

Obstacles to Integrative Medicine: The Case of Traditional Chinese Medicine in Taiwan

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The model of regulations on Traditional Chinese Medicine (TCM) in Taiwan is often categorized as “equalization” or “non-discriminatory,” though in reality the TCM practice is unequally regulated or even marginalized. The thesis of this Article is that medical licensing law in Taiwan played a major role in marginalizing TCM in the medical system and thus delayed the acceptance of TCM by orthodox medicine. First, this Article will describe the “separate-but-equal” doctrine in determining the scope-of-practice issue of TCM regulations. The doctrine exclusively defines the practice boundaries of TCM doctors, thereby obstructing the

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modernization of TCM practices. Some examples indicate this issue is equally important in the Western world. Second, this article will examine why medical licensing law can be an obstacle in the integration of TCM and modern scientific medicine (MSM). This Article adopts Thomas Kuhn's paradigm theory to explain the active function of licensing law in purifying and reinforcing the collective beliefs of a scientific community. Additionally, it explains why medical licensing law in Taiwan should be amended to allow TCM doctors to integrate MSM and other complementary and alternative medicine (CAM) traditions into their practices. Finally, the Article proposes the term "competitive professionalism" as an alternative principle to replace the segregation policy on the scope-of-practice issue. This principle views healthcare professions as competing entities that share the same pool of medical knowledge, and which should serve for the benefit of all patients. The intersections between intellectual property rights and antitrust law can be metaphors for the functions of title protection and scope-of-practice settings. The practice boundaries of healthcare professions should be set up in reference to the training and education of such professions. Under this model, medical licensing law will suit the social demands put on integrative medicine and medical pluralism.

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I. INTRODUCTION

In 2009, National Taiwan University Hospital, one of the most prestigious teaching hospitals in Taiwan, established the Center for Complementary and Integrated Medicine.¹ In March of that year, the hospital began offering several alternative treatments, including music therapy, meditation, Chinese herbal medicine, Tai Chi, aromatherapy, art therapy, and spiritual (religious) counseling.² While a few members of the hospital exhibited some level of opposition, this event indicates that the largest base of modern scientific medicine (MSM) in Taiwan has softened its attitude toward complementary and alternative medicine (CAM).

The hospital claimed this change would allow it to catch up with the growing trend of using CAM in Western countries.³ In other words, the medical professionals in Western countries accepted CAM first,⁴ and then Taiwanese physicians followed. However, many CAM therapies, such as acupuncture and traditional Chinese medicine (TCM), which are becoming popular in Western countries, existed in Taiwan for several decades before their transplantation in the West. One survey indicates that, between 1996 and 2001, 62.5% of Taiwan's population used at least one modality of TCM to treat illness or alleviate symptoms (instead of only using TCM for preventing illness or promoting health) with an average frequency of 11.5 visits per user.⁵ This number is much higher than the 40% usage rate in the United States.⁶ The question is why, up until this

¹ Pat Gao, *The Healing Power of Tradition*, TAIWAN REV., July 1, 2011, <http://taiwanreview.nat.gov.tw/ct.asp?xItem=166932&ctNode=1342&mp=1>.

² Fuzhu ji Zhenghe Yixue Zhongxin (台大醫院輔助暨整合醫學中心) [Center for Complementary and Integrated Medicine], *Zixun Shidian (諮詢時段) [Counseling Hours]*, TAIDA YIYUAN (台大醫院) [NAT'L TAIWAN U. HOSP.], <http://www.ntuh.gov.tw/CIM/Lists/List5/AllItems.aspx> (last visited July 10, 2012).

³ According to the hospital's website, the founding of the Center for Complementary and Integrated Medicine was inspired by the senior administrators' visit to the National Center for Complementary and Alternative Medicine in the United States. Center for Complementary and Integrated Medicine, *Background*, NAT'L TAIWAN U. HOSP., <http://www.ntuh.gov.tw/en/CIM/Lists/Background/AllItems.aspx> (last visited July 10, 2012).

⁴ For example, in 1997, the National Institutes of Health in the United States, after reviewing the medical literatures of the last several decades, concluded that acupuncture is effective in treating adult postoperative or chemotherapy-induced nausea and vomiting, and postoperative dental pain, and as an adjunct treatment or an acceptable alternative for treating chronic diseases. NAT'L INSTS. OF HEALTH, NIH CONSENSUS STATEMENT: ACUPUNCTURE 7 (1997), available at <http://consensus.nih.gov/1997/1997Acupuncture107PDF.pdf>.

⁵ Fang-Pey Chen et al., *Use Frequency of Traditional Chinese Medicine in Taiwan*, 7 BMC HEALTH SERVICES RES. 26 (2007), available at <http://www.biomedcentral.com/1472-6963/7/26>.

⁶ In 2007, approximately four out of ten Americans used CAM therapy. PATRICIA M. BARNES ET AL., COMPLEMENTARY AND ALTERNATIVE MEDICINE USE AMONG ADULTS AND

time, have neither TCM nor acupuncture been reviewed scientifically in Taiwan? With a sufficient number of patients qualified to be subjects of related experimental research, it is easier for MSM doctors in Taiwan than physicians in Western countries to conduct scientific research on TCM. It is understandable that it has taken time for communities of orthodox medicine to accept foreign medical traditions, but since medical pluralism is so popular in Taiwan, there is no obvious reason why the medical profession in Taiwan has been so slow to accept these traditional treatments, and indeed not do so until after their Western counterparts.

The thesis of this Article is that medical licensing law in Taiwan played a major role in marginalizing CAM in the medical system, and thus delayed the acceptance of CAM by advocates of orthodox medicine. Although the development of medical science has been criticized for being influenced by factors other than objective scientific evidence (such as money, the interaction between academia and industry, or professional bias), law rarely has been considered a factor influencing the evolution of medicine. To demonstrate how licensing laws influence the scientific foundation of both MSM and CAM, as well as the competence of practitioners in both camps, the case of TCM, a popular CAM in Taiwan, will be discussed.

Although a great deal of the criticism of CAM is based on the assumption that most CAM therapies lack scientific evidence proving their safety and effectiveness, many advocates believe that the scientific method should not be applied to their remedies.⁷ This Article argues that, in the case of TCM in Taiwan, this phenomenon could be a *result*, not a *cause*. Although it is common sense that the functions of a medical system include more than delivering basic healthcare, few CAM commentators analyze the orthodox medical system from the perspective of its functions of scientific research and professional education. These functions are an obstacle to the TCM profession adopting the scientific method to test remedies; hence, the “separate-but-equal” principle toward the regulation of MSM and TCM has led to the marginalization of TCM in Taiwan’s medical system.

This Article will first describe the “separate-but-equal” doctrine in determining the scope-of-practice issue of TCM regulations. This doctrine defines the practice boundaries of TCM doctors, thereby obstructing the modernization of TCM practices. Some examples indicate that this issue is equally important in the Western world. Next, this Article will examine how medical licensing law can be an obstacle to the integration of TCM and MSM. This Article adopts Thomas Kuhn’s paradigm theory to explain the active function of licensing law in purifying and reinforcing the collective beliefs of a scientific community.

CHILDREN: UNITED STATES, 2007, at 1 (2008), available at <http://www.cdc.gov/nchs/data/nhsr/nhsr012.pdf>.

⁷ Marcia Angell & Jerome P. Kassirer, *Alternative Medicine: The Risks of Untested and Unregulated Remedies*, 339 NEW ENG. J. MED. 839, 839 (1998).

Additionally, it explains why medical licensing law in Taiwan should be amended to allow TCM doctors to integrate MSM and other CAM traditions into their practices. Finally, this Article proposes the term “competitive professionalism” as an alternative principle to replace the segregation policy in the scope-of-practice issue. My competitive professionalism principle views healthcare professions as competing entities that share the same pool of medical knowledge and should serve for the benefit of all patients. The intersections between intellectual property rights and antitrust law are metaphors for the functions of title protection and of scope-of-practice settings. The practice boundaries of healthcare professions should reflect the training and education of the professions. Under this model, medical licensing law will fit the social demands of integrative medicine.

