

**Pain Management as a Framework for Understanding the Evolution of  
Chinese and Western Medicines in the Twentieth Century:  
Herbs, Opium, and Acupuncture Analgesia**

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David Eisenberg, the first American medical exchange student selected to study in the People's Republic of China from 1979-80, had the privilege of witnessing a unique implementation of surgical anesthesia during a major brain surgery at the Beijing Neurosurgical Institute. A Chinese anesthesiologist, thoroughly trained in both Western medicine and Traditional Chinese Medicine (TCM), provided a very minor dose of both narcotic and sedative drugs prior to the operation.<sup>1</sup> This dosage was not nearly enough to supply sufficient anesthesia for such a complicated surgery, however. The anesthesiologist then pulled out several long, thin acupuncture needles and carefully stuck them into specific points on the patient, including the eyebrows and temples. Twisting the needles upon insertion, the anesthesiologist further stimulated several "meridian" points, or channels of energy that run through the body. This technique, called acupuncture anesthesia/analgesia, sufficiently served to eliminate pain for the patient as a large tumor was removed from his brain.<sup>2</sup> During the operation, the patient claimed to be feeling no pain. After the successful surgery, he walked out of the operating room unaided and seemingly unharmed.<sup>3</sup>

Imagine undergoing a complex brain operation without the application of modern-day anesthetics or pain killers, specifically opioids. This not only sounds like a grotesque form of torture but also completely unnecessary in light of medical progress and the contemporary

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<sup>1</sup> Traditional Chinese Medicine (TCM) evokes varied meanings for different scholars, but in this essay the term will refer to the Chinese medicine practiced for thousands of years. TCM, native Chinese medicine, and Chinese medicine are used interchangeably.

<sup>2</sup> Although the term acupuncture *anesthesia* is generally used, the Chinese pointed out that acupuncture *analgesia* is more accurate because sensations other than pain are often retained. The terms are used interchangeably. John Bonica, "Acupuncture Anesthesia in the People's Republic of China: Implications for American Medicine," *JAMA* 229, no. 10 (September 2, 1974): 1317.

<sup>3</sup> David Eisenberg, *Encounters with Qi: Exploring Chinese Medicine* (New York: Norton, 1985), 68-75.

surgical environment. Why would this even be an option considering the potential consequences? Additionally, consider the aftermath of surgery without the use of opioid painkillers such as oxycodone or hydrocodone. The pain would almost seem unbearable, and why would anybody choose to do this? In other words, why wouldn't a patient always opt in for the use of pharmaceuticals such as opioids?

Before the development of modern pain management, pain was extremely important in determining diagnosis, treatment, and conceptions surrounding how clinicians interacted with patients.<sup>4</sup> Everard Maynwaringe, who wrote the first published English-language treatise on pain in 1682, contended that pain “begins and gives the Alarm, discovering a disorder or disease in this or that internal and hidden part of the body; gives warning betimes, and implores aid”, acting as a warning of a potentially fatal disease.”<sup>5</sup> Pain also dictated how a doctor's authority and legitimacy were assessed, as argued by historian Katherine Walker. Walker asserts, “Surgeons uses their purported knowledge of pain, gained through close contact with their patients' bodies, to develop the best possible treatment options and to emphasize their professionalism.”<sup>6</sup> The subsequent development of anesthesia and pain killers that actually provided powerful results, therefore, was exciting for both scientific research and clinical medicine. William G. Morton, a Boston dentist, performed the first successful procedure under modern anesthesia in 1846 with nitrous oxide.<sup>7</sup> Important breakthroughs in opioid research in the late nineteenth and twentieth

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<sup>4</sup> Katherine Walker, “Pain and Surgery in England, circa 1620-circa 1740,” *Medical History* 59, no. 2 (April 2015): 255.

<sup>5</sup> Everard Maynwaringe, M.D., *Pains Afflicting Humane Bodies: Their various Difference, Causes, Parts affected, Signals of Danger or Safety* (London, 1682), 8. Quoted in Walker, “Pain and Surgery,” 260-61.

<sup>6</sup> Walker, “Pain and Surgery,” 266.

<sup>7</sup> Daniel Robinson and Alexander Toledo, “Historical Development of Modern Anesthesia,” *Journal of Investigative Surgery* 25, no. 3 (May 2012): 141.

centuries subsequently allowed for opioid use to explode. Opioids have predominantly taken over prescriptions amongst clinicians due to their potency, and their widespread adoption by pharmaceutical companies during the 1990's made them readily available for patient use. From 1990, "use of opioids for chronic pain began to increase, showing a substantial year to year rise that continues today."<sup>8</sup> Opioids revolutionized how pain was understood in the medical world from that point moving forward, yet they had implications for recreational use as well.

Modern pain management was a major component of the historical dynamics of the medical world in the twentieth century, but scientific development was taking many different forms, especially in the Western laboratory. Roy Porter draws attention to strides being made in human physiology, "including rapid advances in understanding the functions of the lungs and digestive tract and in investigating the composition and functions of the blood."<sup>9</sup> Porter also acknowledges advancements being made in neurophysiology, biochemistry, and organic chemistry, namely with the study of "proteins, enzymes, nucleic acids, and elucidating the mechanisms of energy production and nutrition."<sup>10</sup> In addition, the new scientific field of molecular biology came to fruition after the principle arose that all living processes should be understood in light of the preexisting sciences of chemistry and physics. Many of these breakthroughs were possible due to "bigger and better laboratories," especially in France, Germany, Britain, and the United States.<sup>11</sup> Traditional Chinese Medicine, so it seemed, could

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<sup>8</sup> Andrew Rosenblum, Lisa Marsch, Joseph Herman, and Russell Portenoy, "Opioids and the Treatment of Chronic Pain: Controversies, Current Status, and Future Directions," *Experimental and Clinical Psychopharmacology* 16, no. 5 (October 2008): 407.

<sup>9</sup> Roy Porter, *The Greatest Benefit to Mankind: A Medical History of Humanity* (New York: W. W. Norton, 1997), 528.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*, 528-530.

lose its footing in this fast-paced, scientific world. Native Chinese doctors ultimately had to face the challenge of survival and integration in the midst of Western medical ascendancy.

Scholars and physicians have explored this twentieth-century challenge for Chinese physicians, and the historiography revolves around how Western science ousted, integrated, or remained passive in relation to a Chinese medicine rooted in thousands of years of practice. In particular, medical historians, medical anthropologists, and physicians debate the efficacy and utility of Western medicine coming in contact with native Chinese medicine and culture. How successful was the West in submerging the ancient practices of Chinese medicine, many of which were refuted by modern scientists? Was there a modified, reborn form of Chinese medicine that emerged after Western medicine swept through China, or did the ancient practice survive through the twentieth century?

Scholars such as Rhonda Chang, David Eisenberg, M.D., and Bridie Andrews contemplate some of these questions. Chang explores the evolution of Chinese medicine, arguing that modern Chinese treatments have been altered by Western science more than previously thought.<sup>12</sup> Andrews aims to shorten the divide between Chinese and Western medicine from a historical context, arguing that Western medicine was not in fact superior to traditional medicine in China. She elaborates on the important interactions between Western missionaries and TCM.<sup>13</sup> Furthermore, David Eisenberg, M.D., enlightens his readers with a personal account of his experiences with TCM after studying the practice in China. Though technically primary, Eisenberg's account contributes to the current historiographical debates by providing evidence of

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<sup>12</sup> Rhonda Chang, "Making Theoretical Principles for New Chinese Medicine," *Health and History* 16, no.1 (2014): 66.

<sup>13</sup> Bridie Andrews, *The Making of Modern Chinese Medicine, 1850-1960* (Vancouver: UBC Press, 2014), 54.

