoretical framework characteristic of traditional medicine developed in Ancient China and continue to flourish there today. Yet, like the story above illuminates, western methods of healing have today usurped traditional approaches as the primary choices for

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<sup>1</sup> Wang Yu. Personal Interview. 24 Nov. 2008.

health care, especially when the sickness or its symptoms are unfamiliar. However, as Wang Yu and her mother discovered, western medicine is not always the most effective against a stubborn illness. Even though Wang Yu went to the western-trained doctor first, she visited the traditional physician as a “foolproof” fallback – and was cured.

China is not the only place where traditional and “modern” western medicines coexist. In the West, TCM and other alternative approaches to healing (known collectively as Complementary Alternative Medicine, or CAM) are becoming increasingly more popular. In the United States it is now common, even fashionable, to ascribe to the benefits of a green tea herbal supplement, the preserving capabilities of Tai Qi, and the quasi-magical effects of acupuncture. The appeal of these therapies is not simply their exoticism; rather, they are perceived as more natural, safe, and at times more successful at treating chronic disease. Additionally, frustrations with the many faults of modern western medicine have led some to seek out treatments from a different school of medicine with diverging theoretical perspectives on disease and its relationship to health. Acupuncture, martial arts practice, and herbal remedies are just three of the plethora of traditional Chinese medical treatments that have recently become very popular in the West.

The existence of both forms of medicine – traditional and western – in China begs the question of whether the two in fact can coexist peacefully, or if they will be always acting in competition. Theoretically, there is a wide gulf between the two philosophies from which the schools of medical practice are derived. Historically, Chinese leaders have alternately suppressed or championed traditional medicine relative to western approaches. At these times, the two schools of healing have been in constant struggle, competing for legitimacy in the eyes of the government as well as their patients. However, at other times significant efforts have been

made to integrate the two disciplines with the ultimate aim of improving Chinese health care and overall population health. Can western and traditional medicine work together to benefit the health of the Chinese people, or will they be perpetually at odds? The aim of this paper is to argue that yes, the two schools of medicine can be complementary and that Chinese health care is often better because of the integration. Although at times throughout history TCM and western medicine have competed in China, they benefit the population most when they work in tandem. However, since the schools are derived from very different philosophical viewpoints, there is a significant barrier to full integration which must be overcome to achieve optimum health benefits for the Chinese people.

To determine whether traditional medicine and western medicine can work together in China, a variety of research methods have been employed. First, an extensive, but by no means exhaustive, literature review of scholarship on the evolution of Chinese medicine from Ancient China to present day has been conducted. This provides essential background for comparison with western medicine, as this school took a decidedly different path of development. Next, a historical review of the literature concerning the introduction of western medicine into China and its subsequent interaction with existing medical traditions there has been undertaken. In addition, a comparison of the philosophical and ethical roots of both schools has been analyzed to determine whether sufficient ground is available for integration. Finally, to address issues of efficacy and effectiveness of Chinese traditional therapies relative to western treatments, a brief survey of scientific literature on the subject has been reviewed. Each method was an essential component in the analysis of the research question.

In this paper, an explanation of the development of traditional medicine in China will provide the backdrop for comparison with western medicine. A historical review of the arrival

and treatment of western medicine in China throughout history will help inform the analysis of its interaction with western medicine. An investigation into the philosophical mores, theoretical underpinnings, and ethical duties surrounding the medical profession in both schools will critique whether it is possible for the two to ever be fully integrated. A scientific literature review will explore the ability of traditional medicine to be successful in healing. Lastly, deductions will be drawn concerning the state of medicine in China today and potential possibilities for integration. Conclusions will be drawn from the above evidence regarding an increased need for traditional medicine and western medicine to act in tandem for the benefit of the health of China's population.

### ***A brief history of the development of medicine in China***

“Traditional” Chinese medicine has a long, storied history spanning over five thousand years. Similar to western medicine's origins, traditional Chinese medicine is deeply rooted in the ancient philosophical and theoretical thought of the geographic location in which it was born. In contrast to western medicine, though, which suffered frequent interruptions in development during times of civilization decline like the Dark Ages, Chinese medicine enjoyed a relatively continuous period of formation even in the face of political turmoil and instability. In fact, the very foundation of traditional Chinese medical thought was laid during the Warring States period over 2500 years ago. However, it is a common miscalculation that Chinese medicine has been static in its methods, perspectives, and approaches to healing over the millennia. Similar to the experience in the West, Chinese medicine continued to evolve as new discoveries and philosophical influences shaped the understanding and practice of medicine. Moreover, Chinese medicine certainly did not develop isolated from external influences; like the contribution of the Islamic world to Western medicine, traditional Chinese medicine both impacted and was affected

by the practices and beliefs of neighboring civilizations such as India. A growing body of evidence is accumulating that demonstrates even the medical traditions of China and Western Europe were connected hundreds of years before regular direct contact between the two civilizations was established.

In order to grasp the nature of traditional medicine and its position in modern day China, it is essential to look to its past. This short review of the development of medicine in China is neither exhaustive nor comprehensive. Yet, the aim of this section is to highlight some historical background to how the medical tradition developed in China, its fluctuations in theoretical approach, and trends in practice. For this task, there is a wealth of literature from which to draw from. However, I have focused my review on the following three sources which collectively review the development of Chinese medicine from a historical and theoretical perspective: Ho and Lisowski's concise *Concepts of Chinese Science and Traditional Healing Arts*, Hoizey and Hoizey's complete *A History of Chinese Medicine*, and Wong's extremely thorough *History of Chinese Medicine*. These works present an in depth view of this topic and taken together deliver a relatively comprehensive understanding of the beginnings, growth, and evolution of traditional medicine in China.

The origins of Chinese medicine are enshrouded in myth. As in Ancient Mesopotamia and Egypt where legend attributes the gods as the primary givers of the healing art to mankind, so in Ancient China stories abound regarding the heavenly provision of medicinal herbs, techniques, and treatments of an almost magical nature. The saga of Chinese medicine takes us back to a time where history and mythology intermingle, during the mythical reign of the Emperor *Huangdi*. According to legend, the Yellow Emperor (*Huangdi*), supreme ruler of the middle kingdom from 2497-2398 BC, and the Divine Farmer (*Shen'nong*), sovereign of the

southern kingdom and the father of agriculture, are credited with spurring the rise of medicine in China<sup>2</sup>. The Divine Farmer is famed to have provided China with the knowledge of poisonous and healing herbs by testing them himself; his transparent body allowed him to rub the appropriate plant on the affected part of his person if he ingested a poisonous one<sup>3</sup>. The therapeutic skills of the Yellow Emperor and his minister Wu Peng the pioneer of Chinese medicine are also famous in Chinese myth. Two of the most influential Chinese medical works written thousands of years later bear their names: the *Huangdi Neijing* (*Yellow Emperor's Classic of Internal Medicine*) and the *Shen'ong Bencaojing* (*Classic of Herbal Medicine*). Yu Fu, Lei Gong, and Qi Bo, who lived during this mythical time, are purported to have served as the first physicians. They were to have served in the court of the Yellow Emperor, creating the practices and techniques of traditional medicine that are still in use today.

While the myths of the Yellow Emperor and the Divine Farmer may not be historical, there is strong evidence that the practice of phytotherapy and the consultation of doctor-shamans were occurring in China as far back as four thousand years ago. The first archaeological evidence of medicine in China dates back to the Shang dynasty (1766-1122 BC). Oracle bones used by shaman-healers have been discovered at archaeological sites. Fruit stones, still valued for their medicinal benefits today by traditional Chinese gynecologists, have also been unearthed dating from this time in Hubei province<sup>4</sup>. During the time these artifacts were used, the Chinese character for doctor (*yi*) was still frequently combined with that for the shaman magicians (*wu*), revealing the still mystical and as yet underdeveloped nature of traditional medicine up to this

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<sup>2</sup> Hoizey, Dominique and Marie-Joseph. *A History of Chinese Medicine*. Paul B. Bailey, Tr. Vancouver: UBC Press, 1993, p. 5.