II. LIMITATIONS ON THE PRACTICE BOUNDARY OF TCM DOCTORS IN TAIWAN

A. TCM Doctors as a Parallel Profession

For people in the United States, acupuncture and herbal medicines are two well-known elements of Oriental medicine, but TCM includes more than needles and herbs. Developed in East Asia over thousands of years, TCM has complete diagnostic methods and diversified treatments that distinguish it from modern orthodox medicine. Rooted in Taiwan since the sixteenth century, TCM has become one of Taiwan’s main healthcare services.⁸ During the Japanese rule of Taiwan from 1895 to 1945, the role of TCM in Taiwan’s healthcare system declined because of government policies that replaced TCM practitioners with physicians trained in modern Western medicine.⁹ When the Chinese Nationalist government took control of Taiwan in 1945, it instituted a new policy and allowed TCM to coexist with modern Western medicine.¹⁰

In articles comparing national TCM regulations, Taiwan’s model is often categorized as “equalization” or “non-discriminatory.”¹¹ The rationale for such a categorization is that the Physicians Act in Taiwan theoretically provides equal title protection to both MSM and TCM doctors.¹² This means that TCM doctors in

⁸ Chunhuei Chi et al., *The Practice of Chinese Medicine in Taiwan*, 43 SOC. SCI. MED. 1329, 1330 (1996).

⁹ *Id.*

¹⁰ *Id.*

¹¹ E.g., Ian Holliday, *Traditional Medicines in Modern Societies: An Exploration of Integrationist Options Through East Asian Experience*, 28 J. MED. & PHI. 373, 384 (2003).

¹² The Physicians Act, in effect since 1943, regulates MSM doctors, TCM doctors, and dentists. Article One states, “Citizens of the Republic of China having passed a physician exam and holding a physician license in accordance with This Law may work as a physician.” All three groups of professionals are called “physicians” in the Act. Physicians Act (2009), available at <http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=L0020001>.

Taiwan may use the title of “doctor” and wear white coats. In many statutes in Taiwan, the term “physician” refers to both MSM doctors and TCM doctors.¹³ Therefore, theoretically, the TCM system is parallel to the MSM system. There are TCM clinics and hospitals in Taiwan, and the National Health Insurance system reimburses the cost of treatment from TCM institutions. Again, theoretically, MSM and TCM exist equally in Taiwan.

However, the relationship between MSM and TCM should be described as *separate* and, as demonstrated below, *unequal*. The rights of MSM and TCM doctors are similar in statutory medical licensure laws but, due to their administrative interpretation by the Department of Health, the legal status of TCM doctors is in a less advantageous position, particularly in terms of scope of practice and restrictions on dual-trained doctors. Such unequal regulations are obstacles to the development of integrative medicine in Taiwan.

B. The “Separate but Equal” Doctrine Defining the Scope of TCM Practice

The scope of practice is a critical challenge in separating TCM and MSM, and the Physicians Act does not define the scope of practice for either. If one interprets the statutes literally, neither MSM nor TCM doctors have limitations on their scopes of practice. This legislation is uncommon: practitioners of traditional medicine in many countries are normally restricted in their scopes of practice. The policy of pushing for the modernization of Chinese medicine based on the scientific paradigm is the cause of this legislation.¹⁴ Unlike with educational institutions for TCM in other countries, the curriculum of formal medical education for TCM doctors in Taiwan combines the curriculum for MSM with additional courses in TCM.¹⁵ This is because students in TCM programs are expected to practice MSM and TCM in an integrated fashion.¹⁶ Therefore, the total length of required formal education for TCM students is longer than that for MSM students.¹⁷ Conversely, MSM education rarely exposes MSM students to TCM.¹⁸ Therefore, TCM education is the major engine in the integration of the practices.

Paragraph five of the Tenth Amendment to the Constitution in Taiwan

¹³ See, e.g., Diplomat Specialization and Examination Regulations art. 2 (2011), available at <http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=L0020028>; Yishi Zhiye Dengji Ji Jixu Jiaoyu Banfa (醫師執業登記及繼續教育辦法) [Physician Practice Registration and Continuing Education Regulations] (1997), available at <http://law.moj.gov.tw/LawClass/LawAll.aspx?PCode=L0020073>.

¹⁴ Chi et al., *supra* note 8, at 1331.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ Holliday, *supra* note 11, at 381.

reads: “The State shall . . . promote the research and development of both modern and traditional medicines.”¹⁹ The integrative strategy of TCM education matches the spirit of the Tenth Amendment, and some practitioners in both the MSM and TCM camps are interested in integrating the two traditions. However, whether their practices can overlap has become a difficult and consistent problem for the Department of Health and, in 1996, a constitutional dispute.

In the case of Interpretation No. 404, a TCM doctor with a pharmacist license chose to use a TCM method of surgery, based on a similar process practiced by MSM doctors, to treat hemorrhoids for a female patient.²⁰ He believed a common MSM over-the-counter drug called WuFenZhu, which contained acetaminophen and aspirin,²¹ was more effective in relieving pain than another drug the Department of Health permitted TCM doctors to prescribe, which contained the MSM elements caffeine and sulpyrine. He prescribed WuFenZhu to relieve the patient’s pain after the surgery, but there were complications and the patient subsequently sued.²² The license of the TCM doctor was suspended because he violated the scope of the practice of his license; however, he objected to the sanction and the case was sent to the Constitutional Court.²³ The TCM doctor claimed that the disciplinary action violated the right of work guaranteed by Article Fifteen and the equal protection rights guaranteed by Article Seven of the Constitution.²⁴ The Constitutional Court disagreed, ruled in favor of the Department of Health, and held that:

Article 15 of the Constitution provides that the people’s right of work should be protected so that people can freely choose their work and professions to maintain their livelihood. Because people’s work is closely related to the public welfare, and is necessary to improve the public interest, work engaged in and qualifications or other requirements possessed by people should be properly restricted by law. . . . *Chinese herbal doctors should provide treatments according to traditional Chinese medical methods. . . .* Directive No. 370167 issued by the Department of Health in the Executive Yuan stated: “. . . (4) Pursuant to the Drugs and Pharmacists Management Act (now the Pharmaceutical Affairs Act), *over-the-counter medicines can be dispensed for the treatment of illness by those without a physician’s license.*

¹⁹ MINGUO XIANFA amend. 10 (1994), available at <http://law.moj.gov.tw/LawClass/LawAll.aspx?PCode=A0000002> (translating “國家應 . . . 促進現代和傳統醫藥之研究發展”).

²⁰ Interpretation No. 404 (Constitutional Ct. May 24, 1996), available at http://www.judicial.gov.tw/constitutionalcourt/EN/p03_01.asp?expno=404.

²¹ Kunxi [Quincy], *WuFenZhu*, GIRO (Jan. 29, 2010), <http://www.giro.com.tw/archives/57>.

²² Interpretation No. 404.

²³ *Id.*

²⁴ *Id.*

Therefore, the dispensing of over-the-counter medicines for patients is not within the scope of a Chinese herbal doctor's medical service." The interpretation of a Chinese herbal doctor's scope of medical service provided by the Department of Health in the Executive Yuan complies with the legislative intent of the Physician Act and the Medical Service Act, and is consistent with the right of work guaranteed by the Constitution.²⁵

The logic of the opinion is that in order for patients to be able to make an informed choice, TCM and MSM doctors should practice methods according to what their titles represent. This means that the scopes of practice for TCM and MSM doctors should be *separate*, and the boundaries, although not clear in the statutes, should be clarified by the Department of Health.

In his dissenting opinion, Justice Wu Geng disagreed with the majority's opinion that an administrative agency could clarify the scope of practice issue without clearer legislative instruction.²⁶ Since violating a scope of practice leads to administrative sanctions, he argued that the legislature should provide intelligible principles to guide the interpretations of administrative agencies. This guidance is necessary so that citizens can foresee whether the law permits their behavior.²⁷ In this case, since patients can purchase the disputed over-the-counter drug without a doctor's prescription, prescribing this drug is not an action usually practiced by TCM doctors. However, the Ministry of Health deems this to be practicing outside the boundary of a TCM doctor's license, and thus it is an unethical action subject to administrative sanctions. Such an interpretation adds restrictions outside the meaning of the authorizing statutes and leaves TCM doctors unable to predict the legitimacy of their practices; therefore, he held it should be deemed unconstitutional.²⁸

In this case, the TCM doctor did not use the MSM drug to treat the patient's illness, but rather to relieve the patient's pain because it was more effective. In other words, the patient was treated by a TCM surgical method and an MSM drug was used to complement the treatment. Such integration might maximize the therapeutic benefits for patients who prefer treatment by TCM doctors. However, the majority of the constitutional court rejected such

²⁵ *Id.* (emphases added). The term "Chinese herbal doctor" used in this translation is not an accurate interpretation of the term "Zhongyishi" (中醫師) referring to TCM doctors in the Chinese language, because the practice of TCM doctors in Taiwan encompasses more than prescribing herbal drugs.