TCM's ties to its long-standing past. The notion of Qi, or vital energy, has diverged from modern science in the sense that it was and still is unable to be anatomically and physiologically proven.<sup>14</sup> Despite the fact that Qi has been used by practitioners for thousands of years, Eisenberg shows that this concept survived due to its mainstream use amongst traditional Chinese physicians of the twentieth century.<sup>15</sup>

The Western medical community at the beginning of the twentieth century was mostly skeptical of TCM due to scientific stipulations, characterizing it as “impervious” and “crude” in a 1903 report.<sup>16</sup> The latter half of the century, especially with the Communist Revolution in China in 1949 along with the significant decade of US-China rapprochement in the 1970's, provided opportunities for aspects of TCM to engage with Western medicine and be marketed to the world. This paper, in analyzing periods such as the Communist Revolution of 1949 and the 1970's, will argue that Chinese Medicine has been favorably adaptive in relation to its traditional history and scientific development. Practitioners of TCM, whilst retaining the medicine's ancient principles, have been able to adapt to Western medicine, subsequently combining forces with Western physicians to create hybrid treatments such as acupuncture analgesia and the use of acupuncture for chronic pain. Acupuncture and herbal treatments have survived the test of time because they do in fact work and don't have addictive qualities that in turn lead to health complications. Western medicine, on the other hand, has been more revolutionary due to the rapid progression of scientific developments in the laboratory and clinic, which are often introduced into society so quickly that their negative effects are not able to be duly recognized in short spans of time.

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<sup>14</sup> Eisenberg, *Encounters with Qi*, 119.

<sup>15</sup> *Ibid.*, 89.

<sup>16</sup> George M. Gould *et al.*, “Chinese Medicine,” *American Medicine* 6, no. 19 (Nov. 1903): 724.

The history of the rapid circulation of opioid painkillers by the pharmaceutical industry in the 1990's, which has led to mass addiction still relevant in society today, calls attention to unorthodox forms of pain management that might help circumnavigate problems like addiction. I believe it is possible to revive Chinese medicine as it came in contact with Western medicine in the twentieth century, and by doing so emphasize treatments such as acupuncture and herbal remedies that might provide alternative solutions to opioid pain management. Additionally, elements of TCM like acupuncture and herbal prescription are relatively inexpensive, enabling treatment opportunities for communities who can't afford more expensive healthcare. Aspects of Chinese medicine did integrate with Western medicine as the twentieth century progressed, yet TCM's attachment to a successful past has made it distinct.

### **Perceptions of Chinese Medicine in Light of the Opium Wars and the Early Twentieth Century**

The end of the nineteenth century and early twentieth century marked a significant period for the investigation of the Chinese medical world by Westerners. Western explorers, especially missionaries, were traveling to China in attempts to obtain firsthand observations and critiques of local practices. Primary and secondary narratives reveal mixed sentiments among these observers concerning the potential marriage of Western and Chinese medicines. Physicians and commentators throughout the century didn't hesitate to make their skepticism clear, yet some were optimistic about the potential advantages of Chinese medicine.

Meanwhile, the use of opium in China throughout the nineteenth century was widespread due to a series of Opium Wars. Occurring from 1839-42 and later from 1856-60, these wars were

a result of Britain willingly forcing opium onto Chinese markets.<sup>17</sup> In particular, British merchants targeted wealthy Chinese customers, but the extent of their sale included less affluent groups as well. The result was usually the same, however, as most clients fell victim to addiction and incapacitation. The Chinese government attempted to restrict the import of the addictive drug by British merchants, but these “tradesmen asked their king in London to intervene militarily on the side of Western business interests.”<sup>18</sup> Britain was easily able to defeat the Chinese due to their more developed levels of industrialization and military technology, and they further imposed humiliating peace negotiations which included the forcing of China to “allow foreign powers to install independent enclaves, primarily in important trade regions like Shanghai and Hong Kong.”<sup>19</sup> Moreover, Christian missionaries were given free rein to settle anywhere they pleased in China for the time being, allowing for the exploration of Chinese culture.<sup>20</sup>

Though mainly used recreationally during this period in China, opium started to take its place in Western medical practice towards the end of the nineteenth century. The substance was not widely used as a pharmaceutical at this point in time, but its powerful effects were well known.<sup>21</sup> Documents from end of the nineteenth century and early twentieth century provide insight into the ensuing frameworks for pain treatment as the twentieth century progressed, and it

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<sup>17</sup> Horst J. Helle, “Exchanges of Threats:” In *China: Promise or Threat?*, A Comparison of Cultures, Brill (2017): 14.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid., 15.

<sup>20</sup> Ibid.

<sup>21</sup> Could opium’s heavy use in China throughout the nineteenth century given traditional Chinese doctors a sense of weariness that Western doctors missed? An interesting question to think about for supplementary conversation.



is necessary to take a look at these archives and perceptions surrounding them to situate the integration of Chinese and Western medicine later in the twentieth century.

The *British Medical Journal*, one of the world's oldest general medical journals begun in 1840, contains many aspects of Western medical perceptions from the nineteenth and twentieth centuries. "The Royal Commission on Opium Trade," published in the *British Medical Journal* in 1893, includes proceedings, observations, and opinions on the causes and effects of the opium trade both in China and India, mostly from the perspectives of Westerners. The commission was established in 1893 by the British government in response to criticism of the Sino-Indian opium trade, which caused mass addiction and dependence on the substance for many Chinese people.<sup>22</sup> Doctors and lay people gave their general thoughts on the advantages and drawbacks of opium's medical and recreational use. Sir William Moore, a chief medical officer and deputy surgeon general, smoked opium himself and claimed it was harmless and beneficial. It allowed one to overcome fatigue and also served as a good prophylactic of fever in strengthening the immune system. He was most likely biased due to his personal use of the substance. He had confessed that opium can be injurious if abused like alcohol, however.<sup>23</sup>

Dr. Mouat, formerly a commercial opium examiner before the proceedings of this commission were published in 1893, was said to have believed that the use of opium in Asia was far better than the use of alcohol by the English. It was "not an incentive to lunacy or crime. It was a prophylactic and a harmless stimulant."<sup>24</sup> Another observer was said to have claimed that

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<sup>22</sup> Ganesha Publishing, ed., "The Royal Commission on Opium, 1893-94: Reports, Minutes of Evidence, and Appendices," *Britain in China*, May 1, 2003.

<sup>23</sup> Anonymous, "Royal Commission On Opium Trade," *The British Medical Journal* 2, no. 1708 (Sep. 1893): 690.

<sup>24</sup> *Ibid.*

“alcohol is an infinitely greater curse.”<sup>25</sup> On the other hand, deputy surgeon-general Partridge was described as believing, “many took it for dissipation...He believed opium smoking to be a vice, and injurious to health and degrading to morals.”<sup>26</sup> Opium use in Asia was often compared to alcohol use in the West, and it seemed as though general opinions were in favor of opium for both its physical and mental benefits. In general, opium in this commission was viewed as the less addictive substance than alcohol, which further valorized its use as a pharmaceutical in the medical world.

Select viewpoints from the 1893 Royal Commission on Opium Trade illuminate how certain Westerners had an affinity for opium, yet Bridie Andrews contextualizes the second half of the nineteenth century by revealing how Western-trained missionaries also approached Chinese herbal remedies with a sense of openness. In her monograph, Andrews analyzes the significance of combining Western missionary medicine and Chinese herbs. This is significant because, despite the momentum created by the opioid outbreak, there was potential for the adoption of alternative remedies for healing and pain management. The use of *materia medica* for both schools of medicine were remarkably similar.<sup>27</sup> Radical developments to Western pharmaceutical practice did not begin until the second half of the nineteenth century, when scientists were able to isolate compounds such as morphine, codeine, and quinine from herbal substances.<sup>28</sup> These process allowed for the same basic analysis and amalgamation of herbal remedies, especially between incoming missionaries and native Chinese physicians.

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<sup>25</sup> Ibid., 691.

<sup>26</sup> Ibid.

<sup>27</sup> Manuals used to list natural substances and instructions for their application.

<sup>28</sup> Andrews, *The Making of Modern Chinese Medicine*, 53.

Despite the application of Western scientific practice to Chinese medicine, Andrews recognizes that missionary medicine did not completely overpower native Chinese medicine in an imposing manner. In fact, Andrews says that “some missionaries were so successful at attuning their practice to local Chinese sensibilities that, by the early twentieth century, their clinics were acknowledged to be less modern and scientific than those established by the Chinese themselves.”<sup>29</sup> In this view, Andrews illustrates that outsiders such as missionaries were accepting of and impressed by aspects of Chinese medicine, creating room for potential combinations between the two practices.

Looking to America, physicians were also showing optimism for Chinese medicine during the second half of the nineteenth century. G. Lorimer, a Western physician, described in “Acupuncture, and its Applications in the Treatment of Certain Forms of Chronic Rheumatism” from an 1886 edition of the *Maryland Medical Journal*, the history of acupuncture as it came from Japan and China and its introduction into Europe about two-hundred years before the article was written.<sup>30</sup> The practice was disregarded in Europe for a period of time, but Lorimer was a proponent for the ancient treatment’s comeback.