<sup>3</sup> Ho, P.Y. and F. P. Lisowski. *Concepts of Chinese Science and Traditional Healing Arts: a Historical Review*. Singapore: World Scientific, 1993, p. 7.

<sup>4</sup> Hoizey and Hoizey 15

point. However, beginning with the Zhou dynasty, traditional medicine was firmly established apart from the practice of magic.

According to the *Rites of Zhou (Zhouli)*<sup>5</sup>, from the eleventh century BC onward the study and practice of internal medicine was separated from that of external medicine. In addition, the position of court physician during the Zhou dynasty was already established<sup>6</sup>. The eighth to third centuries BC, though periods of recurrent violence and political turmoil, saw the creation of the theory of meridians along with the compilation of the *Huangdi Neijing*. This monumental work has been called the Canon of Medicine<sup>7</sup>; it is still a foundational text for the practice and theory of Chinese medicine today. According to Fong, the *Neijing* covers such various topics as “theory of disease, the influence of the constellations on the human organism, the transmission of the elemental vapours, humoral pathology, pulse indications, anatomical speculations, health conservation, principles of treatment, acupuncture and the like<sup>8</sup>”. These advances were made during the time of the Spring & Autumn Period and the Warring States Period. Qin Yueren, a famous physician of the Spring & Autumn Period, was the first to establish methodical principles of diagnostic procedures in Chinese medicine in the fourth century BC. His methods of diagnosis included the four signature external observations of the face and oral cavity (*wang*), listening to breathing and coughing noises (*wen*), recording a patient history (*wen*), and palpitation and the taking of pulses (*qie*)<sup>9</sup>. These diagnostic techniques remain essential tools which the traditional Chinese practitioner still uses today.

By the Han Dynasty (one of the first dynasties in China in the first centuries AD), the philosophy and procedures of traditional medicine were almost fully developed. Chinese

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<sup>5</sup> Hoizey and Hoizey 187

<sup>6</sup> Ho and Lisowski 8

<sup>7</sup> Wong, K. Chimin and Wu Lien-Teh. *History of Chinese Medicine*. New York: AMS Press Inc., 1973, p. 28.

<sup>8</sup> Wong 29

<sup>9</sup> Ho and Lisowski 10

physicians practiced with an understanding of the harmony of heaven (*tian*), earth (*di*), and man (*ren*) in nature. According to Ho and Lisowski, “their world-view conceived a harmonious cooperation of all matters in the universe, arising from the fact that they were all parts of a hierarchy of wholes forming a cosmic and organic pattern and obeying the internal dictates of their own nature<sup>10</sup>”. The Han period witnessed the compilation of the *Shen’nung Bencaojing*, which describes over three hundred medical treatments prepared from a variety of natural substances and puts forth the essential principles of *yin* and *yang*<sup>11</sup>. Additionally, in the Han period medicine developed into a respected profession that required the aspiring doctor to pass an examination, rigorous instruction, and training under a senior physician. At this time, the first primary and chronic care hospitals began to proliferate, though they often experienced fierce opposition from the Chinese rulers as they were influenced by the rise of Buddhism in China as it spread outward from India. In the second century AD, the great physician Hua Tuo established the use of an anesthetic in small surgical procedures and promoted the use of gymnastics in medical treatment in the form of the “Five Animals Exercise”. The third century AD witnessed immense growth in the development of Chinese medicine due to the efforts of several physician-scholars. Wang Shuhe established pulsing techniques as a method for diagnosis and choosing treatment. His contemporary Huangfu Mi compiled an extensive treatise on the use of acupuncture<sup>12</sup>. One of the most famed of traditional physicians, Sun Simiao (581-682 AD) founded the principle of the “ideal physician” and championed the importance of infant and mother health. He also advanced knowledge and treatment of deficiency-related illnesses<sup>13</sup>.

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<sup>10</sup> Ho and Lisowski 12

<sup>11</sup> Ho and Lisowski 22

<sup>12</sup> Hoizey and Hoizey 188

<sup>13</sup> Hoizey and Hoizey 66



The Song, Yuan, and Ming dynasties of the new millennium witnessed a continual development and questioning of ancient Chinese traditional medical practices. The field of medicine was characterized by constant debates: disagreements flared over old traditions of practice and new techniques, between ancient perspectives on the cause of disease and novel theories of pathogenesis, and between the famed physician-scholar responsible for the propagation of wisdom and his “plebian” physician-practitioner counterpart. In 1189, Zhang Guo published the first known history of Chinese medicine, compiling several volumes worth of accumulated wisdom. From 1217-1220, Zhang Congzheng published a text defending his unique theories of “Six Doors” and “Three Methods”<sup>14</sup>. While his ideas were not widely accepted, their assertion represented a key transition between unquestioningly applying ancient medical knowledge and fostering a more critical approach to the practice of medicine. However, acceptance of traditional practices as status quo remained dominant in 1263, when Chen Ziming compiled ancient traditions of surgical procedure in his *Essentials of Surgery*. Wang Lu’s ground-breaking *Yijing Suhuiji* (1368) urged fellow physicians to “go against the tide of accepted opinion on medical classics<sup>15</sup>” in order to rediscover their true meaning. This work helped legitimize opposition and a questioning spirit in the formulation of new medical techniques and perspectives.

The first centuries of the Qing dynasty (1644-1911) were the last in which western medicine did not have a significant influence in China. Major contributions to traditional medical knowledge were also made during this time period. In the sixteenth century during the Qing dynasty, Li Shizhen was a legendary physician who wrote the famous *Bencao Gangmu* (*The Great Pharmacopoeia*), describing the medical properties of some 1,800 natural substances

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<sup>14</sup> Hoizey and Hoizey 189

<sup>15</sup> Hoizey and Hoizey 189-190

and proffering a practical guide to their use against various diseases such as smallpox. The *Bencao* lists most of the natural medicinal substances used in the Western world today; the latest 6 volume edition has been used by more people than any medical book ever written<sup>16</sup>. Because this text has not been completely translated into English, the “discovery” of useful treatments described in the encyclopedia (such as ephedra) was delayed in the Western world<sup>17</sup>. Additionally, the sixteenth century also marked the first practice of variolation in China. Chen Sicheng was the first to recommend the use of arsenic and mercury to treat patients’ ulcers from syphilis in the early seventeenth century<sup>18</sup>. Also during this time, Wu Youxing was the first to remarkably link disease causation to pathogenic “excessive, evil influences”<sup>19</sup>, a major step in discovery of disease pathogenesis.

As this brief review suggests, the development of traditional Chinese medicine has been long, complex, and evolutionary. TCM today is heir to a rich theoretical perspective with roots in ancient philosophy. However, the history of Chinese medicine is anything but static; in contrast, through periods of peace and conflict it has continued to progress. The following section will evaluate its response upon the arrival of Western medicine in the nineteenth century.

### ***Treatment of TCM and western medicine in China: opposition and integration***

Today, less than one quarter of health care delivered in China is based on traditional medicine. Yet, the small proportion of traditional medical practitioners is much supported by the government; its integration with western medicine has been firmly cemented in Chinese policy since the founding of the People’s Republic of China in 1949. Still, the Chinese government has not always showered support on the integration of both schools. Often, the government was

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<sup>16</sup> Ho and Lisowski 43

<sup>17</sup> Ho and Lisowski 44

<sup>18</sup> Hoizey and Hoizey 190

<sup>19</sup> Hoizey and Hoizey 191

supporting one school of medicine and opposing the other. The aim of this section is to describe the pragmatic factors which led alternately to the oscillating policies in favor of integration, opposition to the West, and the abandonment of tradition.