²⁶ Interpretation No. 404 (Butong Yijianshu: Dafaguan Wu Geng (不同意見書：大法官吳庚)) [Dissenting Opinion: Justice Wu Geng], available at http://www.judicial.gov.tw/constitutionalcourt/P03_01_detail.asp?expno=404&showtype=%B7N%A8%A3%AE%D1.

²⁷ *Id.*

²⁸ *Id.*

integration. The decision in this case established the principle that, despite the fact that the statute does not impose limitations on the practices of the two professions, the scopes of practice for both MSM and TCM doctors can be exclusively determined by administrative interpretations of the Department of Health. Such a segregation policy, in this author's opinion, is a "separate but unequal" doctrine.

On the face of this decision, the rationale appears to be that a TCM doctor should provide treatments according to TCM methods. Theoretically, the scope of practice for the doctors in both camps should not overlap. TCM doctors should not be allowed to conduct clinical pathology tests, such as general blood tests or radiography, and MSM doctors should not practice acupuncture or moxibustion. In reality, however, scientific advancement and mutual advances in knowledge by MSM and TCM professionals around the world have blurred the practice boundaries of TCM and MSM. Nonetheless, while an MSM graduate may attend qualification exams and get a TCM license after attending 45 credits of TCM courses, TCM doctors cannot earn MSM licenses through a similar process.²⁹ An MSM doctor or dentist may practice acupuncture without passing an additional national exam after 192 course hours on acupuncture.³⁰ The Department of Health claimed that this policy, which opened the door of acupuncture to MSM practitioners, is based on the fact "that acupuncture has been actively studied in many countries, and acupuncture has been able to be delivered not in the traditional way of needling but in electronic ways based on modern science."³¹ Furthermore, claiming that these modern methods of acupuncture involve electronics and therefore are outside the scope of practice for a TCM doctor's license, the Department of Health prohibited TCM doctors from stimulating acupuncture points by interference wave therapy or low-frequency electric therapy methods.³² Thus, the government applies double standards to the scope of what MSM and TCM doctors can do.

C. Restrictions on Dual-Trained Doctors

Another licensure issue is whether a dual-trained doctor may simultaneously practice TCM and MSM. Since the TCM education includes the same curriculum as MSM, the graduates of TCM schools may choose to take national exams on TCM, MSM, or both.³³ However, the Department of Health

²⁹ ZHAO CHANGPING & LIN JULANG, JIANCHA WOGUO ZHONGYIYAO FAZHAN ZHI QUESHI ZHUANAN DIAOCHA BAOGAO HUIBIAN (監察我國中醫藥發展之缺失專案調查報告彙編) [CONTROL YUAN REPORT: MISTAKES IN THE DEVELOPMENT OF TRADITIONAL CHINESE MEDICINE AND HERBAL DRUGS IN TAIWAN] 31 (2000).

³⁰ *Id.*

³¹ *Id.* at 31-32 ("針灸之臺灣方式，目前世界各國均積極研究引用，且目前之針灸，已由傳統之撚針方式，發展至引用現代科學之電學方式，達到針灸效果").

³² *Id.*

³³ Juyou Duochong Yishi Renyuan Zigezhe Zhiye Guanli Banfa (具有多重醫事人員資格者執業管理辦法) [Regulations for Healthcare Professionals with Multiple Licenses] arts.

prohibits doctors with both TCM and MSM licenses from registering both licenses. Specifically, although these dual-licensed physicians may integrate both medical systems into their practices, they cannot open clinics for both medical systems or inform patients through the signage of their clinics that they practice integrative medicine.³⁴ Under this policy, although dual-trained doctors may order and review clinical pathology tests, since a TCM clinic or a TCM hospital cannot equip MSM facilities, the doctors cannot access the equipment required for the tests if they are registered as TCM doctors. Similarly, if a dual-trained doctor registers as an MSM doctor, she cannot provide TCM products to patients because her clinic is not a TCM clinic.³⁵

The restrictions on dual-trained doctors have had an adverse effect on the attitudes of TCM graduates choosing to register as TCM doctors. Public funding for TCM is scarce, and the only two universities in Taiwan offering TCM programs (the China Medical College and Chang Gung University) are both privately owned. In 2000, only two of fifty-two TCM hospitals were publicly owned.³⁶ Another financing problem involves the National Health Insurance (NHI) system. Although, since the establishment of NHI, the total cost of the system has grown every year, the percentage of reimbursements going towards TCM services decreased from 6.7% in 1995 to 3.6% in 2000.³⁷ In 1998, nine percent of NHI patients used TCM, but reimbursement for TCM services only accounted for 4.8% of NHI.³⁸ The low percentage of reimbursements going towards TCM services is primarily due to double standards in reimbursing TCM and MSM. Reimbursements for many TCM therapies, even for those treating the same diseases, are made at lower payment rates than for MSM counterpart treatments.³⁹ Furthermore, since MSM doctors have higher social status, more treatment options, and higher incomes, this policy discourages graduates of TCM schools from choosing to register as TCM doctors.⁴⁰ Between 1966 and 1997, there were 2,224 students who graduated from China Medical College, the first TCM school in Taiwan. However, by 1997, only 182 of these graduates had registered as TCM doctors and the rest had registered as MSM doctors.⁴¹ This explains why the number and training of TCM doctors is insufficient to promote the usage of TCM in Taiwan.

As mentioned earlier, a majority of the Taiwanese population uses TCM. Why has TCM obtained so little funding from the public sector? One event might provide some explanation. In 2005, the minister of the Department of Health

2-3 (1998), available at <http://law.moj.gov.tw/LawClass/LawAll.aspx?PCode=L0020076>.

³⁴ Chi et al., *supra* note 8, at 1331.

³⁵ *Id.*

³⁶ Holliday, *supra* note 11, at 377.

³⁷ Zhao & Lin, *supra* note 29, at 127.

³⁸ *Id.* at 73.

³⁹ *Id.*

⁴⁰ Chi et al., *supra* note 8, at 1331.

⁴¹ Zhao & Lin, *supra* note 29, at 77.

unexpectedly quit and the vice minister, a female advanced nurse, was appointed as deputy minister before a new minister was chosen. Claiming that a long-recognized *custom* required that only a person with an MSM license should occupy the position of minister, the appointment met with tremendous opposition from the Taiwan Medical Association.⁴² The reason for this clash was that most of the affairs under the control of the minister are related to MSM.⁴³ The Association felt that a nurse should not be a minister of the Department of Health, not even as a deputy minister, and not even on a short-term, temporary basis. This controversy culminated in the appointment of a senior MSM doctor as minister. Of course, the affairs the minister is in charge of are not limited to MSM matters. The minister can influence the resources distributed to hospitals and educational institutions, and can promulgate rules to regulate the healthcare professions. Even under legislation that treats different healthcare professions equally, resource allocation and administrative regulation can be unequal and can marginalize one profession.

Since MSM doctors have sufficient resources to do so, why have they not actively studied TCM to discover whether it is supported by scientific evidence, as their counterparts in the Western world have done? Since TCM is legal in Taiwan, why have TCM doctors not actively done so either? This phenomenon is partially due to the negative incentives given by the medical licensing law. My analysis adopts Thomas Kuhn's paradigm theory, which explains why a scientific community would resist knowledge that is supported by scientific evidence but inconsistent with its own paradigm. This article also provides information regarding physician licensing laws that operate as mechanisms for the MSM and TCM professions to resist knowledge in favor of their opposite camps. Although this analysis primarily focuses on the marginalization of TCM in Taiwan, it can be applied to other CAM traditions as well.