By providing clinical instructions for the use of acupuncture, Lorimer was most likely writing for fellow practitioners or scientific researchers. Lorimer said, “Acupuncture may be employed with advantage for the relief of pain for the removal of muscular disability; and with the removal of the latter condition, muscular atrophy is usually improved.”<sup>31</sup> Lorimer elaborated on the needles themselves, saying that they “are about two inches in length, or longer. They are

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<sup>29</sup> Ibid., 54.

<sup>30</sup> G. Lorimer, “Acupuncture, and its Applications in the Treatment of Certain Forms of Chronic Rheumatism,” *Maryland Medical Journal*, 1886, 120.

<sup>31</sup> Ibid., 121.

set in round handles, and should be introduced with a gentle rotatory motion.”<sup>32</sup> He talked about the importance of acupuncture as a pain reliever, therapy for muscular disability, reliever of rheumatism (a disease categorized by swelling or inflammation), and what to expect in terms of symptoms after needles were applied to a patient.<sup>33</sup> Case studies at the end of the article elaborate on patients who were treated with acupuncture with high success rates.<sup>34</sup> Lorimer was a strong proponent for certain aspects of Chinese medicine such as acupuncture, and his periodical proves that there was definite interest in Chinese medicine and its implications for pain relief.

A 1903 editorial in *American Medicine* regarding Chinese anatomy, physiology, and surgery portrayed a more pessimistic view from the United States of the unfamiliar Chinese medicine. George Gould, the editor of this edition, portrayed Chinese medicine as “impervious,” highlighting the cultural importance to many of their medical practices and lack of cross-cultural assimilation.<sup>35</sup> He also acknowledged that the Chinese were thought to use anatomical and physiological dogmas that had existed for thousands of years, failing to denounce traditional practices that might have become outdated.<sup>36</sup> Additionally, Chinese surgeons were thought to have lacked sophisticated tools and anesthesia when operating, often relying on acupuncture as opposed to invasive surgery. Gould described castration in the Imperial Court: the process of becoming a eunuch was “crude,” frequently eliminating all types of anesthesia and was not truly surgical in nature.<sup>37</sup>

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<sup>32</sup> Ibid., 122.

<sup>33</sup> Ibid., 121-122.

<sup>34</sup> Ibid., 122.

<sup>35</sup> Gould, “Chinese Medicine,” 724.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid., 724-725.

Similarly, some Europeans viewed Chinese medicine negatively at the turn of the century. Articles were commonly published in the *British Medical Journal*, providing insight into how the European medical world might have thought about certain forms of foreign medicine. In a 1904 “Nova Et Vetera” section of the journal, an author provided an informative analysis of the central dogmas within Chinese medicine but with a negative undertone.<sup>38</sup> In opposition to perceptions taking root towards the middle to late twentieth century, this author emphasized that “Chinese medicine at the present day is not merely at a standstill, but is declining.”<sup>39</sup> The author appears to be situating the traditional practices of China against the progress of Western science. Yet Chinese physicians probably saw no need for rapid modernization. Why would their practice, established thousands of years ago, all of a sudden be changed due to the advancements of Western medicine? The author nonetheless framed this adherence to convention as a bad thing.

As the Chinese, saturated with the spirit of Confucius, see in their classic literature the highest wisdom and cling to the moral therein contained, so do they also cling to the ancient teachings on medicine. Scarcely any advance has been made in this subject for centuries; the old ideas are accepted as absolutely true. In fact, there is no modern medical literature in China which is not grounded wholly and entirely on the principles and teachings of the old medical classics, except where here and there the influence of such a Western school as that at Hong Kong makes itself felt over a limited area.<sup>40</sup>

The author, in referencing “ancient teachings,” was probably referring to concepts such as Qi and the *materia medica* that had been in place for centuries.<sup>41</sup> Western physicians were beginning to base the validity of certain principles and practices on scientific proof, and concepts such as Qi were unable to be proven in the laboratory. Herbal remedies recorded in the Chinese *materia*

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<sup>38</sup> “Nova Et Vetera” publications were common in the *British Medical Journal* at the turn of the century, mostly evaluating the medical sphere from a European perspective.

<sup>39</sup> Anonymous, “Nova Et Vetera: Chinese Medicine,” *The British Medical Journal* 1, no. 2260 (April 1904): 960.

<sup>40</sup> Ibid.

<sup>41</sup> See footnote 18.

*medica* were also based on years of medical practice and were not entirely trusted by Western doctors. As a result, this author was similarly not impressed by Chinese anatomical precepts.

Knowledge of anatomy is very backward in China. Anatomical observations are based on imagination rather than actual observation. The difference between tendons and nerves...and between arteries and veins is unknown; the capillary system is unthought of. The cranium, pelvis, forearm, and leg are looked upon as each forming one bone; the large joints are depicted as two rollers, the small ones completely ignored. The larynx, it is taught, passes through the lung to the heart, while the heart is connected by tubes with the liver, the spleen, the kidneys, and the small intestine. Urine passes through the latter into the bladder. The spinal marrow passes to the testicle. Thus does the Chinese medical practitioner picture to himself the construction of the human body.<sup>42</sup>

This account would have most likely convinced curious Western physicians of the inadequacies of Chinese medicine. The ideas illustrated above are certainly negative, yet again it is hard to believe that they were interpreted correctly without verification, especially verification from a traditional Chinese medical professional. Additionally, it was easy for a Western doctor to frown upon anatomical knowledge in China due to cultural conventions, especially knowing “Confucius taught that a man must keep his body unmutilated, and out of love for his parents must avoid all danger to life.”<sup>43</sup> Invasive surgery was very rare due to these cultural customs, and acupuncture was extremely common. Almost too common in the eyes of this author. In addition, surgical instruments used in Chinese medicine were considered rudimentary, further contributing to the primitive outlook of Chinese surgery by Western observers of the time.

Yet despite these negative renditions of Chinese medicine in the West, Bridie Andrews introduces two concepts, commensurability and accommodation, and these notions allow for a glance at how integration between Chinese and Western medicine could be possible. Although these ideas apply to missionary medicine in China, they nonetheless introduce an attempt at assimilation that could be applied in both America and Europe. For Andrews, commensurability

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<sup>42</sup> Ibid., 961.

<sup>43</sup> Ibid., 962.

is understood as the likeness between the two practices, while accommodation relates to how the missionaries adjusted their treatments in order to become more appealing to Chinese patients.<sup>44</sup> Commensurability was most seen in how the Westerners made use of available drugs. Maintaining an adequate supply of drugs was often a problem, and missionaries often supplemented native drugs with Western substances. Additionally, the use of laboratory procedures towards the late nineteenth and early twentieth centuries allowed for a more advanced understanding of certain drugs, which in turn allowed for the processes of preparation and prescription to become more efficient. It appears as though techniques such as laboratory procedures would point to a presumed superiority of modern medicine, yet certain Western pharmaceuticals were also found to contain mystery substances such as cocaine and opium.<sup>45</sup> When looking back, the often hypocritical nature of Western medicine can be recognized.

In terms of accommodation, Andrews asserts that the missionary adoption of the native Chinese language along with adapting to how the Chinese handled pain during treatment are important to note. Pain toleration was observed to be much higher amongst the Chinese as compared to Westerners, and Andrews recognizes that Westerners may have seen race as the root of these “physiological” differences. Anesthesia was often minimized for Chinese patients.<sup>46</sup> Although quite a cruel accommodation, Andrews sees this reduction of anesthesia as nonetheless important to acknowledge. In addition, native patients were used to having prescriptions modified with the evolution of a disease. If a missionary doctor, for example, did not modify certain drugs during treatment of a sickness, patients would often become upset. Missionary doctors subsequently had to adjust to the nature of how their patients wanted to be treated, which

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<sup>44</sup> Andrews, *The Making of Modern Chinese Medicine*, 54.

<sup>45</sup> *Ibid.*, 59.

<sup>46</sup> *Ibid.*, 59-60.

was a challenge. The hospital scene was additionally different in the East than the West. Bathing requirements were frowned upon, and meals were often cooked outside of hospitals due to a distaste for the bland, European hospital food. Medical missionaries had to become accustomed to working in these homey environments. In addition to helping missionaries get along with their patients, these accommodations often caused foreign doctors to change their medical beliefs in general.<sup>47</sup> Andrews remarks that the supposed medical superiority and domination of the missionaries was unconvincing due to the different conceptions of commensurability and accommodation occurring during this period.

