Research, Practice and Applications of Traditional Medicine in China: One Researcher's Journey

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Solo travel within the People's Republic of China is an adventure different from that of traveling with a large group, even if it is between cities like Nanjing and Beijing. As I struck out early that rainy morning from the seminar group's accommodations at Nanjing University's guest housing, it was very clear to me just how much I had been relying on the kindness of the native speakers in our group. Even the cab ride to the Nanjing airport that morning was an issue. I did not have much of a problem signaling a cab to stop for me, but negotiating where that cab would take me was, and so we sat for many minutes at the curb, me in the back seat with my phrase book and she in the driver's seat with a quizzical look on her face, before we agreed that the airport was where I wanted to go. Once at the airport, I felt isolated and exposed as some small souvenirs of Nanjing were confiscated for reasons I could not comprehend. Happily, my arrival in Beijing was different. Getting a cab to take me to my hotel on Wangfujing Road was not a problem at all, and I settled in for my week in the capital of China.

The street, Wangfujing Road, is less than a mile from the Forbidden City and is one of the major shopping areas for Beijing residents. The neighborhood is a mix of the most modern aspects of Chinese urban life and the most traditional. On the side streets, night markets and large neighborhoods of *hutong*[1] open up, while on Wangfujing itself, giant department stores and larger shops draw huge crowds, especially in the several-block portion that has been set aside as a pedestrian mall, where enormous neon signs and huge television screens draw the

crowds to the stores beneath them. This first evening, as I walked on the mall, the World Cup games were playing on some of the giant TVs, while huge crowds sat below, drinking, eating, cheering, and smoking, supplied by the vendors that trailed off into the night markets.

My mission that first evening in Beijing was not to watch the World Cup, but to begin work on my independent project for the Macalester Faculty Development International Seminar that had brought me from Saint Paul to China. In Beijing, my time would be spent learning more about traditional Chinese medicine, from the practitioners that provide services to millions—acupuncturists, moxibustionists, massage therapists, herbalists, and pharmacists—to the researchers at the major scientific institutions of China that are resident in the capital city. To speak with researchers, I had made connections at the major national institutes for Traditional Chinese Medicine (TCM) through the World Health Organization (WHO), but to speak with practitioners required a different strategy: seeking them out and paying for their time as they provided professional services through therapy sessions, or, in the case of pharmacists, soliciting their advice about purchase recommendations for medicines.

On Wangfujing Road, like many busy commercial streets in Beijing (and, indeed, other cities I visited in China) drug stores (pharmacies) are as standard a feature as on Main Street USA. But, for those raised on Walgreens-like establishments, the Chinese pharmacy is a drastic departure. Yes, you can get aspirin or antihistamines there, but you can also get a variety of dried insects, lizards, and other creatures, as well as esoteric plant roots, alongside the shampoos and toothpastes. Most striking, though, is the number of employees working in the aisles and behind the counters.[2] Here, each is prepared to offer advice on whatever it may be that ails you. All wear laboratory coats or some form of clinical uniform; including, in the case of women employees, what appear to be modifications of nurses' uniforms once standard (and long ago abandoned in favor of more comfortable clothing) in the USA—the distinctive caps, starched uniform dresses, stockings, and orthopedic footwear. (The exception is that the uniform color is not white, but pale green.) Beyond these front-line employees are the pharmacists, who seem to work behind the counter only, and offer advice on more vexing problems or confirm the recommendations already provided by employees. It is the elder pharmacists that seem to be the experts of choice to fill special prescriptions that require making up combinations of herbal formulas, rather than choosing and dispensing

from among packaged, pre-prepared medicines. In some stores, there are physicians and actual nurses working, too. Many health providers in China have second jobs: first working in hospitals or other clinics, and in their off hours, at their own or others' private clinics, or at pharmacies, diagnosing ailments of store patrons for small fees.[3]