D. Turf Wars on CAM Regulation

Historically, once a CAM profession is established through licensing legislation the scope of practice issue usually follows. Theoretically, the legislatively authorized boundaries of practice should *reasonably* reflect the training and competence of the licensed practitioners.⁴⁴ However, due to the

⁴² Bi Luo & Li-Hua Zhong, *Wang Xiuhong Dai Weishu Shuzhang, Yijie Yiwai* (王秀紅代衛署署長，醫界意外) [*Wang Xiuhong Is Appointed as Deputy Minister of Health, the Medical Profession Is Surprised*], DA JIYUAN (大紀元) [THE EPOCH TIMES] (Feb. 2, 2005), <http://www.epochtimes.com/b5/5/2/2/n801052.htm>.

⁴³ *Id.*

⁴⁴ WHITE HOUSE COMM'N ON COMPLEMENTARY & ALT. MED. POLICY, FINAL REPORT 90-91, 95 (2002), available at http://www.whccamp.hhs.gov/pdfs/fr2002_document.pdf ("Recommendation 20: States should evaluate and review their regulation of CAM practitioners and ensure their accountability to the public. States should, as appropriate, implement provisions for licensure, registration, and exemption consistent with the practitioners' education, training, and scope of practice.").

complex nature of health care, the political influence of the professions involved, the roles of individual health care providers, and public demand, there are gaps between the legal authority afforded many CAM providers and their clinical competence.⁴⁵ As the following discussion demonstrates, current legislative approaches to CAM professions' scopes of practice cannot resolve the challenge of this gap.

First, the scope of practice for a CAM profession is not necessarily consistent with the scientific consensus regarding the profession's discipline, but is largely a result of lobbying efforts, political tradeoffs and compromises, and local attitudes toward a particular type of CAM provider.⁴⁶ In the United States, for example, the 1997 National Institutes of Health (NIH) Consensus Development Panel on Acupuncture concluded that scientific evidence supported the effectiveness of acupuncture in addressing adult postoperative and post-chemotherapy nausea and vomiting, as well as postoperative dental pain.⁴⁷ In 1996, the Food and Drug Administration removed acupuncture needles from the "investigative" category to the category of "accepted medical instruments," meaning that the FDA acknowledged that acupuncture could be effective.⁴⁸ The NIH has also suggested that acupuncture could be useful as an adjunct treatment, or as an acceptable alternative, in other situations, such as addiction, stroke rehabilitation, headache, menstrual cramps, tennis elbow, fibromyalgia, myofascial pain, osteoarthritis, low back pain, carpal tunnel syndrome, and asthma.⁴⁹ However, no U.S. state has regulated the scope of practice of acupuncturists to be limited to the areas identified by the 1997 NIH Consensus Development Panel.⁵⁰ On the other hand, during the movement in the United States to change the identity of the acupuncture profession by appending "Oriental medicine" to acupuncture,⁵¹ lobbyists often faced difficulty in including Oriental medical diagnostic authority and the power to order or interpret laboratory and radiology tests within the scope of the practice of acupuncturists.⁵² In many cases, the lobbyists' strategy was to get legalized first, then build a patient and political base, and lastly to attempt to amend the scope-of-practice statutes.

⁴⁵ Barbara J. Safriet, *Closing the Gap Between Can and May in Health-Care Providers' Scopes of Practice: A Primer for Policymakers*, 19 YALE J. ON REG. 301, 304-05 (2002).

⁴⁶ Michael H. Cohen, *Advising Health Care Institutions Integrating Complementary and Alternative Medical Providers*, 42 ORANGE COUNTY LAW. 16, 16 (2000).

⁴⁷ NAT'L INSTS. OF HEALTH, *supra* note 4, at 2.

⁴⁸ Christine C. Kung, *Defining a Standard of Care in the Practice of Acupuncture*, 31 AM. J. L. & MED. 117, 120 (2005).

⁴⁹ NAT'L INSTS. OF HEALTH, *supra* note 4, at 10.

⁵⁰ Cohen, *supra* note 46, at 16.

⁵¹ NAT'L ACUPUNCTURE FOUND., ACUPUNCTURE AND ORIENTAL MEDICINE STATE LAWS AND REGULATIONS 6, 11 (2005).

⁵² See, e.g., THE UCSF CTR. FOR THE HEALTH PROFESSIONS, ACUPUNCTURE IN CALIFORNIA: STUDY OF SCOPE OF PRACTICE 3-4 (2004), available at http://www.acupuncture.ca.gov/pubs_forms/scope_practice.pdf.

Second, in defining scope of practice, legislators tend to allocate particular functions or modalities to particular professions, while excluding others. Although statutory definitions typically do not expressly intend for mutual exclusion, judicial interpretations often make distinctions based on functional descriptions.⁵³ This approach creates controversies because it ignores “the essentially overlapping nature of many of those functions.”⁵⁴

The problem is that, in many situations, the boundaries of a CAM license are not easy to draw. Once the courts determine that CAM professionals have crossed the boundaries of their licenses, even slightly, service providers face serious sanctions for the unauthorized practice of medicine, such as prosecution or license revocation.⁵⁵ To describe the turf divisions among health care professionals, Professor Sandra Johnson has quoted Portia’s challenge to Shylock in William Shakespeare’s well-known play, the *Merchant of Venice*:

*This bond doth give thee here no jot of blood;
The words expressly are “a pound of flesh.”
Take then thy bond, take thou thy pound of flesh;
But, in the cutting it, if thou dost shed
One drop of Christian blood, thy hands and goods
Are by the laws of Venice confiscate
Unto the state of Venice.*⁵⁶

In some American states, the legislatures take the approach of exhaustively defining and detailing scopes of practice. For example, Pennsylvania defines “chiropractic” as:

A branch of the healing arts dealing with the relationship between the articulations of the vertebral column, as well as other articulations, and the neuro-musculo-skeletal system and the role of these relationships in the restoration and maintenance of health. The term shall include systems of locating misaligned or displaced vertebrae of the human spine and other articulations; the examination preparatory to the adjustment or manipulation of such misaligned or displaced vertebrae and other articulations; the adjustment or manipulation of such misaligned or displaced vertebrae and other articulations; the furnishing of necessary patient care for the restoration and maintenance of health; and the

⁵³ Sandra H. Johnson, *Regulatory Theory and Prospective Risk Assessment in the Limitation of Scope of Practice*, 4 J. LEGAL MED. 447, 455-56 (1983).

⁵⁴ *Id.* at 455.

⁵⁵ Lori B. Andrews, *The Shadow Health Care System: Regulation of Alternative Health Care Providers*, 32 Hous. L. Rev. 1273, 1305-06 (1996).

⁵⁶ WILLIAM SHAKESPEARE, *THE MERCHANT OF VENICE* act IV, sc. 1, *quoted in* Johnson, *supra* note 53, at 448.

use of board-approved scientific instruments of analysis, including X-ray. The term shall also include diagnosis, provided that such diagnosis is necessary to determine the nature and appropriateness of chiropractic treatment; the use of adjunctive procedures in treating misaligned or dislocated vertebrae or articulations and related conditions of the nervous system, provided that, after January 1, 1988, the licensee must be certified in accordance with this act to use adjunctive procedures; and nutritional counseling, provided that nothing herein shall be construed to require licensure as a chiropractor in order to engage in nutritional counseling. The term shall not include the practice of obstetrics or gynecology, the reduction of fractures or major dislocations, or the use of drugs or surgery.⁵⁷

In spite of the length of these definitional statutes, we cannot expect a legislature to regulate exhaustively all details of the modalities available for CAM professions. In addition, these unambiguous statutes, while preventing many CAM professionals from mistakenly crossing the line, have tied the regulated professions to a fixed and rigid scope of practice and have obstructed them from integrating new modalities into their clinical practices.

Some state laws define the practice of CAM disciplines in simple and generic terms, which often require further interpretation.⁵⁸ For example, in the United States the term “acupuncture” can be interpreted as merely the insertion of needles; however, it can also cover all the subjects of Oriental medicine, including Oriental herbal medicine, Oriental massage, dietary advice, therapeutic exercises, etc.⁵⁹ If administrative regulatory bodies do not provide additional clarifications of statutes, regulated CAM professionals are uncertain whether specific modalities are within the legitimate scope of their practice and bear the risk of prosecution for unauthorized practice.

Perhaps because of the disadvantages of the exhaustive legislative approach, many common law countries, including Australia, New Zealand, and the United Kingdom, typically do not have definitions in their CAM legislation, but instead leave the task of describing scopes of practice to their administrative regulatory bodies.⁶⁰ Under this approach, the boundaries of scopes of practice ultimately depend on the composition of such regulators.