Some of these negative interpretations, such as the accounts from *British Medical Journal* and *American Medicine*, serve to show that the reception of traditional Chinese medicine into the West would be difficult as the century progressed. Additionally, gradual openness to opium, as shown with the “The Royal Commission on the Opium Trade,” directed attention towards the development of more scientific, modern pain management. Some Chinese treatments for pain management were slowly gaining momentum in the West, however, as seen with Lorimer’s take on acupuncture, but lack of scientific research and experience with acupuncture by American and European practitioners undermined its utility. At what point might Chinese medicine then be given more serious consideration?

### **The Effects of the Republican Period (1912-1949) on the Medical Atmosphere in China**

Xiaoqun Xu addresses the dispute between Western and Chinese medicines during the Republican period and in doing so draws a solid line between the two practices in his article “‘National Essence’ vs. ‘Science’: Chinese Native Physicians’ Fight for Legitimacy, 1912-37.”

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<sup>47</sup> Ibid., 60-61.



Adopting a policy standpoint, he navigates the medical turmoil occurring in China at the onset of the twentieth century. As he argues, practitioners of native Chinese medicine were under immense pressure by modern doctors to defend their existing systems and were constantly accused of utilizing a sort of “mysticism” within their frameworks.<sup>48</sup> After a republic was established in China that ended over two thousand years of imperial rule, a national conference in 1912 sparked the discussion and implementation of national education reform. Throughout the period 1912-27, “three [Western] medical schools were set up by the national government and funded by the Ministry of Education, two more were established by provincial authorities; additionally, there were five private medical schools and seven that were run by missionary societies.”<sup>49</sup> A sense of crisis overtook native physicians due to the emphasis on including modern medical schools without recognition of the native medical schooling system.<sup>50</sup> Native medicine was pinned as “superstitious, unscientific, and an impediment to the development of medical science in China.”<sup>51</sup> Scientists of Western medicine were making major breakthroughs in the laboratory, and new treatments were being used in the clinical setting. Consequently, Western medicine was viewed as state-of-the-art, and denouncing its credibility was taken as foolish and naive.

Xu also argues that, after proposals to combine the two schools of medicine, Western physicians claimed that a combination would not be possible. Due to the “neglect of public health and the lack of progress of medical science in China,” Western medicine would need to be given precedence if any sort of improvements to the current healthcare system were to be

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<sup>48</sup> Xiaoqun Xu, “‘National Essence’ vs ‘Science’: Chinese Native Physicians’ Fight for Legitimacy, 1912-37,” *Modern Asian Studies* 31, no. 4 (Oct. 1997): 855.

<sup>49</sup> Andrews, *The Making of Modern Chinese Medicine*, 149.

<sup>50</sup> Xu, “‘National Essence’ vs ‘Science,’” 850.

<sup>51</sup> *Ibid.*, 847.

made.<sup>52</sup> Traditional drugs, however, were one valuable facet of native medicine for modernists, yet native physicians were not qualified to prescribe such drugs in the eyes of modern doctors. Western and contemporary Chinese doctors were more versed in modern science and therefore solely possessed the right to use them in a clinical setting.<sup>53</sup>

Chinese native physicians exercised their power by accusing the West of assaulting cultural nationalism and took collective action aimed at shifting government policy.<sup>54</sup> Yet Western doctors, in Xu's view, also tried to influence policy-making by attempting to side with government officials. Both were very active in lobbying for the upper hand throughout the Republican period. In the end, however, Xu argues that it was the native physicians who gradually managed to acquire more public and government support. The imperialistic ambitions and cultural invasion of Western medicine were delayed for the time being, and proponents of traditional medicine were able to preserve their trade and way of life. Although Xu does a good job of providing context as to what was happening in the Chinese medical world during the Republican period, he does not acknowledge the potential for a sort of reconciliation between the two medical practices. As I will show demonstrate later in this paper, it was possible to develop hybrid treatments between Chinese and Western medical practices. Xu does not make room for efforts to combine certain treatments and theories, and he rather illustrates the medicines as being in stringent competition with each other. There needed to be a winner and loser in Xu's view, and the native physicians were able to achieve victory throughout the Republican period.

Andrews also frames the medical sphere of China during the Republican period, explaining that reformers of Chinese medicine were successful in "molding an image of learned

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<sup>52</sup> Ibid.

<sup>53</sup> Ibid., 856.

<sup>54</sup> Ibid., 847

Chinese medicine that was intellectual and secular.”<sup>55</sup> In the midst of heavy criticism from both modern Chinese physicians and foreigners, native doctors were pressured to publish literature that shaped their practice as more of a science and less of an abstract art. Their aim was to elevate their profession on an international scale by creating publications that were accessible to medical specialists everywhere.

These new texts did not emphasize certain traditional beliefs, specifically those centered around spirits, medical deities, and temple medicine.<sup>56</sup> As a result, Nationalist government agenda was analogous to these rejections of superstition. Bans on “superstitious persons” were issued, and in due course “the acceptable face of ‘Chinese’ medicine was to be the secular medicine of the elite classes, not the popular practices of the ordinary people.”<sup>57</sup> Although such publications pushed Chinese medicine towards reform through scientific development, these new texts helped protect the ancient practice from being banned altogether. A total ban was a frightening threat considering attempts by modernists such as Yu Yunxiu were made in 1929.<sup>58</sup> Andrews maintains that these efforts to enforce “scientific priority” were mostly functions of government rather than patient preference, however. Chinese civilians still preferred to be seen by their native physicians for the most part. Andrews asserts that, “during the Republican period...[reformers of Chinese medicine] failed to have Chinese medicine included in the national education system and were still a long way of achieving their aim of having Western medicine and Chinese medicine accorded equal status.”<sup>59</sup> Native physicians were off to a good start in displacing the imperialistic momentum of the West, and despite setbacks during the

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<sup>55</sup> Andrews, *The Making of Modern Chinese Medicine*, 184.

<sup>56</sup> *Ibid.*, 183.

<sup>57</sup> *Ibid.*

<sup>58</sup> *Ibid.*

<sup>59</sup> *Ibid.*, 184.

Republican period they were gradually achieving more respect for their practice and making efforts towards cooperation with Western medicine.

## **The Integration of Chinese and Western Medicine During the Communist Revolution in China**

The Communist Party of China's takeover with Chairman Mao Zedong as its leader in 1949 would serve as a major platform for the integration of traditional Chinese medicine with Western medicine in China. This integration along with significant developments within the traditional practice amplified interest in TCM on an international scale. Mao's "peasant background prompted him to be an egalitarian, idealist, and anarchist leader who was concerned with politics more than the economy,"<sup>60</sup> and this influenced him to refocus the current healthcare system in China so to further incorporate the neglected rural population. Mao's concern can be seen in a poem written for the Health Ministry: "Health care, health care, it benefits high officials; peasants, peasants, their life and death are nobody's business."<sup>61</sup> The distribution of medical professionals and resources was highly skewed prior to some of Mao's reforms.

China had 1.4 million medical professionals in 1965, with 70 percent working in large cities, 20 percent in the county hospitals, and only 10 percent in the vast rural areas. Furthermore, while 80 percent of the country's population was in the countryside, only 25 percent of medical funds were actually applied to the rural areas (compared with 75 percent in the cities).<sup>62</sup>

Consequently, Mao and his party launched the Rural Cooperative Medical Scheme (RCMS), effective 1968 to 1981, the effort included several elements, but perhaps most important was the use of what Mao called "barefoot doctors."<sup>63</sup> The term can be misleading

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<sup>60</sup> Chunjuan Nancy Wei, "Barefoot Doctors: The Legacy of Chairman Mao's Healthcare," *Mr. Science and Chairman Mao's Cultural Revolution: Science and Technology in Modern China* (January 2013): 260.