The western medical experience in China is linked inseparably to Western imperialism. This is exemplified by the fact that in 1805 the smallpox vaccination reached China, produced by the East India Company and delivered to those in the treaty ports of Macao and Guangdong<sup>20</sup>. The Jesuit missionaries were the first to bring western medicine to China, first informally in their arrival in the early nineteenth century and then formally through the translation of key western medical documents in the latter half of the same century<sup>21</sup>. Peter Parker was the first medical missionary to China; he began practicing in Guangzhou in 1834. During his time in China he established the Canton Missionary Hospital, passing on knowledge of western medicine and surgery to his apprentice Guan Yadu<sup>22</sup>. Jesuit influence was made increasingly possible by western imperialism's opening up of treaty ports and encroaching on Chinese sovereignty during the decline of the last Chinese dynasty. By the end of the nineteenth century, over 150 medical missionaries had come to China, and Chinese physicians had begun to seek western training abroad<sup>23</sup>. The first qualified doctor trained abroad was Dr. Wong Fun, and the first female physician to receive a foreign degree in 1888 was Jin Yunmei<sup>24</sup>. The incursion of western medicine into China was further encouraged by the Treaty of Nanjing which marked the end of

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<sup>20</sup> Jewell, J.A. "Chinese and Western Medicine in China, 1800-1911" Hillier, S.M. and J.A. Jewell. *Health Care and Traditional Medicine in China, 1800-1982*. London: Routledge & Kegan Paul, 1983, p. 3.

<sup>21</sup> Ho and Lisowski 47-48

<sup>22</sup> Jewell 11

<sup>23</sup> Jewell 11

<sup>24</sup> Jewell 20

the Opium Wars, in which China conceded five additional treaty ports to the imperialist powers of the West<sup>25</sup>.

Despite the encroachments of imperialism, the Qing dynasty was still powerful enough to limit the spread of western medicine, along with western influence, to a select number of treaty ports such as Guangdong and Tianjin. The missionary doctors had little impact on the health of the Chinese elsewhere and were all but nonexistent in rural China. Because the missionaries had little impact outside these zones, the Chinese government did not see much practical reason to oppose the existence of western medicine in the limited areas in China. Jesuit missionaries arrived in China with the dual goals of improving the health care of the Chinese people and preaching Christianity. They were able to establish supply chains of western drugs, improve surgical care, teach basic preventative and sanitation techniques, and introduce the smallpox vaccine. Although severely limited in the scope and range of influence, the western doctors were able to establish rapport with the Chinese once the efficacy of their treatments, especially in the infectious disease health and surgical care disciplines (where traditional medicine was lacking).

The advent of the twentieth century led to the further deterioration of the Qing dynasty and the rise of Chinese dissent protesting the extraterritoriality of the Western imperial powers. However, the desire of the Nationalist government (*Guomindang*) which established the Republic in 1911 for freedom from foreign influence did not translate into opposition of western medicine in China. Though western medicine was present in selected enclaves throughout the eighteenth and nineteenth centuries, it was not until 1900 that the Chinese began their first efforts to establish its presence<sup>26</sup>. In fact, the *Guomindang* highly favored western medicine over traditional medicine, though before the creation of the Republic this had little impact. Li Hung-

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<sup>25</sup> Jewell 17

<sup>26</sup> Bowers, John Z. and Elizabeth F. Purcell, Eds. *Medicine and Society in China*. New York: Josiah Macy, Jr. Foundation. 1974, p. 55.

Chang established the first western medical school to train doctors for the Nationalist army in the early 1900s, and Yuan Shi-Kai renamed its successor the Tianjin Army Medical College<sup>27</sup>. In 1902 they created the western-style Peiyang Sanitary Service, followed in a decade later by the Central Epidemic Preventive Bureau<sup>28</sup>. Once the Republic was created and the GMD were in power, their favor of western medicine over the perceived backward traditional school was displayed in more aggressive ways. In 1922, the Ministry of the Interior ranked western practitioners as superior over their traditional peers, and in 1929 the Ministry of Health moved to abolish TCM entirely<sup>29</sup>. However, outcry from traditional professionals and a devastating epidemic thwarted the complete ban.

This favor of western medicine was due to two pragmatic reasons. The effectiveness of western medicine in handling the 1910-1911 Northern Manchurian plague epidemic was a significant force that brought the superiority of western medicine to the forefront of Nationalist health policy. Also, many leaders of the *Guomindang* were educated abroad and espoused a more western ideology. In fact, Presidents Sun Yat-sen and Chiang Kai-shek were both western trained physicians. Sun Yat-sen, who received his degree from Hong Kong College of Western Medicine, has been quoted as asserting “if we do not learn what has been done better abroad, we will sink into backwardness<sup>30</sup>”. Chiang Kai-shek perceived traditional medicine as an obstacle to China’s future, holding the country back from it taking its rightful place among the great powers of the world. According to the Ho and Lisowski, the perception of the time of the interaction between western and traditional medicine was that “polarization [had] developed to the extent of confrontation where Chinese traditional medicine was condemned as being unscientific and

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<sup>27</sup> Bowers 55

<sup>28</sup> Bowers 56

<sup>29</sup> Bower 72

<sup>30</sup> Hoizey and Hoizey 151

regarded as an obstacle to the development of modern medicine in China”<sup>31</sup>. As a result, traditional medicine was oppressed during the First Republic and western medicine given full support. However, this led to significant problems, as mainstream Chinese attitude refused to blindly accept western medicine<sup>32</sup>, traditional practitioners organized in protest, and major public health issues were exacerbated by the lack of trained western physician manpower. Thus, the health of the Chinese population suffered due to the oppression of traditional Chinese medicine. This may have contributed to the downfall of the *Guomindang* and the victory of the Chinese Communist Party (CCP) after the Civil War resulting in the establishment of the People’s Republic of China (PRC).

Under Mao, traditional medicine flourished and was initially promoted over western medicine. According to Rosenthal, in the early twentieth century traditional Chinese medicine was “on its way to historical oblivion”<sup>33</sup>. Yet, for practical political and economic reasons, Mao deemed it vital to the survival of the new regime to revive this school of medicine. Ho and Lisowski argue that traditional medicine played a large role in the dramatic improvement in Chinese public health from 1949 onward, at low cost to the government and with high effectiveness in the countryside. The extent of this is embodied in the assertion of one traditional practitioner that “the practice of *qigong*, a traditional system of health and mind control involving deep breathing and other exercises, has undergone an enthusiastic revival<sup>34</sup>.” Therefore, although initially viewed by the CCP as an “epitome of feudalism<sup>35</sup>”, pragmatic

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<sup>31</sup> Ho and Lisowski 48

<sup>32</sup> Bowers 59

<sup>33</sup> Rosenthal, Marilyn M. *Health Care in the People’s Republic of China: Moving Toward Modernization*. Boulder: Westview Press, 1987, p. 37.

<sup>34</sup> Ho and Lisowski 51

<sup>35</sup> Rosenthal 38

reasons such as the critical health need of the Chinese population and its effective utilization of labor (the country's best resource) spurred Mao to support TCM.