⁵⁷ Chiropractic Practice Act, 63 PA. STAT. ANN. tit. 63, § 625.102 (West 2012).

⁵⁸ For example, California defines the practice of chiropractic as all methods “taught in chiropractic schools or colleges; and, also, to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body, but shall not authorize the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in materia medica.” CAL. BUS. & PROF. CODE § 1000-7 (West 2012).

⁵⁹ NAT’L ACUPUNCTURE FOUND., *supra* note 51, at 3.

⁶⁰ David A. Chapman-Smith, *Legislative Approaches to the Regulation of the Chiropractic Profession*, 16 MED. & L. 437, 440 (1997).

Third, legislators have taken unequal approaches in defining the scope of practice of physicians as opposed to other health care providers. Since medicine is broadly defined to include all types of health care service, MSM physicians are free of the burden of proving their clinical abilities before they can practice new treatments or newly established sub-specialties.⁶¹ In contrast, CAM providers have to beg their state legislators to expand their scopes of practice so that they can provide updated diagnostic methods and innovative treatments in their disciplines.⁶² Occasionally, the legislative progress of a CAM licensing law may fall far behind the general clinical competence of regulated professionals. For example, chiropractic professionals in the United States have often faced difficulties in expanding their legal scopes of practice to be consistent with the development of their therapeutic theories. Chiropractic is a well-established profession (licensed in all American states), and California is a state with generally liberal policies towards CAM. However, in the 2005 case of *Tain v. State Board of Chiropractic Examiners*, the California Court of Appeals held that the chiropractic healing practice currently authorized in California was limited to those curricula taught in chiropractic schools in 1922.⁶³ Changes to the curricula of those schools could not enlarge the scope of authorized practice, and asymmetric limits on practice did not violate equal protection.⁶⁴ The court ruled that California chiropractors have no fundamental right “to fully develop their own medical/chiropractic paradigms” or to “realize their own individual identity within their chosen vocation and the full economic benefits of their profession” that required strict scrutiny of the challenged law.⁶⁵

The unequal legislative approach in favor of the MSM profession is the major obstacle to CAM professions in expanding the scopes of their licenses. The Pew Taskforce on Health Care Workforce Regulation analyzed the result of this legislative approach:

Medicine is the only profession with state practice acts that cover *all* of health care services. With this exclusivity, little or nothing exists that can be added to the medical act and medicine has no incentive to delete anything. From this position, medicine can see every request for regulatory change from any other profession or occupation as a challenge or confrontation. With all-inclusive practice authority, the profession also has the credentials, expertise, and political influence to comment on potential impacts of changed laws on patients, clients, and consumers.⁶⁶

⁶¹ Safriet, *supra* note 45, at 308.

⁶² *Id.* at 308-09.

⁶³ *Tain v. State Bd. of Chiropractic Exam'rs*, 130 Cal. App. 4th 609, 628 (Cal. Ct. App. 2005).

⁶⁴ *Id.* at 627-31.

⁶⁵ *Id.* at 629.

⁶⁶ TASKFORCE ON HEALTH CARE WORKFORCE REGULATION, STRENGTHENING CONSUMER

The most common responses of the medical profession against expanding the scope of practice for any other provider can be summarized as (1) “That’s the practice of medicine,” (2) “[O]nly we can do it,” and (3) “If you want to do it, go to medical school.”⁶⁷ These responses ignore the fact that CAM schools can recruit the same faculties to teach the same curricula as taught in medical schools.⁶⁸ If CAM professionals have sufficient training in conventional medicine, they will be able to make more complete diagnoses and have more treatment options in working with their patients. However, students of CAM schools have little incentive to learn conventional medicine if they are prohibited from utilizing the modalities thus acquired. Unequal legislation therefore discourages CAM professionals from training in conventional medicine.

In addition to resistance from the medical profession, a group of CAM practitioners seeking licensure legislation might face objections from other established CAM professions. For example, the acupuncture community in the United States has faced resistance not only from the medical profession, but also from the chiropractic community as well. The chiropractic community has shared the battle of overcoming opposition from the medical profession in seeking public legitimacy. However, because the acceptance of chiropractic, as a profession, began before the recognition of acupuncture as a distinct profession in the United States, acupuncture professionals have had to negotiate with the chiropractic community as well as the medical community in the states where they want to pass initial laws regulating acupuncture practice.⁶⁹ As a result, twenty-eight states include acupuncture within the scope of practice of chiropractic. Ten of those do not require that chiropractors receive any training in acupuncture before practicing it. Among the other eighteen, no state specifies a standard curriculum, and no state requires more than 200 hours of training for chiropractors to become credentialed. This compares with the approximately 2,000 hours of training required for licensed acupuncture professionals.⁷⁰

Although most statutory definitions are premised on the assumption that “the enterprise of healing can be carved into neatly severable and licensable blocks,”⁷¹ many CAM disciplines, unlike biomedicine, are not exclusively licensed. In many American states, not just licensed acupuncturists but also many other health care professionals such as medical doctors, osteopaths, chiropractors,

PROTECTION: PRIORITIES FOR HEALTH CARE WORKFORCE REGULATION 23 (1998), available at <http://www.soundrock.com/sop/pdf/Pew%20Commission-Strengthening%20Consumer%20Protection.pdf>.

⁶⁷ Safriet, *supra* note 45, at 310.

⁶⁸ Eileen Stretch, *Vantage Point: Credentialing Naturopathy*, in INTEGRATING COMPLEMENTARY MEDICINE INTO HEALTH SYSTEMS 197, 198 (Nancy Faass ed., 2001).

⁶⁹ NAT’L ACUPUNCTURE FOUND., *supra* note 51, at 8-9.

⁷⁰ *Id.* at 5, 9.

⁷¹ MICHAEL H. COHEN, COMPLEMENTARY AND ALTERNATIVE MEDICINE: LEGAL BOUNDARIES AND REGULATORY PERSPECTIVES 109 (1998).

podiatrists, dentists, physician assistants, naturopathic doctors, optometrists, nurses, physical therapists, and veterinarians might all be authorized to practice acupuncture.⁷² This may be with or without a requirement for any specific acupuncture training.⁷³ This characteristic of the licensing regulations raises the question why, if CAM therapies are shared and utilized by different professions, conventional treatments are not shared as well.

Many controversies surrounding the scope of practice for CAM professionals are not necessarily related to the safety or efficacy of debated modalities, but to the training and education of the regulated CAM professionals. CAM practitioners may be prohibited from recommending exercises and diets, or from prescribing certain items that patients can access without physician prescriptions, such as over-the-counter (OTC) drugs, vitamins, and dietary supplements.⁷⁴ These modalities are legally utilized by physicians and other healthcare professionals, and even by unsupervised patients themselves, so safety and efficacy concerns do not exist. The development of CAM disciplines may reach a point where these modalities can be used by the disciplines for more accurate diagnosis or better therapeutic results, but until the CAM professions succeed in their turf wars with other professions, they cannot clinically provide services that might be beneficial to patients.

III. EXCLUSIVELY DEFINED SCOPES OF PRACTICE AS OBSTACLES TO INTEGRATION

A. *Patient Demand for Integrative Medicine*

The knowledge gaps, distrust, conflicts of interest, and competition between medical professionals and CAM professionals trap patients in the middle, and the patients tend to be the ones who suffer.⁷⁵ Although patients typically lack the in-depth knowledge necessary to select the best CAM disciplines for their conditions, patients with some types of sickness, such as cancer or chronic illness, need viable options outside the realm of conventional medicine. Andrew Weil, director of the University of Arizona Program in Integrative Medicine, explained the following patients' dilemma that remains unsolved in current orthodox health care settings:

Patients want physicians who can take the time to sit down with

⁷² NAT'L ACUPUNCTURE FOUND., *supra* note 51, at 9.

⁷³ *Id.*

⁷⁴ COHEN, *supra* note 71, at 47-49.