The morning after my investigation of the pharmacies along Wangfujing Road, I had scheduled a TCM medical checkup. My appointment was with one of many public clinics run by physicians from the Beijing University of Traditional Chinese Medicine. Sitting in a waiting room along with several other patients, I waited for my time with a doctor. It was surprising, then, that the door opened and several doctors and nurses walked in to conduct the examinations all at the same time. My nurse took me aside and told me[4] that my physician, a very elderly, kindly looking woman who was watching me intently as the nurse conversed with me, did not speak English, so she would be translating for us. I asked the nurse if she could also explain the reasoning behind each step in the exam as we went through it. This was agreeable to both of them and led to a very pleasant three-way conversation about why I was visiting Beijing and this clinic. After shaking hands, we sat at a table across from each other and the formal examination began, which had four components.[5] First, she took my right hand and began checking pulses. As the nurse told me, the physician would be checking the status of only six different pulses on each wrist, but if there were reason, would check many more.

In TCM, pulse taking indicates many things, including early evidence of a disease process before more outward signs are observable. The practice of pulse taking considers as many as thirty different characteristics at each of the pulse points, each associated with conditions across the organ systems and the status of both blood and *qi* flow.[6] A few pulse types would be familiar to Western medicine, such as irregular, thready, or weak pulses. TCM identifies additional pulses, such as *slippery* (often described as the sensation of "pearls rolling in a dish," this pulse can be part of an early diagnosis of pregnancy), *soggy* (soft and indicates disruptions of blood and *qi*), *hidden* (deep and associated with severe pain) and *confined* (deep and localized to the wrist bones, associated with cold pain). My nurse informed me that years of experience are necessary for TCM physicians to develop pulse-taking skills.

Next, the doctor examined my tongue for such characteristics as coatings, color, and dampness, each of which relates to particular conditions or syndromes when considered in connection with other

indicators, such as pulse. The third component of the examination is referred to as *auscultation and olfaction*—listening and smelling. The physician leaned in to smell my breath and listen to the sounds my body made, and here also employed a stethoscope. Finally, she asked a series of questions through our translator/nurse, chiefly about whether I had experienced certain sensations, and about aspects of my history, lifestyle, and diet. Concluding the examination, she began to tick off on her fingers the conditions that Western medicine would say I have, each of which I was well aware of, thanks to my family practitioner back in Minnesota. The nurse indicated that standard TCM practice would be to prescribe treatments to aid in preventing the further development of these "Western diseases," but also to prevent and potentially reverse the spread of related disease processes along the pertinent meridian channels and organs. A prescription pad was produced, and three herbal infusions were in order: *Yin Lian Qian Gan Ke Li* (to remove heat and detoxify the liver and to treat hypertension); *Liu Wei Di Huang Wan* (to restore *yin* function to the kidney and for lower back and leg pain); and *Tong Mai Ke Li* (to promote blood and *qi* flow).[7]

That evening, I began a regimen of these infusions, steeping the myriad contents of small packets in boiling water and drinking the result each morning and evening. As TCM medicines are intended to be very mild and of low toxicity compared to Western medicines, it would be hard to say that I noted any strong indicators that the drugs were affecting me over the three weeks of my regimen. However, a comparison of medical tests taken in the U.S. in preparation for travel to China and those one week after returning was intriguing. All indicators related to the conditions treated using these infusions had improved. Cholesterol levels and blood pressures had improved to the extent that medication levels were cut dramatically. Of course, it is also true that this change was seen after more than three weeks of extensive daily walking and activity, and virtually no fast food (beyond a single trip to KFC, which I felt offered superior food over the U.S. version).

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It was mid morning of the next day that I visited one of the private clinics run by TCM physicians in their off time from hospital or public clinic employment. On the recommendation of my local contacts, I was there to receive meridian acupressure therapy from a woman

who introduced herself as Helen Wu, Doctor of Traditional Medicine and specialist in meridian therapy. She insisted that I call her Helen, and smiling, asked me to guess how much experience she had doing this work. This seemed like an easy question to me, which may have been why she asked. Helen was a very petite and seemingly ageless woman, somewhere around 4'10" and perhaps 90 lbs., which gave me no help. However, her hairstyle, appearance, and her stylish but certainly uncomfortable shoe choice to go with her lab coat suggested that she was rather young. Summoning my best professorial attitude, I guessed, "Perhaps seven years already?" Helen's eyes opened wide and the intensity of her glare made me uncomfortable as it lingered for several moments. Then, she abruptly burst into laughter. "I am a grandmother! I have been doing this for twenty years, not seven!" This did shock me, and Helen was obviously pleased by my surprise and what must have been a rather humorous facial expression.