This revival was the consequence of several pragmatic considerations on the behalf of the CCP. First, encouraging the use and further development of TCM was highly accepted among the rural populace which comprised the majority of the CCP supporters. Supporting traditional medicine also represented a clear break from their predecessors in policy and supposed freedom from foreign influence. Second, cheap western drugs were unavailable to most Chinese people and the use of herbal treatments supported rural development and agriculture. The third reason for the support of TCM was the urgent need to remedy the deplorable state of health care after the Civil War. After years of destructive war, the health care infrastructure was in shambles; the state of health of the Chinese population was terrible. The great labor force of traditional practitioners relative to their western counterparts appealed greatly to the Chinese government seeking to quickly address this major problem. Finally, the ultimate aim of the CCP was to unify the country and consolidate control, and the recognition of TCM afforded the Chinese government the opportunity to regulate traditional doctors, further promoting their authority<sup>36</sup>. “Unite and reform” clinics were established to encourage traditional doctors to share ‘secrets’ of the trade, thereby eliminating privatization of medical knowledge and increasing monitoring efficiency.

Though it was initially suppressed under Mao, western medicine soon became supported in the form of integration with traditional medicine. Several physician scholars sought to embrace the new doctrine of cooperation. Zhang Binglin, a former CCP revolutionary, and Wu Ruifu, who composed several works comparing western and Chinese approaches to internal

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<sup>36</sup> Hillier, S.M. and J.A. Jewell. “Chinese Traditional Medicine and Modern Western Medicine: Integration and Separation in Modern China.” Hillier, S.M. and J.A. Jewell. *Health Care and Traditional Medicine in China, 1800-1982*. London: Routledge & Kegan Paul, 1983, p. 313.

medicine, are two notable advocates of integration<sup>37</sup>. Mao's views concerning the benefits of integrating western medicine are aptly summed in the following statement made in a medical magazine from the 1950s:

Our doctors don't know science. They don't understand human anatomy and what is more don't analyze the nature of medicine. As for bacteria and communicable disease they haven't even heard of them. They only talk about the five elements, their production and elimination, heat and cold, yin and yang and prescribe medicine according to the old formulas. All these nonsensical ideas and reasonless beliefs must basically be cured by the support of science<sup>38</sup>.

However, Mao has also asserted that "Chinese medicine and pharmacology are a great treasure house; efforts should be made to explore them and raise them to a higher level<sup>39</sup>." Still, integration was not always met peacefully. Western doctors resisted education in traditional techniques and the corruption of traditional practitioners provided more fuel for criticism by their western counterparts<sup>40</sup>.

The 1960s witnessed a shift in CCP policy towards integration. The introduction of the Barefoot Doctors campaign, an effort to meet the wide need for rural health care by training hundreds of comrades in rudimentary traditional and western health practices, was met with widespread success. While the achievements of these health care providers were lauded, during the Cultural Revolution and the Reign of the Gang of Four, western medicinal professionals were ousted as "intellectuals" and the practice of western medicine was temporarily banned. Hillier and Jewell have argued that the oppression of western medical professionals was essential in the survival of traditional Chinese medicine and establishing it as the basis for primary care into the 1970s.

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<sup>37</sup> Hoizey and Hoizey 159

<sup>38</sup> Hillier and Jewell 309

<sup>39</sup> Sidel, Victor W. and Ruth Sidel. *Serve the People: Observations on Medicine in the People's Republic of China*. Boston: Beacon Press, 1973, p. 128.

<sup>40</sup> Hilliard and Jewell 316



The transition of power to Deng Xiaoping restored the important role of western medicine in China and further enhanced efforts towards integration. At this time, Chinese leaders sought to modernize TCM to make it more acceptable in Western scientific and biomedical terms<sup>41</sup>. As a result, traditional doctors were required to receive standardized training and traditional therapies were scrutinized in the formal laboratory. This was pragmatic in recognizing the great leap modern western medicine had made in identifying disease pathogenesis, developing novel effective treatments to previously untreatable diseases, and the proliferation of new technologies as a result of intensive scientific research. The Chinese had also begun to trust in western medicine's efficacy. Integration represented a unique opportunity to marry the "best of both worlds", choosing what works from both disciplines and synthesizing them in a uniquely Chinese context. This has occurred under the advent of four directive policies for the practice of medicine, developed under Deng Xiaoping's push for modernization:

1. Increased emphasis on hospitals as centers for care (rather than community primary care centers)
2. Specialist and professional knowledge became valued over political association
3. New developments involving technology were promoted and technology transfer from developed countries encouraged
4. A declaration of equality of western and Chinese medicine and a subsequent push for their complete integration

These four directives were vital in cementing Chinese government support for integration. Yet, integration has meant many things in policy, from the establishing of separate wings for both schools in a hospital to the combination of treatments and procedures into one prescription.

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<sup>41</sup> Kohn, Livia. *Health and Long Life: the Chinese Way*. Magdalena: Three Pines Press, 2005, p. 98.

Chinese medicine in the present is typified by its plurality of practice and conceptual approaches. According to Unschuld, Chinese medicine is by no means unified in theory or practice<sup>42</sup>. While science continues to set the pace through its promotion of research since the fall of the Gang of Four, traditional practices (themselves lacking concrete unity) remain strong. Integration of all kinds has faced many challenges throughout the Deng, Jiang, and Hu eras but has remained an important policy in public health. Today, there remains a rural and urban divide between the provision of care, with the cities dominated by western health care and the countryside by traditional care. While today neither western nor traditional medicine is oppressed by the government, integration has yet to be fully implemented.

Traditional practitioners disagree on the degree of modernization that should be applied to their school of medicine. Some advocate rigorous application of scientific practices to TCM and encourage complete unity by taking the “best of both worlds”. Others contend that this has harmed traditional medicine’s integrity. According to some opponents of modernization, “the elimination of the original theoretical background of systematic correspondence threatened the existence of traditional Chinese medicine as a conceptually independent alternative, thereby contributing to a further, and potentially final, stagnation of this ancient knowledge<sup>43</sup>.” As an answer to this debate, Chinese leaders have advocated the “three roads” strategy: one road allows TCM to develop independently, the other road permits western medicine to develop uninfluenced, and the final road is the coexistence or conjunction of TCM and western medicine. For the most part, citizens are free to choose the best option for therapy. This plurality of health care options has allowed China to take advantage of advances in western medicine while simultaneously permitting the development of the traditional school.

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<sup>42</sup> Unschuld, Paul U. *Medicine in China: A History of Pharmaceuticals*. Berkeley: University of California Press, 1986, p. 261.

<sup>43</sup> Unschuld 261

### *Theoretical and ethical comparisons of TCM and western medicine*

The art and practice of medicine are not developed in a cultural vacuum. Societal norms inform understandings of what is health and ill-health. Likewise, the philosophical developments of a civilization form the foundation for medical theory and bioethics. As this section will demonstrate, Chinese traditional medicine developed in a vastly different philosophical and ethical context from western medicine. This is readily apparent in the theoretical understandings of pathology and wellness, as well as in the society's perceptions on fundamental issues such as life and death. However, some significant similarities between the two schools exist, as in the altruistic responsibilities of the physician. Still, the major theoretical differences between TCM and western medicine are the major obstacles to their integration and any move toward mutual understanding.

#### *Philosophical and ethical underpinnings*

The biomedical and bioethical perspectives in China are largely affected by Confucianism and Daoism. Both philosophies were founded in Ancient China and persist in modern thought today. In general, these philosophies emphasize harmony over chaos and relationship over individualism. Unlike the West, where values of human rights and independence have flourished, Confucian and Daoist cultures tend to be collective in nature. The traditions of Confucianism and Daoism have informed Chinese perspectives on ethical issues surrounding birth and death. Similarly, traditional Chinese values of filial responsibility have influenced the practice of medicine and the understanding of public health. Moreover, the ethical and theoretical differences of China and the West have led to diverging understandings of disease and approaches to treatment.