⁷⁵ Tracy W. Gaudet & Nancy Faass, *Developing an Integrative Medicine Program: The University of Arizona Experience*, in INTEGRATING COMPLEMENTARY MEDICINE INTO HEALTH SYSTEMS 35, 36 (Nancy Faass ed., 2001) ("They did not want to go to their own conventional doctor only to have all alternative therapies dismissed and then go to their alternative practitioner to be told the opposite.").

them and listen and explain to them, in language they can understand, the nature of their problem . . . who will not push just drugs and surgery as the only approach to treating illness . . . who are sensitive to mind-body interactions; who will not laugh in your face if you ask questions about Chinese medicine; who are willing to look at you as more than just a physical body.⁷⁶

Nonetheless, one promising development is that there has been a trend toward integrative medicine in the United States.⁷⁷ More physicians are comfortable working with CAM providers in the same offices.⁷⁸ Communication among practitioners, insurers, and policy-makers has expanded.⁷⁹ The number of interdisciplinary referrals between physicians and CAM professionals has increased dramatically.⁸⁰ These integrative settings look promising in providing patients the best combination of conventional and alternative medicine.

Even so, the attendance of CAM professionals in integrative medicine institutions is not without obstacles. While some American hospitals and healthcare networks have given hospital staff privileges to CAM professionals, integration is often physician-centric.⁸¹ For example, physicians and administrators of a hospital might limit an acupuncturist's scope of practice to using needling to treat nausea from chemotherapy and radiation sickness (the therapeutic uses of acupuncture found effective by the 1997 NIH Consensus Panel), while the acupuncturist's license might permit him or her to perform the full range of modalities within Oriental medicine.⁸² Overall, only CAM therapies that meet the biomedical paradigm might be accepted. For many CAM professionals, this means they must alter their approaches, give up their identities, and lose their independence to adapt to a physician-dominated system.⁸³

Although they have not analyzed the relevant belief-shaping mechanisms described by his theory, many CAM commentators have adopted Kuhn's paradigm theory to describe the conflicts of scientific belief between biomedicine and CAM

⁷⁶ Steve Bunk, *Is Integrative Medicine the Future? Relman-Weil Debate Focuses on Scientific Evidence Issues*, 13 SCIENTIST 1 (1999), available at <http://classic.the-scientist.com/article/display/18532/>.

⁷⁷ Eileen Stretch & Nancy Faass, *New Perspectives*, in INTEGRATING COMPLEMENTARY MEDICINE INTO HEALTH SYSTEMS 32, 32 (Nancy Faass ed., 2001).

⁷⁸ *Id.* at 34.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ Michael H. Cohen & Mary C. Ruggie, *Integrating Complementary and Alternative Medical Therapies in Conventional Medical Settings: Legal Quandaries and Potential Policy Models*, 72 U. CIN. L. REV. 671, 690 (2003).

⁸² *Id.* at 694.

⁸³ WHITE HOUSE COMM'N ON COMPLEMENTARY & ALT. MED. POLICY, *supra* note 44, at 22.

practitioners.⁸⁴ Conflicts in the scientific beliefs of healthcare professionals reinforce the inconsistency between the limited scope of practice of CAM professionals' licenses and the evidence of clinical trials on the safety and efficacy of CAM treatments. Nonetheless, the reality of narrowly limited CAM practice in biomedical organizational settings, and the scientific beliefs of individual practitioners, should not be viewed as the results of personal learning experiences and decisions, but as the consequences of mechanisms operating within the professional communities of the practitioners. The following section will further analyze the interactions between these mechanisms and medical knowledge.

B. Thomas Kuhn's Paradigm Theory and the Development of Medical Knowledge

According to Kuhn, a paradigm is defined as "universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners."⁸⁵ A community of practitioners uses a paradigm as a criterion to choose problems for which the paradigm can be assumed to have solutions.⁸⁶ Practitioners subsequently work under the paradigm to expand their knowledge.⁸⁷ Only those problems consistent with the paradigm are admitted as scientific, or even encouraged for study.⁸⁸ "Other problems, including many that had previously been standard, are rejected as metaphysical, as the concern of another discipline, or sometimes as just too problematic to be worth the time."⁸⁹ A paradigm can even insulate a community from socially important problems simply because the problems "cannot be stated in terms of the conceptual and instrumental tools the paradigm supplies."⁹⁰ Scientific development based on one paradigm is considered at the stage of *normal science*.⁹¹

⁸⁴ See, e.g., COHEN, *supra* note 71, at 1-3; Ruiping Fan, *Modern Western Science as a Standard for Traditional Chinese Medicine: A Critical Appraisal*, 31 J.L. MED. & ETHICS 213, 218 (2003); Joseph P. Folger, *Mediation Research: Studying Transformative Effects*, 18 HOFSTRA LAB. & EMP. L.J. 385, 386-87 (2001); David J. Hufford, *Evaluating Complementary and Alternative Medicine: The Limits of Science and of Scientists*, 31 J.L. MED. & ETHICS 198, 201 (2003); Douglas Litowitz, *Gramsci, Hegemony, and the Law*, 2000 B.Y.U. L. REV. 515, 545-48 (2000); Francis W. Peabody, *The Reawakening of Complementary and Alternative Medicine at the Turn of the Twenty-First Century: Filling the Void in Conventional Medicine*, 20 J. CONTEMP. HEALTH L. & POL'Y 329, 331 (2004); J. Brad Kallymyer, Note, *A Chimera in Every Sense: Standard of Care for Physicians Practicing Complementary and Alternative Medicine*, 2 IND. HEALTH L. REV. 225, 235-36 (2005).

⁸⁵ THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS*, at viii (2d ed. 1970).

⁸⁶ *Id.* at 37.

⁸⁷ *Id.* at 35-42.

⁸⁸ *Id.* at 37.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.* at 10.

According to Kuhn, the shift from one paradigm to another consists of three stages: awareness of anomaly, crisis, and revolution. An anomaly appears when an observation and the prediction of a paradigm are inconsistent.⁹² The members of the community will attempt to adjust the scientific rules under the same paradigm to explain the anomaly.⁹³ However, when some members of the community recognize that the existence of an anomaly is not a problem of scientific rules but of the paradigm, the transition to crisis begins.⁹⁴ Although different scientific theories are suggested, most of them only exist for a short time.⁹⁵ Ultimately, the members of the community create a new paradigm and a majority of the members of that community accept it.⁹⁶ After overcoming resistance from the followers of the old paradigm, the new paradigm dominates the community and produces a new normal science; at this point, a scientific revolution completes itself.⁹⁷

The paradigm of MSM differs from that of CAM in the nature of the human body, the cause of disease, and the methodology and attitude of treatment.⁹⁸ Developed in the age when Newtonian physics and Cartesian dualism dominated the intellectual world, the biomedical paradigm of MSM views the body as a machine, separated from mind and spirit, and reducible to physics and chemistry (mechanism and reductionism). The germ theory is a good example to demonstrate the biomedical paradigm on the cause of a disease and its treatment.⁹⁹ One single outside *invader* that preys on a particular part of the body causes disease; the treatment approach is to *attack, kill, or fight* the invader.¹⁰⁰ Although this biomedical model has been very successful for treating infectious disease, acute and traumatic injuries, and many conditions with single, specific causes, it has been less successful with the chronic, multifaceted, and terminal illnesses that together account for seventy percent of the health care budget of the United States.¹⁰¹

In comparison, CAM disciplines and traditions share the holistic paradigm, a model that dominated the world before orthodox medicine established its hegemony in the nineteenth century.¹⁰² The holistic paradigm views the body as a container of humors and energies, inseparable from the soul, with the innate

⁹² *Id.* at 57.

⁹³ *Id.* at 61.

⁹⁴ *Id.* at 82.

⁹⁵ *Id.* at 61.

⁹⁶ *Id.* at 77-78.

⁹⁷ *Id.* at 159.

⁹⁸ COHEN, *supra* note 71, at xii-xiii.

⁹⁹ Don G. Bates, *Why Not Call Modern Medicine "Alternative"?*, 583 ANNALS AM. ACAD. POL. & SOC. SCI. 12, 14 (2002).

¹⁰⁰ COHEN, *supra* note 71, at 2.

¹⁰¹ *Id.* at 2-3.