Apparently, a patient's inability to judge her age did not affect Helen's commitment to improving their health, as she directed me to undress down to my underwear and she would be right in to begin our session. Her last warning to me failed to register on my naïve ears: "To do this meridian therapy will be a long time, and I will need to press very hard sometimes, okay?" I nodded as she exited, and started to undress.

Helen Wu was a strong woman. Let me clarify; as time has passed since our session, I increasingly believe that pound for pound, this was the strongest person I have ever had lay their hands on me, and certainly to do so for the longest period of time. Growing up on the south side of Chicago I had occasionally let my ironic wit or otherwise bad timing put me on the wrong side of a number of fists, elbows, and feet, but no one had ever dominated me so effectively, so completely, and only used their fingers or thumbs. Helen Wu did, and she did it for well over three continuous hours that day.

Our plan was for her to conduct as thorough a session in meridian therapy as she could, given the limited time I would be in Beijing and our ability to schedule only a single treatment session. This was unusual for her. Most of the tourists she saw came for short adjustments as a lark or to satisfy curiosity. Local patients came repeatedly to realign energy flow in otherwise functional systems. In addition, she reflected on these practices as she conducted the therapy, telling me what she was doing, why, and what effect it should have.

A review of TCM concepts is well beyond the scope of this essay and readily available elsewhere,[8] but a limited discussion of the meridian system is of value here. TCM texts hold that there are twenty meridians, or energy channels, that allow *qi* (life force) to flow through the body, but, as Helen told me, modern practitioners seem to limit the majority of work to twelve:

- Lung
- Pericardium
- Heart
- Large Intestine
- Healer (or Energizer; sometimes called the triple healer)
- Small Intestine
- Spleen
- Liver
- Kidney
- Stomach
- Gallbladder
- Bladder

With the exception of the Healer, the meridians direct *qi* flow to certain organs, and the more than 300 "points" identified along these meridians, in turn, are specific locations at which the flow can be altered by pressure (acupressure and meridian therapy), insertion of needles (acupuncture), or burning (moxibustion). The effectiveness of practices like incising specific areas of skin and cupping (applying a heated glass or metal cup over an area of the skin to induce a partial vacuum pressure) or combinations of the two as employed in European and other folk medicine systems as well as traditional Chinese medicine may also be interpreted as reflecting action mediated through this system of points and meridians.

Over the course of our session, Helen located and activated more than 80 points along the meridians, naming each as she isolated them, and describing what I would feel with the activation and what the impact of this therapy would be if maintained over time as part of a general health care regimen. Some points, such as the SP (Spleen) 6 point (a few inches above the ankle on the shin) are easily located and activated, while others, such as GB (Gall Bladder) 30 point are also close to the bone, but under deep layers of muscle and skin (along the side of the buttock near the hip joint). As she activated the points with

great pressure through her fingertips, my attention was driven to focus on the point, and to note the physical sensation produced as Helen released the flow of *qi*. The result of each release was similar: a radiating, electrical sensation (termed *de qi* in TCM[9]) moved outward from the location, and was sometimes intense enough to cause me to gasp. Some in Western medicine interpret the sensation as the result of minute trauma to spots related strongly to myofacial pain trigger points.[10] I was left with two lasting impressions of my meridian therapy: clear maps of the points along the meridians in the tiny bruises across my body, and for several days, a profound feeling of relaxation.