Traditional Chinese ethics, primarily influenced by the teachings of Confucius and the philosophy of Daoism, define an individual relationally. Relationships make a person who he is, not vice versa<sup>44</sup>. Ancestors are venerated and continuing the family line is strongly encouraged. The family community is very important in personal identity and the family's preferences often trump individual desires. While during most of Chinese history the relational aspect was overemphasized, greatly limiting the freedom of some individuals, the Confucian philosophy championing the relational definition persists in Chinese bioethics today<sup>45</sup>. This has important implications on human rights as a concept in China. Because a person is defined by who he is as part of a whole community, it is difficult to separate this identity from an individual identity with rights as in a Western understanding of the term. As Qiu confirms, "in a Confucian framework, there is no place for universal human rights; instead rights are related to role"<sup>46</sup>.

The philosophy of Daoism also strongly affects the Chinese bioethical perspective. According to Daoism, the ways of humans should follow the ways of heaven (and nature). Humans should "carry forward" the *Dao* of nature, but must not transcend it. In addition, a balance between nature and humanity must be maintained, including equal promotion of the *yin* of heaven and nature and the *yang* of earth and humanity. Daoism and Confucianism place a strong emphasis on personal body integrity. The body can only be damaged in two circumstances. First, the integrity may be compromised to meet his parent's needs (filial piety). Second, according to the *Analects of Confucius*, the body may be damaged in sacrifice to the *ren*, or the practice of loving and caring for others (Qiu 76). *Dao*, or "The Way", underlies all

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<sup>44</sup> Hu, Xinhe. "On Relational Paradigm in Bioethics." Julia Tao Lai Po-Wah, Ed. *Cross-cultural Perspectives on the (Im)possibility of Global Bioethics*. Dordrecht: Kluwer Academic Publishers, 2002, p. 97.

<sup>45</sup> Hu 99

<sup>46</sup> Qiu, Ren-Zong. "The Tension between Biomedical Technology and Confucian Values." Julia Tao Lai Po-Wah, Ed. *Cross-cultural Perspectives on the (Im)possibility of Global Bioethics*. Dordrecht: Kluwer Academic Publishers, 2002, p. 81.

approaches to Chinese medicine<sup>47</sup>. Because *Dao* depicts to a certain “organic order” of the universe, one which ebbs and flows in a natural, spiritless manner, a person’s maintenance of harmony with the *Dao* is to be desired. Kohn describes *Dao* as the “deepest essence [of nature], the inner quality that makes things what they are<sup>48</sup>.” It is this inner nature of humans that connects them to the surrounding environment. By definition, this concept is obscure and beyond the scope of ordinary human perception. However, knowledge of the *Dao* is at the heart of medical theory.

Daoist and Confucian thought has informed the way Chinese physicians view modern technology. Often, their perceptions are radically different from their Western counterparts, who value individual choice and survival over interconnectedness and balance. According to Qiu, any genetic technology used in the assistance of reproduction should not disrupt the balance between nature and humans<sup>49</sup>. In this way, “A proper interpretation or re-interpretation of Confucianism will not impede the development of new technology, but can play normative roles in its application<sup>50</sup>.” Because family is the basis of society, and extending the family lineage through both the *yin* and *yang* is important. Therefore, cloning and IVF strategies which utilize donor gametes or surrogate mothers are incompatible with this Confucian value<sup>51</sup>.

Similarly, the diverging philosophies of Chinese culture and Western culture have led to different perspectives on death and its treatment. The term for end-of-life care in Chinese may translate to “hospice” in English. End-of-life care is currently a private matter based on

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<sup>47</sup> Kohn, Livia. *Health and Long Life: the Chinese Way*. Magdalena: Three Pines Press, 2005, p. 9.

<sup>48</sup> Kohn 9

<sup>49</sup> Qiu 78

<sup>50</sup> Qiu 79

<sup>51</sup> Qiu 77

maintaining the dignity of patients during the dying process<sup>52</sup>. As the population ages and new technologies that sustain life become available, though, end-of-life care has increased in its importance as a policy issue. One focal point of care is to relieve pain in a dignified way to maintain the patient's respect as he dies<sup>53</sup>. In end-of-life care, the right of informed consent is respected within the limits of the government boundaries<sup>54</sup>. Debates about euthanasia have yet to be resolved in China. However, strong family ties to decision-making about care during the dying process exist in the Chinese context that will possibly lead to diverging outcomes from the West on this issue.

Confucian virtues have affected medicine and health in China in many ways. Filial piety and family responsibility are two important values in traditional Confucian philosophy. These values have shaped the understanding of health care in China, particularly when it comes to care for the elderly. According to Wang, the Chinese take into account order and relative importance when considering public health. It is seen as a duty of the child to care for his or her parents. They put family first, then their immediate community, then society as a whole<sup>55</sup>. This is radically different from the Western concept of the parent-child relationship where there is no contractual obligation to care for parents when they age. Instead, care must be voluntary or a moral burden on the society as a whole. Also, Confucian teachings offer a diverging perspective of one's moral obligations toward personal health and the health of others. Peimin Ni in "Confucian virtues and personal health" argues that Confucius himself advocated for personal health as a moral virtue and evidence of the practice of *ren*, or the concept of benevolence

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<sup>52</sup> Li Yiting, Ole Doring, Liu Fang, Fu Li, and Su Baoqi. "End-of-Life Care in China: a View from Beijing." *End-of-Life Decision Making: a Cross-National Study*. Robert H. Blank and Janna C. Merrick, Eds. Cambridge: The MIT Press, 2005, p. 35.

<sup>53</sup> Yiting et al. 37

<sup>54</sup> Yiting et al. 44

<sup>55</sup> Wang. Fan, Ruiping, Ed. *Confucian Bioethics*. Dordrecht: Kluwer Academic Publishers, 1999, p. 21.

towards humanity<sup>56</sup>. Ellen Zhang asserts that the concept of the body in Neo-Confucianism promotes an integration of the self with the heavens and the earth through *qi* and the relation of the five elements<sup>57</sup>. Furthermore, “one might say, Confucius does not limit himself by making a person merely *capable* of benefiting the world; he teaches that one *ought* to benefit the world<sup>58</sup>.” Finally, unlike Western bioethics and philosophy, which attempts to separate its ideas of justice and perceptions of “the good life”, Confucianism clearly unites these two theories, purporting a very specific cultural value of the intended goals of medicine and how justice relates to it<sup>59</sup>.

The strong family values and interests in maintaining a proper balance between opposing forces in nature and humanity result in the Chinese ethical viewpoints on issues of birth and death. Human rights as they are expressly defined in the West are not compatible with Chinese understandings of role and identity. Therefore, the protection of such rights as informed consent in the dying process and the use of donor gametes in assisted reproduction are inapplicable in the Chinese cultural context. Additionally, the emphasis on family relationship and roles reveals a significant difference between Chinese philosophy and Western philosophy; this gap has led to varying approaches to public health. Consensus does not exist between Chinese and Western perspectives on birth and death; this reflects the wide gap between traditional Confucian and Daoist philosophies and modern Western perspectives. In traditional medicine, these differences are vividly manifested in the approach to understanding sickness and how the body normally functions in harmony with the environment.

#### *Yin-yang balance and the five elements*

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<sup>56</sup> Ni, Peimin. “Confucian virtues and personal health”. Fan, Ruiping, Ed. *Confucian Bioethics*. Dordrecht: Kluwer Academic Publishers, 1999, p. 27.