¹⁰² Bates, *supra* note 99, at 14.

ability to heal itself.¹⁰³ Health is regarded as a dynamic *equilibrium* that is “natural” and harmonious.¹⁰⁴ The goal of treating diseases is to regain the *balance* of the body.¹⁰⁵ Multiple factors cause illness, including biochemical, environmental, social, psychological, behavioral, and spiritual elements.¹⁰⁶ Depending on the origins of different disciplines, CAM therapeutic interventions can be categorized into seven major fields: (1) mind-body interventions, (2) bioelectromagnetic applications in medicine (acupuncture can be listed in this category), (3) alternative systems of medical practice, (4) manual healing methods, (5) pharmacological and biological treatments not yet accepted by mainstream medicine, (6) herbal medicine (most therapies of TCM are in this category), and (7) treatments focusing on diet and nutrition in the prevention and treatment of chronic disease.¹⁰⁷ The shared characteristics of CAM systems include a focus on individualized treatment, treatment of the whole person, promotion of self-care and self-healing, and recognition of the spiritual nature of each individual.¹⁰⁸

Many patients do not use MSM or CAM treatments exclusively.¹⁰⁹ Consequently, many CAM commentators have suggested the model of an integrated health care system in which practitioners of MSM and CAM work together to provide patients the best service by integrating the knowledge, skills, and wisdom of their disciplines.¹¹⁰ Such integration requires the practitioners’ willingness to understand other paradigms and cooperate with the practitioners of other schools. Ideally, if medical scientists conduct more research, new discovery will ultimately prove which paradigm is better than the other. Nevertheless, according to Kuhn’s paradigm theory, due to their different perspectives in looking at the world and of practicing science in it, the observations and experiences of different scientific schools are incommensurable, even if practitioners of the schools observe or experience the same phenomena.¹¹¹ Misunderstanding, distrust, and enmity are inevitable.¹¹² Before practitioners of different schools can

¹⁰³ *Id.* at 15-16.

¹⁰⁴ *Id.* at 16.

¹⁰⁵ *Id.*

¹⁰⁶ COHEN, *supra* note 71, at 4.

¹⁰⁷ WHITE HOUSE COMM’N ON COMPLEMENTARY & ALT. MED. POLICY, *supra* note 44, at 9-10.

¹⁰⁸ *Id.*

¹⁰⁹ See John A. Astin, *Why Patients Use Alternative Medicine: Results of a National Study*, 279 JAMA 1548 (1998) (showing that the majority of alternative medicine users go to CAM not because they are dissatisfied with conventional medicine, but largely because they find CAM to be more congruent with their own values, beliefs, and philosophical orientations toward health and life).

¹¹⁰ See, e.g., COHEN, *supra* note 71, at 114-15.

¹¹¹ KUHN, *supra* note 85, at 4.

¹¹² *Id.* at 149-50. For example, a director of an acupuncture school said his worst students were American doctors because they were no good at “accepting theories that don’t fit in with what they were taught.” JAMES C. WHORTON, NATURE CURES: THE HISTORY OF ALTERNATIVE MEDICINE IN AMERICA 270 (2002).

communicate with each other, “one group or the other must experience the conversion that we have been calling a paradigm shift.”¹¹³ Since the biomedical paradigm and the holistic paradigm have such fundamental disparities regarding the nature of health, sickness, diagnosis, therapy, theory, and doctor-patient relationships, it is difficult to expect members of the different camps to simply cooperate with each other without disagreement.¹¹⁴ For instance, the 2002 report by the White House Commission on Complementary and Alternative Medicine Policy stated that while education and training programs for health care practitioners should develop core curricula regarding other schools, for MSM professionals to discuss CAM and for CAM professionals to discuss MSM treatments with their patients, some challenges, including professional, organizational, and institutional resistance to change, still prevent such curricula from materializing.¹¹⁵ Observations like this confirm that Kuhn’s paradigm theory is an effective model for explaining why integrative medicine has not been widely adopted by health care practitioners despite the potential for tremendous financial benefit.

CAM commentators rarely mention the relationship between the organizational structure of a scientific community and that community’s acceptance of a specific paradigm.¹¹⁶ However, organizational structure explains how a community maintains member loyalty to a specific paradigm. Kuhn maintains that paradigms are not chosen freely by the minds of scientific practitioners.¹¹⁷ Unlike education in music, graphic arts, or literature, scientific education and training are grounded first and foremost in scientific textbooks. Education and training by the book limits what scientists see and what they believe.¹¹⁸ Scientific textbooks erase the importance of past dominant paradigms in history, implying that scientific revolutions and previous paradigms never happened, and that scientists consistently worked toward the series of individual discoveries and inventions that culminated in the particular objectives embodied in today’s paradigms.¹¹⁹

How does a scientific community ensure that the content of textbooks reflects the dominant paradigm? In an academic community, this question is easy to answer. “A paradigm is what the members of a scientific community share, *and*, conversely, a scientific community consists of men who share a paradigm.”¹²⁰ Therefore, if a textbook writer does not believe the dominant paradigm, he or she

¹¹³ KUHN, *supra* note 85, at 150.

¹¹⁴ Bates, *supra* note 99, at 16-21.

¹¹⁵ WHITE HOUSE COMM’N ON COMPLEMENTARY & ALT. MED. POLICY, *supra* note 44, at xx-xxi.

¹¹⁶ *Cf.* KUHN, *supra* note 855, at vii (emphasizing that his work is about the sociology of the scientific community, instead of just another theory of scientific philosophy).

¹¹⁷ *Id.* at 136-40.

¹¹⁸ *Id.* at 164-65.

¹¹⁹ *Id.* at 136-40.

¹²⁰ *Id.* at 176.

will leave or be excluded from the community. The majority of a community must share a paradigm; otherwise, the “community” can no longer be defined as such.

Nevertheless, for health care practitioners, there is a more powerful weapon than social pressure to achieve the goal of unanimity: medical licensing laws. Kuhn’s paradigm theory does not provide analysis on this dynamic. However, it is the single most important mechanism that excludes TCM from the research fields of MSM physicians in Taiwan today.

C. Scope-of-Practice Laws as Intellectual Property for the Medical Professions

Medical licensing laws keep the medical profession pure.¹²¹ Physicians whose practices deviate from the dominant standards of care based on the biomedical paradigm risk being prosecuted, disciplined, and held liable in malpractice lawsuits. All of these possible sanctions originate from medical licensing laws.¹²² Additionally, the laws determine who can decide the content of licensing examinations and which education and training requirements new physicians must satisfy. Raising the quality of health care and protecting the public have been the primary reasons for justifying such restrictions.¹²³ Of course, these restrictions limit the clinical experiences of physicians, the direction of medical innovation, and the types of treatment that patients can choose. Of these three influences, the direction of medical innovation is the most important, since it, in turn, affects how many resources a government is willing to put into CAM research and the training of professionals.

Because safe and effective CAM therapies extend the horizons of medical practice, they can be regarded as medical innovations. Regarding the relationship between institutional frameworks and innovations, Nobel Prize in Economics winner Douglass C. North explains:

Once technology develops along a particular path, given increasing returns, alternative paths and alternative technologies may be shunted aside and ignored, hence development may be entirely led down a particular path. The results are not always optimal downstream

¹²¹ See BARRY R. FURROW ET AL., HEALTH LAW § 3-1 (2d ed. 2000) (outlining the self-regulation of the medical profession, with its system of state licensing, board certification, and private credentialing); see also *id.* § 3-6 (explaining the variety of approaches taken by states in the regulation of alternative health care). In Taiwan, the Physicians Act and the Medical Service Act constitute the major part of the laws. See *supra* note 25 and accompanying text.

¹²² See *id.* §§ 3-3 to 3-5 (defining the unauthorized practice of medicine and its antecedent, the definition of “practice of medicine”).

¹²³ See *id.* § 3-2 (providing a brief history of, and arguments for and against, standards for entry into medical professions based on statute and credential rather than market forces).

....
 . . . [T]he general points I wish to make here are . . . quite clear:
 (1) the institutional framework will shape the direction of the
 acquisition of knowledge and skills and (2) that direction will be
 the decisive factor for the long-run development of that society.