<sup>61</sup> *Ibid.*

<sup>62</sup> *Ibid.*

<sup>63</sup> *Ibid.*, 251.

because these medical personnel were not in fact doctors, but rather “young part-time farm workers who served their communities after basic training in Western medical techniques and indigenous Chinese treatments.”<sup>64</sup> The program proved to be very effective and made use of local populations to provide care in light of a massive shortage of medical personnel in rural areas. The barefoot doctors were effectively a first line of defense for those experiencing illness and other ailments. They were trained only in basic treatments and primary healthcare but also disseminated Maoism, preventative medicine, and health education.<sup>65</sup> If patients needed more advanced care, they were sent to the commune or county hospitals where mobile teams from urban medical environments would provide treatments.<sup>66</sup>

Though trained in Western as well as Chinese medicine, the barefoot doctors made use of Chinese practice in an extremely efficient manner. Resources and treatments associated with TCM were much cheaper than those of Western medicine, making the native practice much more accessible for communities in third-world China. Herbal remedies and acupuncture were paramount. Lyrics drawn from the theme song of a movie called *Red Rain*, made in 1975 to honor the barefoot doctors, illustrate how valuable these treatments were to the people of China: “a silver needle treating hundreds of diseases and a red heart warming thousands of families.”<sup>67</sup> TCM was extremely prevalent prior to Mao’s coming into power, especially in terms of TCM doctors vastly outnumbering Western doctors in China. Now Mao recognized the importance of having Western medicine and research in the country, and one of his most monumental accomplishments in healthcare was an attempt to integrate the two forms of medicine.

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<sup>64</sup> Ibid., 252.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid.

Earlier in the century, traditional medicine had been criticized for having a “lack of unified standards, one of the reasons behind the abortive nationalist ban of TCM in 1929.”<sup>68</sup> Mao, on the other hand said, “Chinese medicine is a grand cache of knowledge that we should actively bring to light and further evolve.”<sup>69</sup> One could be convinced that Mao firmly believed in the value of TCM as it stood in comparison to Western medicine, but Mao’s true admiration of TCM has been questioned due to his political motivations. In the 1960’s, the Soviet Union joined the United States in imposing sanctions on China. These sanctions forced China to become more independent due to the fact that the Chinese had relied on the Soviet Union in the 1950s for much of their Western pharmaceuticals and medical technology.<sup>70</sup> Mao could have been shifting away from reliance and moving towards self-sufficiency, as seen with his adoption of TCM. He was also thought to be competing for leadership amongst the emerging communist countries in the world, and asserting total independence was a sign of strength and power.<sup>71</sup> Whatever the motivation, Mao’s gradual adoption of TCM was evident.

TCM was seen as much more low-cost and holistic than Western medicine at the time, so important in light of China’s economic struggles.<sup>72</sup> Chunjuan Nancy Wei, the author of “Barefoot Doctors: The Legacy of Chairman Mao’s Health Care,” poses the question, “One might wonder: How could care be so cheap and the medicine be offered for free? The answer was in the utilization of acupuncture and Traditional Chinese Medicine.”<sup>73</sup> If emphasis was instead placed on the use of Western technology and drugs, then care would be much more

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<sup>68</sup> Ibid., 262.

<sup>69</sup> Ibid.

<sup>70</sup> Ibid., 263.

<sup>71</sup> Ibid., 262.

<sup>72</sup> Ibid.

<sup>73</sup> Ibid., 264.

expensive and limited to a smaller population. Due to its accessibility, TCM started to be incorporated into medical research. Tu Youyou won the esteemed Lasker Award after being recruited by Mao as a researcher during the Cultural Revolution. She “explored historical Chinese medical documents and screened many plants before identifying, in 1972, a powerful anti-malarial compound named artemisinin.”<sup>74</sup> These accomplishments, along with many others, drew attention to TCM around the world.

Attention was indeed being given to Chinese medicine, as shown with American journalist James Reston’s article titled, “Now, About My Operation in Peking.” Reston was treated with acupuncture and the Chinese herb mugwort leaf for post-surgical pain in 1971 before writing his article. Published in the *New York Times*, Reston’s description introduced modern acupuncture to America during the early 70’s.<sup>75</sup> The Communist Revolution was important for the recognition of TCM, but other calamities occurring during Mao’s time in power often outweigh certain positives. “Low-level productivity, lack of personal and economic autonomy, excessive political campaigns and extensive abuses of intellectuals” often characterize the era.<sup>76</sup> Despite these negative undertones, China’s medical sphere nonetheless had positive features and moments of efficiency and notable success. In providing successful treatment to people who might not have been able to pay otherwise, TCM methods should be reassessed. Third-world countries continue to struggle with the basic human right of providing affordable and effective healthcare, and TCM might serve to be useful. The Communist Revolution of 1949 served as a major step towards medical integration, and how have scholars theorized and historicized these moments of amalgamation?

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<sup>74</sup> Ibid., 269.

<sup>75</sup> Ibid.

<sup>76</sup> Ibid., 274.

Rhonda Chang argues that a completely different form of Chinese medicine was created as the twentieth century progressed. Her understanding of this new Chinese medicine is of one that diverged from the ancient medicine, eventually being transformed by western anatomical frameworks in the middle of the twentieth century. The onset of the Communist Revolution in 1949 and adoption of medical science by the Chinese provided a platform for a completely new Chinese medicine. Chang affirms, “although it has been argued by scholars that this new [Chinese] medicine is a synthesis or a hybrid form or medicine, I argue that the underlying principles of the new medicine embodied in the concept *bianzheng lunzhi* are predominantly biomedical in nature and that concepts such as *yinyang* and *wuxing*, which were central to traditional *yi*, have been excluded.”<sup>77</sup> *Bianzheng lunzhi*, a new system for practicing Chinese medicine after its interactions with biomedicine, was largely based on the “experiential mode.” Chang defines this as “treating symptoms of disease based on an archive of formulas that are meant to be matched to symptoms of illness.”<sup>78</sup> The concepts of *yinyang* and *wuxing* are fairly abstract, with *wuxing* being the five phases of fire, soil, metal, water, and wood. These phases affect and change *yinyang*, which are the opposite forces of nature and the body that need to be in constant balance with each other. *Yi* is the name for ancient Chinese medicine.<sup>79</sup>

The *yinyang* and *wuxing* theories are fairly abstract and hard to prove, and Chang argues that they undermined the efficacy of Chinese medicine and were rightfully eliminated in the middle of the twentieth century and throughout the Communist Revolution. The reshaping of medicine did not produce a hybrid practice but a completely new TCM in Chang’s view. Chang’s interpretation of Chinese medicine as the twentieth century unfolded is rather

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<sup>77</sup> Chang, “Making Theoretical Principles,” 67.

<sup>78</sup> *Ibid.*, 78.

<sup>79</sup> These concepts taken from *Ibid.*, 69.



unconvincing, however. Her dismissal of ancient principles such as the *yinyang* theory is inherently deterministic, as it undermines Chinese medicine as it relates to its very long and important past. She is not wrong in recognizing that there was intersection between Western medicine and Chinese medicine, yet her claim that Chinese medicine was reborn as a separate entity is rigid. The next section highlights the importance of ancient principles in the practice of Chinese medicine, and more on Chang's historiography will be explored later in the essay.

### **Perpetuation of Qi in the 1970's and the Recognition of Acupuncture Analgesia by Western Physicians**

*Encounters with Qi: Exploring Chinese Medicine* by David Eisenberg, M.D., is a firsthand account of an American's experience with Chinese medicine. Eisenberg, once the Bernard Osher Distinguished Professor of Medicine at Harvard Medical School, was in medical school at Harvard when he was selected as the first ever American medical exchange student to study in the People's Republic of China. In his book, he describes his trips to China from the years 1977-85. Eisenberg explores the interactions of Western and Chinese medicines, often arguing that the West can and should benefit from including components of alternative medical practices. In particular, some of his research questions are, "What can we in the West learn from the medical practices of the Chinese people that might improve our understanding of health, illness, and the healing process? Can Chinese medicine be integrated into Western medical practices?"<sup>80</sup>

Eisenberg elaborates on his experiences with Chinese patients, the theory of acupuncture as an analgesic during surgery, and the abstract concept of "Qi." Qi is the notion of "vital energy," as Eisenberg first learned from his teacher of TCM, Dr. Fang. Qi provides a unique way

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<sup>80</sup> Eisenberg, *Encounters with Qi*, 30.

of looking at human anatomy from an alternative perspective, as it flows through blood, bodily fluids, vital essence, five solid Yin organs, and six hollow Yang organs.<sup>81</sup> At a point when he was struggling with the concept of Qi, Eisenberg interviewed Dr. Fang for clarification. Dr. Fang responded:

Qi means that which differentiates life from death, animate from inanimate. To live is to have Qi in every part of your body. To die is to be a body without Qi. For health to be maintained, there must be a balance of Qi, neither too much nor too little. The origins of Qi are three. There is 'original Qi,' that portion of Qi transmitted from your parents to you. It is unique, yours from the moment of conception. But, it is finite, and over time is used up little by little. The second source of Qi is 'nutritional Qi,' meaning Qi extracted from the food you eat. It is constantly being utilized and replenished. The third is 'air Qi,' the Qi extracted from the air you breathe. It, too, is used and replenished. The function of Qi will help you understand the many relationships you now struggle with. All of human pathology can be seen in terms of balances and imbalances. A balanced state corresponds to health. Any excess or deficiency corresponds to illness. When the body is in a state of equilibrium, internally and with respect to the external environment, then it possesses a 'positive vitality,' a form of Qi that protects the body and defends it from 'pathogenic factors.'<sup>82</sup>

Eisenberg's narrative explores other traditional concepts, such as Yin and Yang and the Five Elements.<sup>83</sup> Remedies such as herbal medicine, massage, acupuncture, and moxibustion (the burning of herbs near the surface of the skin) are treatments that attempt to incorporate and improve these theories within the human body. Eisenberg's account is very helpful for both the layperson and medical professional and differs from other sources by including detailed stories, conversations, observations, and interviews. Eisenberg concludes by arguing that the marriage of both Western and Chinese medicines may "bring both sides closer to their mutual goal of understanding health and eradicating those forces which lead to the deterioration of life."<sup>84</sup>

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<sup>81</sup> Ibid., 42.

<sup>82</sup> Ibid., 43-44.

<sup>83</sup> Ibid., Yin and Yang represent "opposing complementary aspects of the universe, and the human biological processes can be thought of in Yin and Yang" (37). "Everything in the universe, including man, consists of five basic elements: wood, fire, earth, metal, and water... Everything classified as Yin or Yang also corresponds to one of the five elements" (39).

<sup>84</sup> Ibid., 238.

Although Eisenberg's account is firsthand and therefore primary, he nonetheless provides a historiographical interpretation by showing that traditional practices in Chinese medicine were *not* being forgotten but were rather fully applicable to modern practice in light of the shifting medical environment. Interactions with TCM physicians and Eisenberg's resulting impressions point to the notion that the medicine in the 1970's and 80's still largely drew on ancient philosophies and treatments. In fact, these time-honored aspects were integral to understanding and practicing TCM. For example, when interviewing Dr. Ren, a traditional Chinese physician in his seventies, Eisenberg was further enlightened about the concept of Qi. Dr. Fen's answer sheds light on the importance of drawing from time-honored philosophies.

Well, acupuncture depends entirely on the flow of Qi. The acupuncturist senses and directs Qi through the needle. Acupuncture without Qi is only as effective as one man's sticking needles into the flesh of another. This would serve no purpose. Chinese massage is the same. Qi can be used to heal in many situations. It has been used therapeutically for thousands of years and is basic to all of Chinese medicine. Let me assure you. It is a physical reality.<sup>85</sup>

Although the concept of Qi was and still is often confusing for Western scientists and physicians to understand, including Eisenberg during this time, Dr. Ren argued that it was central to TCM. It was extremely hard to prove this concept of "vital energy," or the flow of energy throughout the body, from a scientific perspective. No anatomical evidence validated the existence of energy channels or maps of Qi used by acupuncturists.<sup>86</sup> Despite these shortcomings, acupuncture fundamentally cannot exist without Qi according to accomplished practitioners such as Dr. Fen. It is necessary to be understood from a conceptual perspective despite its lack of proof in a laboratory setting.

In a 1972 interview, American anesthesiologist Dr. John Bonica gave some insight into the recognition of Chinese treatments such as acupuncture and acupuncture anesthesia by

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<sup>85</sup> Ibid., 89.

<sup>86</sup> Ibid., 119.

Western physicians. Dr. Bonica was not your average 1970's anesthesiologist. He was one of two central editors in charge of publishing the findings of the 1975 First World Congress of Pain held in Italy. The congress was attended by over 1,100 scientists, physicians, and other health professionals. It was the largest and most extensive multidisciplinary and interdisciplinary meeting of professionals associated with pain research and therapy that had ever been assembled.<sup>87</sup> Because Bonica was such a prominent physician, it is fascinating to contemplate his optimism for the possible integration of acupuncture into American operating rooms. In advanced medical practices such as open heart surgery, for example, acupuncture was starting to be used as both an anesthetic and analgesic in ways that were entirely experimental. Did this obscure form of pain management actually work? Bonica acknowledged that the ancient treatment had a history of being "looked at by physicians and scientists as a sort of witchdoctor, quackery type of practice."<sup>88</sup> There was no doubt in his mind, however, that acupuncture was effective, whether through "hypnosis, psychophysiological processes, or neurophysiologic bases for the benefit that is derived by the patient."<sup>89</sup> It is important to note Bonica's optimism about acupuncture in a scientific perspective and its potential use for Americans. Proof that acupuncture was safe and effective was imperative for its official introduction into medical discourse amongst Western physicians.

Dr. Bonica claimed that modern Chinese physicians did not practice acupuncture until about the 1950's. He argued that two groups, acupuncturists and physicians, were deemed

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<sup>87</sup> John Bonica, *Proceedings of the First World Congress on Pain, Advances in Pain Research and Therapy*, v. 1. (New York: Raven Press, 1976), v.

<sup>88</sup> Dr. John Bonica, "Dr. John Bonica Discusses the Use of Acupuncture," Interview by Dulcie Lawrence, Digital Public Library of America, Oct. 6, 1972, <https://archive.mpr.org/stories/1972/10/06/dr-john-bonica-discusses-use-acupuncture>.

<sup>89</sup> Ibid.

separate. Chairman Mao's attempt to unify the two medicines provided opportunities for modern Chinese physicians to take up acupuncture and incorporate it into their own modalities of medicine, for example in the realm of surgery with acupuncture anesthesia.<sup>90</sup> Bonica recognized acupuncture as a treatment that had been used by the Chinese to treat many ailments, including disease. He mainly wished to explore its efficacy for chronic pain, saying, "I think this is a very important national health problem and an area where patients often seek help."<sup>91</sup> The notion of acupuncture anesthesia seemed promising at the time, but it was also very new and presented a high risk factor. Bonica claimed many "quacks" existed in the United States. These fraudulent practitioners would buy cheap needles and claim to be trained in acupuncture. Because of this peril and in an effort to emphasize the true healing power of the treatment, Bonica was hopeful that he would be able to "develop laboratory investigations and clinical studies in which the procedure will be evaluated with traditional Western methods of treatment."<sup>92</sup>

In the years following this interview, Bonica published an article titled "Acupuncture Anesthesia in the People's Republic of China: Implications for American Medicine." After visiting seven cities and eighteen hospitals in China, he provided his own observations and data analyses on the recently developed treatment. Bonica noted, "every report on the subject published in China credits 'Chairman Mao's Proletarian Medical and Public Health Line' as the impetus for its development."<sup>93</sup> He recognized two main reasons for the introduction of acupuncture anesthesia in 1958 and its continued use in China. First, the lack of trained anesthesiologists, especially in rural areas, was a major problem given the early stages of pain

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<sup>90</sup> Ibid.

<sup>91</sup> Ibid.

<sup>92</sup> Ibid.

<sup>93</sup> John Bonica, "Acupuncture Anesthesia in the People's Republic of China: Implications for American Medicine," *JAMA* 229, no. 10 (September 1974): 1317.

relief development in China. Second, it was an exclusively Chinese invention separate from conventional Western medicine and therefore militated against “Western imperialism.”<sup>94</sup>

Although Bonica concluded that many Westerners had romanticized acupuncture anesthesia, often predicting it was used in surgical operations more than it actually was, he did recognize some of its advantages and implications for the future.

Because the technique is simple, convenient, inexpensive, and requires no elaborate equipment, it can be done by barefoot doctors and other paraprofessionals who have not had training in drug anesthesia. This capability is especially important in view of the shortage of trained anesthesiologists in rural areas. Since the technique is inexpensive, it reduces the cost of medicine for the poor and middle farmers.<sup>95</sup>

Although Bonica was mainly interested in the efficacy of acupuncture analgesia in China at the time and its potential application in the United States, he saw acupuncture itself as useful for those who weren't able to access certain forms of pain management. In addition to China, the U.S. was struggling with healthcare issues during the 1970's. According to the Center for Medicare and Medicaid Services, approximately 40 percent of personal health expenditures were paid out of pocket in 1970.<sup>96</sup> If less expensive treatments were available such as acupuncture, even though perhaps not as trusted and researched as drug anesthesia, they might nonetheless be useful both in China and the U.S.