<sup>57</sup> Zhang, Ellen Y. “The Neo-Confucian concept of body and its ethical sensibility”. Fan, Ruiping, Ed. *Confucian Bioethics*. Dordrecht: Kluwer Academic Publishers, 1999, p. 26.

<sup>58</sup> Ni 38

<sup>59</sup> Fan 259

The concept of *yin* and *yang* is central to any theoretical understanding of Chinese medicine. According to Rosenthal, the *yin* and *yang* forces are “hypothesized polar-opposite forces in the body that have to remain in harmony for the maintenance of personal health<sup>60</sup>.” While *yin* is most frequently associated with dark, inactive, and traditionally female characteristics, *yang* is perceived as bright, active, and traditionally male. Every *yin* has its *yang* counterpart. Each is supposed to exist with its opposite in a harmonious balance. Within the operation of this balance there are subtleties which make up the five phases. These five phases inform the five elements, which form the basis of classical Chinese theory on nature and medicine<sup>61</sup>:

Phase	Minor yang	Major yang	Yin-yang	Minor yin	Major yin
Element	Wood	Fire	Earth	Metal	Water
Organs associated	Liver and gall	Heart and small intestine	Spleen and stomach	Lungs and large intestine	Kidneys and bladder

Kohn aptly describes the vitally interconnected relationship between these five elements in this way:

In their natural rhythm, the five materials produce each other continuously in a harmonious cycle. Thus, water comes about through rainfall. It makes things grow, so that there is lush vegetation and wood arises. Wood dries and becomes fuel for fire, which burns and creates ashes. Ashes become earth, and earth over long periods of consolidation grows metals in its depths. Metals in the depths of mountains, moreover, attract clouds and stimulate rainfall, thus closing the cycle<sup>62</sup>.

Not only are they harmonious and interrelated, the five elements in nature and in medicine serve as checks and balances against each other. This has important implications for the practice of traditional medicine. As they are all interconnected, it is possible for patients with the same symptoms to receive different diagnoses because their *qi* flow between elements is different.

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<sup>60</sup> Rosenthal 37

<sup>61</sup> Kohn 21

<sup>62</sup> Kohn 23



### *Qi and the meridian system*

The second most important concept of theoretical understandings behind Chinese medicine is *qi*, or the material energy of the universe<sup>63</sup>. In medicine, *qi* is the life force of the body and therefore the foundation of good health and long life. This *qi* is connected to the *qi* of everything outside the body; according to Chinese theory, the flow of *qi* in an individual and its relation to the *qi* in the world around him or her is the main indicator of vitality. As Kohn argues, Chinese medicine perceives health as “not just the absence of symptoms and ailments” but rather the “presence of a strong vital energy and of a smooth, harmonious, and active flow of *qi*”<sup>64</sup>. Conversely, wayward or deviant *xieqi* occurs when *qi* is present in excess or depletion; this disharmony is the cause of ill health.

*Qi* flows through an intricate system of energy lines in the body, called meridian lines or *jingluo*<sup>65</sup>. There are 12 main meridians, 6 yin which move essential *qi* and 6 yang pathways which transport active *qi*. When *qi* is in excess, these pathways become overcrowded and swelling and heat occur. When *qi* is deficient, chills result. Pairs of meridians are connected to different organs and are associated with particular phenomena including emotions, senses, and additional body parts<sup>66</sup>.

The concepts of *qi* and *jingluo* have led to dramatically different approaches to diagnosis and treatment when compared to modern western perspectives and techniques. Traditional diagnostic techniques rely on the observation of 12 distinct pulse systems to ascertain disease<sup>67</sup>. These pulse systems correspond to the 12 meridian lines. Acute observation of variances in pulsing is a highly developed skill in traditional medicine. Treatments to restore the normal flow

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<sup>63</sup> Kohn 11

<sup>64</sup> Kohn 12

<sup>65</sup> Kohn 51

<sup>66</sup> Kohn 51

<sup>67</sup> Rosenthal 57

of *qi* are often prescribed from a wide range of elements including but not limited to medicinal herbs, insects, animal parts, and minerals. Additional treatments not used in western medicine but common in traditional Chinese medicine include moxibustion, cupping, acupuncture, massage. These therapies are based on an understanding of the correct flow of *qi* in the body and attempt to realign energies. The restoration of balance, rather than cure of a specific disease, is usually the goal of these treatments. These therapies are very different from western medicine. Their effectiveness and methods of action are extremely difficult to explain without grounding in traditional Chinese philosophy. Not only do they originate from a different worldview of disease genesis and how wellness is restored, but the very language of health is foreign to the ears of western doctors. This has proven to be a significant obstacle to communication between the two schools of medicine and has hindered efforts towards integration.

*The physician's oath: duties and responsibilities of traditional doctors*

While traditional medicine and western medicine differ in philosophical orientation and approach to healing in many respects, in one respect they are astonishingly similar. In both schools of medicine, the calling of a physician is high: a doctor is held to lofty expectations of selflessness and service for his patients. In the West, the Hippocratic Oath<sup>68</sup> governs a physician's actions and outlines his responsibilities. Sun Simiao, the revered physician of

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<sup>68</sup> Cross reference this abbreviated ancient version of the Hippocratic Oath, taken by men upon assuming the apprenticeship to become physicians in Ancient Greece:

"I swear... that I will fulfill according to my ability and judgment this oath and this covenant: To hold him who has taught me this art as equal to my parents and to live my life in partnership with him, and if he is in need of money to give him a share of mine...to give a share of precepts and oral instruction and all the other learning to my sons and to the sons of him who has instructed me and to pupils who have signed the covenant and have taken an oath according to the medical law, but no one else. I will apply dietetic measures for the benefit of the sick according to my ability and judgment; I will keep them from harm and injustice. I will neither give a deadly drug to anybody who asked for it, nor will I make a suggestion to this effect. Similarly I will not give to a woman an abortive remedy. In purity and holiness I will guard my life and my art...If I fulfill this oath and do not violate it, may it be granted to me to enjoy life and art, being honored with fame among all men for all time to come; if I transgress it and swear falsely, may the opposite of all this be my lot."

ancient China described above, outlined this remarkably familiar prescription for the conduct of a medical practitioner:

He should compose himself, ban all his desires and approach the case dedicated to the relief of the sufferings with a compassionate heart. No regard should be given to the social status of the patient, be it lowly or exalted, poverty-stricken or affluent, aged or young, ugly or beautiful, or to his being a friend or enemy, a relative, a Chinese or a foreigner, a wise person or a fool; but everyone should be treated alike, exactly like a close and dear relative. A physician should not consider his own safety, but must regard the sufferings of the patient as his own, so that he was similarly grieved. He must not entertain any desire of just putting on a show, but must be single-minded in his intentions to relieve sufferings. Thus he should not avoid difficulties in traveling, nor should he be concerned with the time, be it day or night, winter or summer. Neither should he be concerned with his personal comfort, whether hungry or thirsty, tired or exhausted. In this way he would truly become a great physician for his people<sup>69</sup>.

This declaration highlights the responsibility of the traditional physician to the sick, and calls for his complete commitment to the practice of his art. The individuality of the physician's knowledge, coming from experience and teaching from elder physicians, is also emphasized as it is in the West. The incredible similarity of this call for physicians with its Western counterpart reveals at least some compatibility and potential for integration of the two schools of medicine. From this standpoint, we now turn to an examination of the efficacy of TCM as observed through historical successes and by modern day research.