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It was several days later that I made another visit to a private clinic, this time to undergo acupuncture therapy at the hands of Dr. Gu, the proprietor of Dr. Gu's TCM clinic. My visit to the clinic resulted from a referral by a researcher. Interestingly, the clinic was located in a large suite in the Wangfujing Grand Hotel. Dr. Gu had moved all of the usual furniture out of the rooms and replaced them with examination tables, foot massage stations, and massage tables. Several massage therapists were working on their clients as I entered. As in my TCM medical exam almost a week earlier, Dr. Gu went right to work discussing the rationale of acupuncture and how my treatment would be conducted. We reviewed my history briefly, and he excused himself for a moment. He returned with a handful of sterile, paper-wrapped disposable acupuncture needles, some alcohol wipes, gauze pads, and a magic marker. He had me remove my shirt and rapidly inserted (in my estimation) about two-dozen needles across my upper back and neck, several more into my arms, and perhaps six more into the back of my head. The actual insertion process was surprisingly without pain. Dr Gu would palpate an area, nod, and insert the needle, guiding it through a larger steel tube. The result of inserting these needles was varied, with some providing that same *de qi* sensation of radiating energy that Helen Wu had induced with her rock hard fingertips. Other insertions produced a dull ache or local sensation of electric shock. I remarked on the difference between the *de qi* experienced with meridian therapy and acupuncture. Dr. Gu suggested that I withhold judgment for fifteen minutes. So I waited, talking with Dr. Gu for the next fifteen minutes, at which time he got up and said, "Now we will see what we have." He began to manipulate each of the needles,

for most using the twirling technique (quickly spinning the needle between his thumb and forefinger), but for a few, the sparrow pecking technique (rapidly moving the needle in and out, in a "pecking" motion) was his choice. Each of the points came alive with sensation, and decidedly more were giving off the radiating sensation. It was fifteen minutes later that he removed all the needles, and I said goodbye. I could feel many of the needle placements for the remainder of the day, especially those that had gone deep into my forearms near the elbow. Beyond this, I felt calm and comfortable for the remainder of the day, but unlike the more global meridian therapy, this feeling did not seem to last into the next day.

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Massage therapy is sometimes maligned and associated with undesirable elements, whether in the U.S. or other countries. Massage is not immune to this reputation in China as well, but in the cities I visited, there are clear indicators of which establishments provide therapeutic massage with certified therapists, versus others, such as hair salons and barbershops, that offer scalp and foot massage as part of their services. Massage, like other forms of therapy, requires significant training. In China, many certified therapists, and certainly all that I interacted with, feel that a strong philosophy guides their work. While in Beijing, I visited the Dragonfly Therapeutic Retreat,[11] which also operates in several other locations in Shanghai, where the seminar participants would reconvene as a group. At Dragonfly, the therapists are each specialists in particular techniques, such as traditional Chinese massage, the Japanese form of Shiatsu, or foot reflexology. Sessions can involve multiple therapists and combinations of different forms. The atmosphere is decidedly influenced by Buddhist traditions, and so is the training for many of the therapists. Chinese massage, like acupuncture and acupressure, is based on the meridian system and regulation of *qi* flow, here through a discipline of specific hand manipulations, or *shou fa*. The most common forms of Chinese massage are *anmo*[12] (general health massage) and *tuina* (referred to as push and lift/grab; massage used for specific injuries, such as muscle strain). Therapists are trained in dozens of hand techniques.[13] To me, the result of treatments using combinations of *anmo* and *tuina* is uniformly one of relaxation and a feeling of general well being. Unfortunately, this does not last for days, so frequent visits are required to maintain these desirable effects. With

the prevalence of massage practitioners in China, costs of these treatments are extremely reasonable, and so I continued to receive massage at one of the Dragonfly Centers after leaving Beijing and arriving in Shanghai. Based on my recommendations of this therapy, several members of the seminar group also visited the center for their own treatments.

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Beyond visiting with practitioners to gain insight about TCM, which could have been done in many cities across China, my visit to Beijing was specifically arranged to develop a network of TCM research contacts (and potential collaborators) within the People's Republic of China's national institutes devoted to TCM, collectively the China Academy of Chinese Medical Sciences (CACMS).[14] The CACMS was founded in 1955 and has six member hospitals and thirteen institutes. In addition, the Academy houses three World Health Organization Collaborating Centers for Traditional Medicine in the areas of clinical medicine and information, acupuncture, and Chinese *materia medica*. It is the connection with the WHO that provided me with the necessary introductions to meet with researchers at the CACMS, as my extramural funding from the U.S. National Institutes of Health also comes from a WHO Collaborating Center, the National Center for Complementary and Alternative Medicine (NCCAM).