Additionally, Bonica was able to observe some of the research on acupuncture anesthesia occurring in China. During animal neurophysiologic studies, he recorded that “although stimulation of many acupuncture points produced inhibition, the most effective inhibition [of pain] occurred when the stimulation was in the same or adjacent spinal cord segment.”<sup>97</sup> Needles

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<sup>94</sup> Ibid., 1318.

<sup>95</sup> Ibid., 1319.

<sup>96</sup> “National Health Expenditure Data (Historical),” CMS.gov, Accessed March 26, 2019, <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html>

<sup>97</sup> Bonica, “Acupuncture Anesthesia in the People's Republic of China,” 1322.

were often placed in points of the body that were seemingly unrelated to the region of pain or injury. This procedure had to do with traditional theories of acupuncture, where meridian channels located in remote areas of the body could be stimulated. Bonica saw that this technique might not be most effective, however, because pain was primarily inhibited when needles were placed in spinal cord segments closer to the area of concern. Bonica recognized that the technique might prove useful in America, yet proper training in China was necessary for Americans.<sup>98</sup> He commented, “as one who has seen American patients complain bitterly of pain and become unmanageable when surgical incision is made with inadequate drug anesthesia, I was most impressed to see Chinese patients wide awake, lying quietly while surgery was being performed.”<sup>99</sup> Bonica concluded by recognizing the potential for acupuncture to relieve postoperative pain and therefore reduce the depressant effects of narcotics.<sup>100</sup> The fact that some of the leading actors in the field of anesthesiology were intrigued by acupuncture and saw the necessity for its continued research is very important to note. Though it had the propensity to be frowned upon by Westerners, the practice was proven to have elements of efficacy and success.

Acupuncture massage functions similarly to acupuncture in its manipulation of Qi throughout the body minus the invasive application of needles. After observing it in a clinical setting, Eisenberg concludes that “when applied appropriately, [massage] made every patient markedly more comfortable and relaxed, within minutes and without drugs. There is no reason why Western practitioners cannot learn and implement this skill. High technology and human touching are not mutually exclusive.”<sup>101</sup> Thus, Eisenberg was optimistic that both Chinese and

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<sup>98</sup> Ibid., 1325.

<sup>99</sup> Ibid., 1323.

<sup>100</sup> Ibid., 1325.

<sup>101</sup> Eisenberg, *Encounters with Qi*, 113.

Western medicine could benefit from one another, especially with acupuncture. This process would not be easy and would take time, but he was nonetheless ambitious and eager for the exploration of Chinese medicine by Western researchers.

Eisenberg claims, “the clinical research needed for such confirmation [that of the clinical efficacy of Chinese medical therapies in light of science] is a precious investment. It will clarify which techniques are most effective for which patients and enhance Western medicine’s understanding of human physiology and health.”<sup>102</sup> This blending of Chinese medicine with Western medicine was seen as unconventional in Chinese history, especially during the Republican period. Native medicine, as previously seen in Xiaoqun Xu’s article, was “superstitious” and “unscientific,” even being characterized as “an impediment to the development of medical science in China.”<sup>103</sup> And critiques such as these permeated the 1970’s, as Eisenberg asserts that “Western-style Chinese doctors do not use traditional Chinese medicine and do not refer patients to traditional practitioners.”<sup>104</sup> The fact that this was the sad reality in China *and* the West, however, provided more reason to propose attempts at integration. There was value in Chinese medicine from Eisenberg’s perspective, and he had witnessed clinical efficacy while studying abroad.

This merging of medical techniques from both worlds had fluctuated throughout the century, first initiated by Chairman Mao Zedong during the Communist Revolution, and Eisenberg notes that “what broke off the engagement was the chaos of the Cultural Revolution.”<sup>105</sup> To give some context, the Cultural Revolution in China was launched at the end

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<sup>102</sup> Ibid., 232.

<sup>103</sup> Xu, “‘National Essence’ vs ‘Science’,” 847.

<sup>104</sup> Eisenberg, *Encounters with Qi*, 30.

<sup>105</sup> Ibid., 231.



of June 1966 by Mao Zedong and came to an end in 1976, and its aim was to “disrupt the routine pattern of administration and conduct which was forming in the Communist Party hierarchy” and instill “reconstruction of the government political machine in a manner differing sharply from the original character of the Communist Party in China.”<sup>106</sup> The old-fashioned ways of these original characters were “denounced as revisionist, ‘taking the capitalist line,’ and were attacked, often with a certain amount of violence and harsh treatment.”<sup>107</sup> The relationship of the two medicines was tense in the decades ensuing this revolution, but Eisenberg reflects that “over the past five years (which would have spanned from 1980 to 1985), the present Chinese government has begun to reconcile the squabbling parties.”<sup>108</sup> From a political perspective, the role of the government was necessary in providing formidable platforms for research and eventual combination of the two medicines, and Eisenberg sees the fall of the Cultural Revolution as the perfect time for these platforms to be initiated.

It is compelling to note, however, that Chunjuan Nancy Wei, the author of “Barefoot Doctors: The Legacy of Chairman Mao’s Health Care,” recognizes certain scientific research of Chinese herbs during the Cultural Revolution in China, such as the discovery of the anti-malarial compound named artemisinin in 1972. She also highlights the launching of Mao’s Rural Cooperative Medical Scheme (RCMS), which included the creating of barefoot doctors. Perhaps it was difficult for Eisenberg, a foreigner, to notice these accomplishments in light of the chaos of the Cultural Revolution. Regardless, the Communist Revolution undoubtedly introduced a potential for the integration of Chinese medicine with Western medicine, and Eisenberg wanted

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<sup>106</sup> C. P. FitzGerald, “Reflections on the Cultural Revolution in China,” *Pacific Affairs* 41, no. 1 (1968): 51.

<sup>107</sup> *Ibid.*

<sup>108</sup> Eisenberg, *Encounters with Qi*, 231.

to see the continuation of this integration whilst studying in China and during the publication of his book.

Monumental figures during the 1970's and beginning of the 1980's, such as medical student David Eisenberg and Dr. John Bonica, acknowledged the potential of Chinese medicine and encouraged its adoption and future study, especially in the realm of pain management. Eisenberg, commenting on their practice, notes that his "clinical observations convinced me that acupuncture is effective in providing analgesia and controlling certain chronic pain syndromes."<sup>109</sup> Bonica has been more critical of acupuncture anesthesia but believed "we should not dismiss acupuncture analgesia without giving it further trial."<sup>110</sup> Though investigative, these people were well-respected and extremely influential in paying tribute to Chinese medicine. From a Chinese standpoint, the many native physicians and mentors of Eisenberg, such as Dr. Fang, along with the plethora of anesthesiologists and surgeons who accompanied Bonica during his visit to China, were imperative in spurring communication between Western and Chinese medicine. Without friendly connections between medical professionals such as this, a fusion between the two medical worlds would not have been possible.

The historiographical viewpoints presented in this paper are multifaceted, but they largely revolve around the extent to which traditional Chinese practice meshed with Western medicine in the twentieth century. Bridie Andrews discusses commensurability and accommodation in light of early missionary medicine in China. Commensurability can be understood as the likeness between the two practices, while accommodation relates to how the missionaries were able to adjust their treatments to fit Chinese patients' desires and needs.<sup>111</sup> Early twentieth century

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<sup>109</sup> Ibid., 232.

<sup>110</sup> Bonica, "Acupuncture Anesthesia in the People's Republic of China," 1324.

<sup>111</sup> Andrews, *The Making of Modern Chinese Medicine*, 54.

Westerners did in fact develop commonalities with TCM, as seen with their ability to supplement native drugs into their preexisting practices. The Westerners were also able to accommodate to Chinese culture and existing treatments, as is evident in their propensity to treat natives how they wanted to be treated. This accommodation can be observed with the adjustment of prescriptions by missionaries as diseases evolved, a practice that was custom for TCM physicians at the time.<sup>112</sup>

Xiaoqun Xu, as noted earlier in the essay, looks at the introduction of Western medicine into China during the Republican period, and he describes the two medicines as profoundly different. He is not wrong for portraying them as black and white, yet the manner in which he dismisses the potential for a combination of the two is misleading. Most important is his overall description of Western and Chinese medicines as engaging in some sort of game or match. There nearly needed to be a winner and a loser from Xu's lens, and the native physicians took the victory. Xu's portrayal of the era leaves little room for what scholars such as Eisenberg have recognized, such as a reconciliation between Western medicine and TCM and attempts towards hybrid treatments.