***When to use? the efficacy of integrating western and Chinese medicine in China***

From a public health standpoint, both western and traditional medicine have been extremely helpful in improving the health of the Chinese population. The history of health care in China has demonstrated the successes of both schools in ameliorating the major health

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<sup>69</sup> Ho 34

problems in China and bears testimony to the fact that both are essential for maintaining population health. As shown above, Western medicine was essential in fighting urgent epidemics and delivering crucial vaccinations, transferring key technologies, and promoting scientific research in the efficacy of therapies and developing cures for diseases. In contrast, traditional medicine has proved vital in providing primary care to rural areas, harnessing the vast labor resources of the nation, and providing a wealth of wisdom from several millennia of practice. As Mao declared in 1953, “Chinese medicine and pharmacology are a great treasure house; efforts should be made to explore them and raise them to a higher level<sup>70</sup>.” It is clear that both schools have contributed to the dramatic improvement in China’s population health over the past fifty years. However, is there evidence of the successful integration of traditional and western medicine in China? This section will present a case study of the novel use of acupuncture as an anesthetic in surgery will be used to highlight the effectiveness of integration.

*Case study on integration: acupuncture and surgery*

Acupuncture, or the use of small needles to penetrate the skin at defined points along meridian lines in order to redirect *qi*, has existed as a therapy in China for over two thousand years. As such, its techniques and methods of implementation are highly developed. A theoretical understanding of the body’s energy flows and the vital role of harmony in health is essential for a physician’s skilled application of acupuncture. In the past two hundred years, acupuncture has been used as an anesthetic during surgery in China. Western doctors practicing medicine in China also utilized this technique. In 1846, a Scottish physician reported the use of acupuncture and hypnosis to assist in 76 separate surgeries. The success of this combination of western and traditional techniques highlights the potential for integration of the two schools of medicine.

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<sup>70</sup> Sidel 129

Following the Chinese Civil War, the need to provide cheap, effective health care to the debilitated Chinese masses was great. Recovering China had little ability to afford expensive therapies such as ether anesthesia and narcotic pain medications manufactured by western pharmaceuticals. Instead, practitioners (western and traditional alike) turned to traditional methods to meet the needs of their patients such as acupuncture during surgery. This was in line with Mao's 1958 declaration to "make the past serve the present and foreign things serve China"<sup>71</sup>. Visiting western physicians were skeptical about acupuncture's efficacy as a general anesthetic, however; their bewilderment and distrust was due mostly to a lack of scientific understanding of how it worked rather than the observed ineffectiveness of the treatment. Yet, when Dr. Sherwin Nuland observed several surgeries in China using the acupuncture technique as part of the Yale-China partnership, he was convinced that its effectiveness was widespread and held much promise for wider application.

According to Nuland, while Chinese physicians cannot agree on the theory of how needle anesthesia works, accumulated evidence supporting its effectiveness outweighs a lack of scientific justification. The difference in approach belies a fundamental difference in traditional and western perspectives. In the West, research and theory relies on the ability to separate out variables in order to discover how they function. They assume an explanation for everything can be found using their particular understanding of science. By contrast, Chinese medicine observes how something functions within its environment, because of its interconnectedness and their particular philosophy of the workings of the cosmological universe. This difference is displayed by the patients as well. Whereas Western patients usually chafe and struggle against a disease or condition, Chinese patients seek to strike a balance and restore harmony.

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<sup>71</sup> Nuland, Sherwin. "Chinese Medicine, Western Science, and Acupuncture". *National Center for Complementary and Alternative Medicine Distinguished Lecture*. National Institutes of Health. 10 March 2009.

It is estimated that acupuncture is extremely effective as a general anesthetic in about 80% of patients, all of whom feel mild to no discomfort before, during, and following surgery. As with any medical technique, acupuncture is more effective during certain types of surgeries such as the removal of a thyroid or an operation on the brain and less useful in other surgeries, like operations concerning the stomach or intestines. About half an hour prior to surgery, needles are inserted along specific meridian lines in the body to affect the flow of *qi*. Unlike Western surgeries, in which the “cocoon like atmosphere” is generated, the patient remains fully conscious throughout the operation, conversing with the acupuncturist monitor any pain or discomfort<sup>72</sup>. Surgery using acupuncture requires much skill and precision; often, procedures take longer than when using a chemical anesthetic. However, recovery time and the patient’s need for pain medications following surgery are dramatically reduced.

Recent research in acupuncture has uncovered some of the mysteries surrounding its effectiveness. Scientists have ascertained that the insertion and rotation of needles into the skin in a specific way mimic the effects of a high dosage of a powerful drug such as morphine. It stimulates the release in endorphins in specific locations in the brain, effectively increasing the patient’s ability to tolerate pain and activating the body’s inherent mechanisms of protection. Further research is currently being conducted on whether stimulating the needles sends messages up to the brain to stimulate the endorphin receptors.

In this way, acupuncture induces a “profound elevation of the pain threshold and tolerance brought about by a mechanism or mechanisms that have not yet been fully explained in terms that are acceptable to western science”<sup>73</sup>. The success of acupuncture as a general anesthetic provides evidence not only for the need for a new paradigm in the West for looking at

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<sup>72</sup> Nuland

<sup>73</sup> Nuland

unexplained phenomena and appreciation for the time honored theories of TCM. It also points to the great effectiveness of integration of traditional and western techniques, which leads to overall better treatment for the patient.

### ***Medicine in China today: new opportunities for integration***

Health care in China today is radically different than it was in the Deng and the Mao eras. Privatization of health care has had multiple negative affects, leading to problems access, overpricing, and disparities in quality. Increasingly, Chinese citizens are at risk of resurging infectious disease as well as battling chronic diseases which plague developed countries. With the shift in focus of health care in China over the past several decades has come a decline in the emphasis on integration of TCM and western medicine. However, the need for the collaboration of the two schools has never been so dire. In order to serve the Chinese people, a return to integrative health policies in China is imperative.

However, as this paper has shown above, significant obstacles to full integration of traditional and western medicine exist. There is a sizable gap dividing the two therapeutic approaches, both in theory and in bioethics. Recently, increasing efforts have been made to translate traditional treatments into scientific language that western physicians can understand. As with the research on how acupuncture is effective as an anesthetic, these deliberative efforts at understanding are crucial in bridging the divide.

Also important in increasing the potential for integration is the dramatic elevation in foreign interest in traditional Chinese medicine and other complementary medicine. Immigration, research, and frustrations with western medicine have all played a role in advancing TCM and furthering integration. The following section of this paper will further

develop this statement. Finally, a concluding section will consider the current state of health care in China and the role integration can play in ameliorating the problems China faces.

*Increasing interest abroad: the role of globalization, research, and frustrations with Western medicine in promoting integration*

According to the U.S. Census Bureau, there are currently an estimated 1,518,650 Chinese-born people living in the U.S.<sup>74</sup> These immigrants have brought with them their food, culture, and practices, including those involving medicine. Alongside the wave of immigration from China and Asia, increased western and Chinese scholarship on the subject of Chinese medicine has proliferated as translations become more accessible. Scientific research has grown exponentially on the subject of traditional treatments; these studies focus on TCM's efficacy and potential hazards. This is in response to the overwhelming escalation in demand and use of "non-traditional" remedies. Over \$4.2 billion was spent on herbal/botanical in the U.S. in 2002<sup>75</sup>. The number of practitioners of traditional medicine has also multiplied in the U.S. In *The New England Journal of Medicine* Cassileth cites that "the estimated growth in the number of chiropractors, acupuncturists, naturopaths, optometrists, podiatrists, and other nonphysician clinicians between 1995 and 2005 is double that of physicians<sup>76</sup>." Interestingly, those who turn to complementary and alternative medical therapies tend to be women, people with higher levels of education and income, and patients with chronic illnesses that are difficult to treat<sup>77</sup>. Of the almost 40% of Americans who visited a nonphysician clinician in 1997 many sought preventative rather than curative or emergent care. This is particularly interesting because although the services provided between nonphysician and physician clinicians were

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<sup>74</sup> 2000 estimate, includes people born in Hong Kong and Taiwan

<sup>75</sup> Marcus, Donald and Arthur Grollman. "Botanical Medicines: the need for new regulations." *The New England Journal of Medicine*. Vol. 347, No. 25. 19 Dec. 2002, p. 2073.