My visit to CACMS was intended to focus on two of the thirteen institutes: the Institute of Acupuncture and Moxibustion, and the Institute of Chinese Materia Medica, each of which sponsors research that intersects well with my own research interests in pain modulation and folk medicines. The visit was scheduled by the CACMS Office of International Cooperation, which developed a rigorous and highly formal agenda of activities for my visit. The Director of that office, Dr. Zou Jianhua, met me as I checked in at the security gate, and we made our way into the administrative building, stopping occasionally to pose for pictures in front of statues of historic figures in the several-thousand-year development of TCM. During our subsequent meeting, she gave me a brief history of the CACMS, its mission, the goals her office has for international collaborations, and, punctuated by a tea service, questioned me extensively about my own work, including the results of several papers listed in my *curriculum vitae*. She was very enthusiastic about the prospects for collaboration between CACMS researchers and

my laboratory, and had several suggestions to make about features to include in any funding proposals I might prepare in this regard, such as scholar exchanges that would bring me back to Beijing and bring CACMS researchers to my laboratory for research stays. As our time drew to a close, she presented me with a large crystal paperweight commemorating the Academy, and then escorted me to a luncheon held in my honor in the private dining room of a busy nearby restaurant. While I knew the visit would feature a schedule of meetings, I was unprepared for the level of attention I was given, from the status and offices of the researchers I met with, to the ever-present professional photographers documenting each event.

My time at the Institute of Acupuncture and Moxibustion began with a short tour of the Institute facilities, with a staff interpreter as my guide and a photographer in tow. We toured the Institute's museum of acupuncture, and looked in on several clinical research areas. My next meeting was large, with upwards of twenty in attendance. Eight of these participants were especially notable: the Director of the Institute; the Vice Director; the Director of Research; the Chair of Neurology at the associated hospital; the Editor of the Institute's flagship journal, *Acupuncture Research*; the Institute's chief of pain research; and the Director of the International Training Center. Several staff served as interpreters, although each of the dignitaries spoke English. Others took notes or served refreshments, while the photographer continued taking pictures. We spent hours in this meeting, engaged in a wide-ranging conversation. We discussed what recent research has revealed about the mechanisms underlying acupuncture effects. The group spent a great deal of time drawing me out on my understanding of TCM as well as recent findings in the pain literature and from my own lab. As the conversation continued, we discussed the impact of Western science on clinical applications of TCM. One such area is anesthesiology. The researchers agreed that the popularity of acupuncture anesthesia had waned, and Western intravenous and inhalant-based anesthesia has become the standard in China's hospitals. In the FDIS session on TCM at Nanjing University, Dr. Zha Wei, who is the Director of Acupuncture and Moxibustion at the Nanjing University of Traditional Chinese Medicine, had posited several reasons for this, not the least of which being that TCM practitioners are willing to accept changes that make their work easier. Dr. Wei had said that although acupuncture anesthesia was inexpensive, the need to screen patients for acupuncture anesthesia made it harder to use. The

Institute researchers all agreed. Acupuncture worked well for some patients, but it could not be relied upon, especially in emergencies, in the way that Western anesthetic drugs can. I also had the opportunity to question the assembled researchers, and later was able to follow up with some individuals.