Rhonda Chang is on the other end of the historiographical spectrum from Xu. She argues that a completely new TCM was formed during the middle of the century due to impetus of Western medicine. Her portrayal of this new TCM as entirely different from ancient Chinese medicine is unconvincing, however. Chang argues that Western medicine in the twentieth century ultimately ousted the ancient theory of *yinyang*, a principle central to *yi* and practiced for thousands of years. In arguing that *yinyang* was thrown out of Chinese medicine, Chang fails to recognize *yinyang's* connection to Qi. In fact, she does not even mention Qi. Eisenberg's account

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<sup>112</sup> Ibid., 60.

sheds light on the critical connection between *yinyang* and Qi, however. Eisenberg once interviewed Dr. Fang, a native Chinese physician, who said, “Qi flows through all internal organs, hollow and solid,” and these organs are characterized as “five solid Yin organs,” and “six hollow Yang organs.”<sup>113</sup> By disposing of the *yinyang* theory, therefore, Chang also disposes of Qi.

Chang asserts that the contemporary Chinese medicine she claims was created is “based on Western anatomical understandings of the body and disease,” yet goes on to say that the “contemporary Chinese medicine practices uses herbs and acupuncture methods.”<sup>114</sup> She argues that this contemporary Chinese medicine utilizes acupuncture, yet she simultaneously dismisses the fundamental premise of acupuncture by throwing out the *yinyang* theory and therefore Qi. In this view, Chang seems to be basing acupuncture on “Western anatomical understandings,” –potentially untrue, according to native Chinese physicians such as Dr. Fang. Dr. Fang said, “the purpose of acupuncture is to simply reestablish the balance and normal flow of Qi where there is imbalance and stagnation.”<sup>115</sup> Chang seems unable to recognize the connection between the *yingyang* theory, Qi, and acupuncture. By discarding the *yinyang* theory and Qi, she is also unintentionally discarding acupuncture. The absence of acupuncture in any form of Chinese medicine would be preposterous given its inherent importance to the practice.

Chang is right to say that TCM changed in the twentieth century, but she goes too far. Eisenberg, consequently, illustrates a more correct picture of what Chinese medicine looked like leading into the 1970’s and 80’s. He recognizes the value of Qi, yet was optimistic for the amalgamation of Western and TCM as seen during his experiences with acupuncture anesthesia/analgesia. In sum, I assert Bridie Andrews and Eisenberg create a more accurate

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<sup>113</sup> Eisenberg, *Encounters with Qi*, 45, 42.

<sup>114</sup> Chang, “Making Theoretical Principles,” 66.

<sup>115</sup> Eisenberg, *Encounters with Qi*, 45.

historiography for Chinese and Western medicine in the twentieth century. They don't paint the two as in opposition, as Xu does, and they don't assert that Western medicine transformed ancient Chinese medicine into a new practice. They rest in the middle, illustrating Chinese and Western medicine as separate bodies of medical practice that have the potential to borrow from each other and experiment with the integration of different theories and treatments.

Traditional Chinese medicine, especially with its use of acupuncture, was recognized by early Western observers at the end of the nineteenth and early twentieth centuries, but little was known about the practice, and it was rarely trusted. As the twentieth century progressed, however, practitioners of Chinese and Western medicine found ways to cooperate with each other. Chinese medicine's survival into the present day says something about its ability to adjust when needed but simultaneously remain true to its central principles and precepts. Scholars had even predicted that "since biomedicine is patently superior to traditional Asian medicine, resistance to it will decline over time and Asian medicine can be expected to gradually fade away."<sup>116</sup> Asian medical systems, especially TCM, have persisted and effectively debunked claims such as these.

## **Epilogue and Conclusion**

Since their rapid adoption into modern medicine, the prevalence of opioid painkillers has allowed addiction to run rampant. Users often experience withdrawal from the painkillers themselves, yet this problem can escalate and force people to become dependent on cheaper and more readily available recreational opioids such as heroin. Homelessness and mass addiction have skyrocketed due to the misuse of these substances. Large pharmaceutical companies

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<sup>116</sup> Charles M. Leslie, *et al.*, *Paths to Asian Medical Knowledge* (Berkeley: University of California Press, 1992), 3.

towards the end of the 1990's employed researchers who in turn "reassured" medical communities that opioids were in fact not addictive, motivating healthcare providers to prescribe them at greater rates.<sup>117</sup> It has become evident that less regulation of opioids has been a mistake, both in the corporate world and clinical setting. In fact, according to the National Institute on Drug Abuse, in 2019 more than 130 people die in the United States on a daily basis from the misuse and overdose of opioids. In 2017, more than 47,000 Americans died from overdosing on prescription opioids, heroin, and fentanyl (an extremely dangerous, synthetic opioid.) Between 21 to 29 percent of patients prescribed opioids for chronic pain misuse them.<sup>118</sup> These statistics are staggering, and even more concerning is the fact that these numbers are actually increasing rather than being reduced.

In light of the negative consequences of opium, aspects of Chinese medicine are being explored in modern research. Chinese herbal remedies are being used in tandem with modern cancer treatments such as chemo- or radio-therapy. Certain herbal medicines, such as astragalus, turmeric, and ginseng, to name a few, have promise in cancer treatment. They have been shown to reduce tumor progression, support the immune system of a patient, and reduce fatigue and pain caused by cancer.<sup>119</sup> In learning from traditional Chinese practitioners, it would be beneficial for Western physicians and researchers alike to engage on a deeper level with the medical past. Modern researchers suggest that "accumulated experience from TCM...and other ancient medical practices could allow modern researchers to design and control synergistic

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<sup>117</sup> "Opioid Overdose Crisis," National Institute on Drug Abuse, Accessed March 7, 2019, <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis>.

<sup>118</sup> Ibid.

<sup>119</sup> Fanghua Qi, "Chinese Herbal Medicines as Adjuvant Treatment During Chemo- or Radio-Therapy for Cancer," *Bioscience trends* 4, no. 6 (2010): 297.

effects far better than was possible by blending crude natural products.”<sup>120</sup> Scientists, not only historians, should realize the value of historical engagement, and it would be highly valuable to incorporate this strategy into future research tactics and clinical applications.

The respective stories of both the Chinese and Western worlds of medicine, how these different practices have been molded over time, and the extent to which they have drawn on each other are reflected in modern-day healthcare systems. Successes such as development of antibiotics and creation of advanced medical equipment demonstrate medical progress, but the evolution of pain management and anesthesia is one of the important elements of both the effectual and ethical progress of medicine. Relief of pain reflects the manner in which Western and Chinese medicines have been sculpted throughout history.

Opium was nonetheless present in the late nineteenth and twentieth centuries, but chemical research and pharmaceutical adoption made the substance disproportionately prevalent in the West towards the end of the twentieth century. Though preventing pain, opioids are a relatively new, revolutionary form of pain management that have led widespread addiction and misuse. In Chinese medicine, however, acupuncture has been used heavily for thousands of years, stimulating meridian pathways to trigger the normal flow of Qi in the body. Treatments in Chinese medicine have survived the test of time because they do in fact work. Acupuncture has adapted and been imbedded in advanced surgical procedures such as acupuncture analgesia, in due course drawing on both elements from the past and modern science. In this sense, elements of TCM that have survived foreign and domestic attacks, such as acupuncture and herbal

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<sup>120</sup> Hong-Fang Ji, "Natural Products and Drug Discovery: Can Thousands of Years of Ancient Medical Knowledge Lead Us to New and Powerful Drug Combinations in the Fight Against Cancer and Dementia?" *EMBO reports* 10, no. 3 (2009): 199.

substances, have potential for healthcare in policy, clinical settings, and research. This adaptivity of Chinese medicine attributes to its value, and aspects of the practice should be further incorporated into the Western medical domain. Throughout the twentieth century, it was possible, and still might be today, to have a multifaceted healthcare system that does not rely on one practice in order to provide optimal care.



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