<sup>76</sup> Cassileth, Barry. "Book Review: The Role of Complementary and Alternative Medicine: Accommodating Pluralism." *The New England Journal of Medicine*. Vol. 347, No. 11. 12 Sept. 2002, p. 860.

<sup>77</sup> Straus, Steven. "Herbal Medicines: What's in the Bottle?" *The New England Journal of Medicine*. Vol. 347, No. 25. 19 Dec. 2002, p. 1997.



differentiated, there was little difference in the patients they treated. Therefore, “the implications of these findings hinge on the degree to which the increase in conjoint service delivery represents growing coordination or fragmentation of care<sup>78</sup>”. The differentiation of the two schools demonstrates the capacity for collaboration and integration even in the United States.

Accompanying the rise of alternative therapies has been a growing frustration at western medicine. As costs rise and medicine appears to become more profit-based, many have developed a profound disillusionment in the health care system. Others have lost the blind trust of their physician’s prescription and the expectation that western treatments can cure everything. Many have discovered the fallibility of their doctors through unfortunate experiences with medical errors. As such, they view complementary medicine as a safer, less invasive form of treatment which affords them more control of the therapy’s direction. As Cassileth argues, “over the past few decades, patients have become increasingly interested in forgoing passivity in the doctor-patient relationship and demanding full information and something akin to a partnership role. There is a desire for more control over one’s own health care and an unwillingness to rely exclusively on health professionals<sup>79</sup>.” This trend has provided a window for the growth of TCM in the U.S., and additionally an opportunity for the further integration of the two disciplines. Research seeking to bring traditional medicine into the realm of scientific understanding has been rigorously undertaken. Medical schools have begun offering training in complementary medicine techniques and encouraged their students to be exposed to this alternative form of practice in away rotations and study abroad experiences. When traditional medicine has not fit neatly into the scientific mold, as in the case of acupuncture, it has proceeded to challenge and

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<sup>78</sup> Druss, Benjamin, Marcus, Steven, Olfson, Mark, Tanielian, Terri, and Harold Alan Pincus. “Trends in Care by Nonphysician Clinicians in the United States.” *The New England Journal of Medicine*. Vol. 348, No. 2. 9 Jan. 2003, p. 130.

<sup>79</sup> Cassileth 860

shape the Western understanding of how the body operates. This challenge is mutually beneficial and ultimately leads to an improvement in both disciplines, as well as conferring overall advantages to caring for the health of the patients. The expanding influence of traditional medicine has led to further mutual understanding on both sides and increased developments for integration.

*Health care in present-day China: problems and solutions with integration as key*

The demands of the current health care system in present-day China require an innovative solution. Integration of traditional and western medicine has in the past proved useful in surmounting challenges to providing adequate public health care to the sizable Chinese population. Further bolstering of integration efforts is needed if the Chinese government is to meet the new challenges in health care in the twenty-first century.

In the 1980s, China underwent an epidemiological transition from the prevalence of infectious disease to chronic disease as the leading cause of death, partially because of the public health approach and focusing on prevention<sup>80</sup>. Additionally, as a result of economic reform and societal transformation, the health care system has become more privatized. This privatization included a shift in cost of care from the central government to the consumers, decreasing the share of GDP spent on health care and increasing the out-of-pocket payments made by individuals. Also, the responsibility for funding health care centers was transferred to local and regional governments. The CCP also began to regulate prices in order to control rising health care costs, leading to several problems such as the overprovision of profitable procedures and the ballooning of a black market<sup>81</sup>. At the same time, significant changes in rural health care structure also occurred; with the collapse of the commune structure, collective health services

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<sup>80</sup> Ma, Sai and Neeraj Sood. "A Comparison of the Health Systems in China and India." *International Programs at Rand Occasional Paper*. Center for Asia Pacific Policy, 2008, p. 6.

<sup>81</sup> Ma and Sood 8

disappeared and 900 million people in the countryside were left uninsured<sup>82</sup>. The barefoot doctors that were so successful in providing primary care using integrated medicine to the countryside were forced to seek a profit as primary private health care practitioners and are currently unregulated. Barefoot doctors have now become “village doctors” who are required to undergo more extensive training and pass an examination. The shift in their focus has become more curative (as opposed to preventative) and profit-based (in contrast to the service oriented nature of the position in previous eras)<sup>83</sup>. With the privatization of medicine, there was a subsequent shift in focus from preventative to curative care. Accompanying this change has been a greater reliance on western medicine. “With the dismantling of communes, there is no more collective support or funding for organizing the mass-scale expeditions to collect, grow, and produce traditional Chinese or herbal medicine<sup>84</sup>.” Public discontent with the current state of health care in China has led leaders to consider another round of reforms to decrease out-of-pocket expenses, reduce over-prescription, and formulate a health insurance plan with both rural and urban components.

As Blumenthal and Hsiao have argued, “China faces huge health care problems that make those of the United States seem almost trivial by comparison and that constitute a major potential threat to China’s domestic tranquility<sup>85</sup>.” However, the Chinese have proved they are up to the task of conquering these formidable difficulties. In the past, they have used the plurality of health care traditions to their advantage to utilize resources efficiently and provide better care for the people. Unlike the authoritarian regimes of some states, the Chinese Communist Party has

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<sup>82</sup> Ma and Sood 8

<sup>83</sup> Chen, Meei-Sha. “Transformation of Health Care in the People’s Republic of China.” *The Blackwell Companion to Medical Sociology*. William Cockerham, Ed. Malden: Blackwell Publishers, 2001, p. 468.

<sup>84</sup> Chen 470

<sup>85</sup> Blumenthal, David and William Hsiao. “Privatization and Its Discontents- The Evolving Chinese Health Care System.” *The New England Journal of Medicine*. Vol. 353, No. 11. 15 Sept. 2005, p. 1165.

continuously recognized the advancement of public health as vital to the sustained improvement of population health<sup>86</sup>. Through innovative and unique policies, the CCP has mobilized its large labor force and emphasized prevention to ameliorate the quality of life for the population. Not only have Chinese leaders promoted public health measures and integration for the health of its people, but also because it desires to maintain stability and remain in power. As Brumenthal and Hsiao aptly put, “in a country where the threat to established political authority (such as the communist revolution itself) have sprung up for millennia from the grievances of an impoverished peasantry, the consequences of differentials between rural and urban health care carry profound political significance for the current Chinese leadership<sup>87</sup>.” To effectively maintain power, the CCP needs to implement a solution utilizing the integration of western and traditional medicine.

Both western and traditional medicine have played vital roles in maintaining the health of the Chinese people. Each has its strengths and areas where it has helped public health the most. While Chinese medicine has been essential in the realm of primary care and prevention, western medicine has been a key player in managing the threat of infectious disease and stimulating research and development. Significant work is underway to help western and traditional physicians understand each other. Bridging the gap will facilitate the integration of the two schools of medicine that is already taking place. Full collaboration and integration, as in the case of using acupuncture as general anesthesia in surgery, is not only possible but will ultimately benefit patient care both in China and the Western world.

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<sup>86</sup> Anson, Ofra and Shifang Sun. *Healthcare in China: Lessons from HeBei Province*. Burlington: Asheton Publishing Company, 2005, p. 78.

<sup>87</sup> Brumenthal and Hsiao 1168