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In my laboratory, in the course of investigating the relief claimed by folk medicine systems to be provided by a variety of plant products, I have frequently seen that standard Western testing paradigms fail to demonstrate such effects. It is certainly possible that the plants themselves were simply ineffective, but an alternative explanation for these results may be that these standard paradigms are insensitive to the actual effects. For example, in the realm of pain relief, sufferers may find that "relief" comes in different forms, such as reduction in the anxiety caused by the presence of pain or the refocusing of attention away from painful sensations. Western pain assessment paradigms are generally intended to simply measure changes in perceived pain intensity. What definition of pain did these researchers use in their studies? Would their research be furthered by a broader conception of pain relief and new paradigms sensitive to the effects encapsulated by this broader concept? This brought on a very animated discussion, ranging from the need to adhere to some forms of research to publish in certain arenas, to the value that this would have in pursuing the mission of the Institute. We closed with an opening: If my research develops such paradigms, researchers at the Institute of Acupuncture and Moxibustion are interested in learning about them, and, potentially, collaborating to examine the effects of acupuncture in these models.

My meetings at the Institute for Chinese Materia Medica went similarly well. In a meeting with the Vice Director of the Institute and several key researchers, our conversation had again been rather free-wheeling, ranging from basic research to the operation of pharmaceutical factories, until I broached the same topics about which I had earlier questioned the group of Institute of Acupuncture researchers—but here, about the limitations that Western paradigms may place on observing the effects of herbal remedies rather than acupuncture. This struck a chord with the group. Several researchers discussed their work using standard Western pain assays. As our discussion continued, the group became excited at the possibility that new paradigms

might open up new avenues of research for Chinese medicinal plants. As I later confirmed with individuals, including the Vice Director, collaboration with researchers here only awaited a mechanism in order to begin, and in all communications since returning from China this has been reaffirmed multiple times. As the National Center for Complementary and Alternative Medicine (NCCAM) recently signed an international collaboration agreement with the China Academy, my next steps will be to begin work within NCCAM guidelines to obtain funding for initial collaborative work.

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My time among the TCM practitioners and researchers in China provided me not only with greater insight into and new perspective on this system of folk medicine, but also an appreciation of the people of this country and for the opportunities that greater interaction with China can bring—including work in my own lab. The potential impact of new methods sensitive to assessing the range of effects induced by TCM formulas (some of which may contain 10, 15, or more ingredients) provides ample reason for our excitement about this possible collaboration, in addition to the willingness of CACMS faculty and staff to share information, extracts, formulas, and expertise. In my last stop of my CACMS visit, the Institute's interpreter, superintendent of materials, our photographer, and I visited the Museum of the Institute of Chinese Materia Medica, a series of rooms containing samples from over 10,000 medicinal plants and animal products. As I marveled at the exhibits of materials, the superintendent leaned in. "Unfortunately," she said, "we only have room for a small sample of our plants and roots in this museum. Our collection includes over 100,000 different specimens." As I thought about the implications of her statement, about TCM, and the opportunities that this trip to China provided, another thing became obvious to me—I very much needed to schedule another massage. ◉

Notes

1. Beijing's traditional maze-like narrow streets of small houses, some with tiny businesses operating within. For a more detailed discussion of *hutong*, see http://www.chinavista.com/experience/hutong/hutong.html.

2. Larger businesses in China's cities seem to share this feature. While the tiny booths of night markets and family shops of Beijing's *hutongs* may only have one or two people

working, the department stores, pharmacies, and even the ubiquitous KFC restaurants all seem to have large numbers of staff in comparison to stores in the U.S.

3. As discussed and confirmed by many of the practitioners with whom I visited.

4. All conversations and dialogue reported in this essay are taken from field notes and therefore based on the author's best recollection rather than from verbatim transcripts.

5. For a more detailed description of the four components of TCM examination, see Wiseman and Ellis 1996; and Weiyi and Fanyi 2004.

6. Weiyi and Fanyi 2004, pp. 135–147.

7. See Qingye, Zhanwen and Yuanan 2004 for example and further discussion.

8. For example, see Wiseman and Ellis 1996.

9. *De qi* is considered a very important indication of the accurate placement of acupuncture needles, and as in acupressure practice, the activation of a particular point.

10. See Wilk 2001.

11. Website: http://www.dragonfly.net.cn.

12. Also referred to as *amma* in some texts.

13. Sohn and Sohn 1997.

14. This name is less than a year old; the original name of the academy is the China Academy of Traditional Chinese Medicine, and in most literature available the academy remains abbreviated by those initials (i.e., CATCM).