....
 . . . Much of that history is path dependent simply by nature of
 constraints from the past imposing limits on current choices and
 therefore making the current choice set intelligible.¹²⁴

How do medical licensing laws defer medical innovation? Courts traditionally have held that licensed practitioners have legitimate property rights that cannot be taken away without due process.¹²⁵ But what is this intangible property right? In viewing a scope of practice as the boundary of the property rights collectively owned by professionals, the defined scope of the health care professionals' practice functions like a patent, the protection of professionals' titles functions like a trademark,¹²⁶ and CAM theories that cannot be explained by modern science are akin to trade secrets. According to intellectual property theory, policies that broaden intellectual property protections might enhance the incentives for initial innovation but discourage follow-on innovation.¹²⁷ This is because if the intellectual property owner does not license the intellectual property to others, all follow-on innovations by others will have only one buyer: the owner of the initial innovation. If the owner of the initial innovation refuses to buy, other follow-on innovations cannot continue. Compare this to licensing law: if legislation defines the right of a profession to practice a therapy exclusively, regardless of the competence of other professions in practicing that therapy, the profession will have little or no incentive to integrate the knowledge of other professions into its practice, since the profession will have essentially monopolized a specific market. As we have seen in the history of the suppression of alternative medicine, by granting the medical profession exclusive authority over modern modalities, the malfunctioning of medical licensing law obstructs the development of CAM.

Current medical licensing laws in Taiwan, by separately defining the scopes of practice of MSM doctors and TCM doctors, demonstrate the negative

¹²⁴ DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE 76, 78, 137 (1990).

¹²⁵ See, e.g., *Dent v. West Virginia*, 129 U.S. 114, 128 (1889); *Hawker v. New York*, 170 U.S. 189, 191 (1898); *Wills v. Composite State Bd. of Med. Exam'rs*, 384 S.E.2d 636, 639-40 (1989). Taiwanese jurists generally have the same perspective as their American colleagues.

¹²⁶ John L. Reed, *Lanham Act and Deceptive Trade Practice Claims Arising Under State Professional Licensure Laws*, 8 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 223, 246 (1997).

¹²⁷ Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 994-99 (1997).

effects of the segregation policy. Since MSM doctors monopolize most modern diagnostic modalities, patients must go to MSM doctors to get thorough diagnoses and try conventional treatments first. Therefore, since there is no competitive pressure, MSM physicians have no incentive to learn from, or study, TCM. MSM physicians usually accept evidence from randomized trials and amend their theories accordingly, but, occasionally, even when trials prove the effectiveness of TCM, some MSM physicians prefer to stick to the theory and dismiss the “facts.”¹²⁸ On the other hand, because MSM physicians marginalize TCM, TCM practitioners have little incentive to prove their treatments through scientific research. Furthermore, since MSM physicians have unlimited scopes of practice, they might incorporate TCM therapies proven safe and effective into their practices, thus removing the therapies from the monopoly of TCM doctors. A good example is that MSM physicians, who have completed some hours of training, can practice acupuncture in Taiwan under the regulation of the Department of Health without passing an additional exam. The fear of being colonized thus discourages TCM practitioners from modernizing their theories.¹²⁹ Therefore, the segregation policy has not only discouraged the camps of MSM and TCM from learning from each other, but has also delayed their integration.

If the curricula of TCM educational institutions incorporate a significant portion of MSM, as has been done in the TCM schools in Taiwan, should states authorize TCM practitioners to integrate MSM modalities into their practices? The medical profession may reject this idea since innovations in biomedicine are the result of the profession’s collective efforts. However, even patents have time limitations. The reason for setting time limitations on patents is that unlimited patents have adverse effects in delaying follow-on innovation, and most of the important innovations in history have been the result of accumulated innovations. Eliminating the legal barriers to the sharing of medical knowledge will encourage the advancement of medical innovations. The MSM doctors in Taiwan and elsewhere do not create MSM knowledge alone; rather, knowledge is the result of the collective efforts of medical professionals and scientists from around the world. Therefore, it is unconvincing that only one domestic profession should practice knowledge produced by foreigners. Biomedical knowledge, just like TCM and other CAM knowledge, should belong to the patients and not to one single profession. Consequently, exclusively authorizing one single profession to practice MSM is not justifiable.

IV. COMPETITIVE PROFESSIONALISM

¹²⁸ See, e.g., Ted J. Kaptchuk, Letter to the Editor, *Distant Healing*, 134 ANNALS INTERNAL MED. 532 (2001) (“[W]here the evidence of multiple positive, randomized controlled trials will not convince the medical community of its validity . . . [i]t seems that the decision concerning acceptance of evidence . . . ultimately reflects the beliefs of the person that exist before all arguments and observation.”) (footnotes omitted).

¹²⁹ JULIE STONE & JOAN MATTHEWS, COMPLEMENTARY MEDICINE AND THE LAW 35 (1996).

A. *The Positive Effect of Professionalism and Scientific Progress*

In Kuhn's paradigm theory, the notion of *normal science* has led to misunderstandings. Since normal science excludes theories and research that do not fit into the accepted paradigm, a paradigm might be misunderstood as an arbitrary ideology based on an ungrounded belief. However, normal science also has its advantages. Since all members in a community share the same paradigm, they can work on more detailed, concrete problems. Kuhn compared natural science with literature science, and concluded that the reason some disciplines, such as philosophy or sociology, do not have detailed studies is that the researchers in the disciplines still quarrel over the fundamental problems in the field.¹³⁰ The energy and effort of members in those disciplines have been expended resolving those fundamental issues and there is frequently none left for resolving more concrete problems. In other words, the reason the medical profession has so successfully found remedies for so many diseases is that its members share the same biomedical paradigm. From this perspective, professionalism in medical licensing laws supports normal science in the medical profession.

Medical licensure has other benefits as well. For example, without medical licensing laws, it would be difficult to promote medical professionalism within the medical profession. This is the same as the American Bar Association's requirement that every law student study legal ethics: it is included in the requirements of education and training, the bar examinations, and the professional discipline statutes that execute and reinforce legal ethics.

A negative result of the professional paradigm in health law is that it obstructs mutual learning among conventional and CAM disciplines. The monopoly over conventional modalities not only encourages physicians to research and utilize phenomena under the biomedical paradigm, but also forces them to ignore phenomena that do not fit the paradigm. The monopoly additionally prevents other groups of healthcare practitioners from utilizing biomedical modalities in ways different from those of the medical profession. This phenomenon indicates that medical licensure functions like a patent, which encourages innovations by granting owners a legal monopoly to utilize specific innovations. Antitrust concerns are raised when protection prevents the competitors of patent owners from making follow-on innovations. Patent law resolves this dilemma by setting limits on patents, and subjecting patents to antitrust scrutiny. However, such limits and antitrust scrutiny do not exist in medical licensing laws, since state actions are exempted from scrutiny.¹³¹ Thus, healthcare licensing laws ought to be designed differently from the current

¹³⁰ See, e.g., KUHN, *supra* note 85, at viii.

¹³¹ Melissa K. Stull, Annotation, *What Constitutes "State Action" Rendering Public Official's Participation in Private Antitrust Activity Immune from Application of Federal Antitrust Laws*, 109 A.L.R. FED. 758, § 4[a] (1992).

orthodox structure. The most important aspect is not to segregate, but rather to encourage overlapping scopes of practice among healthcare professions.

In countries tolerating CAM or recognizing medical pluralism, CAM healers can absorb some features of biomedical practice into their practices.¹³² For example, Ayurvedic physicians in South Asia, and Chinese medical doctors in China, commonly prescribe biomedical drugs.¹³³ Allopathic physicians in these countries learn CAM, and CAM physicians learn and/or practice allopathic medicine as well. Such integration and borrowing do not have to be regarded as evidence of biomedical hegemony. On the contrary, such phenomena can be seen as a sign of biomedicine's weakness: the medical professions and the governments in these individual countries cannot prevent the leakage of biomedical technology, knowledge, and practice from health care institutions and the biomedical academy.¹³⁴ If laws regulating CAM disciplines were flexible and open to innovation, then CAM professionals would be capable of integrating their disciplines with biomedicine and other CAM disciplines, thus replacing physicians as the gatekeepers for patients to access integrative medicine. Such competition between physicians and CAM professionals would encourage all healthcare professionals to look at other disciplines with open eyes, produce more evidence on CAM, and achieve better understandings of CAM theories. Ultimately, such mutual wisdom and knowledge would produce theories that could coherently explain both conventional medicine and CAM. It is for this reason that this Article proposes that the paradigms of free-market commercialism and professionalism both be applied in regulating CAM professionals.

B. Professions as Competing Entities

Competitive professionalism, or competitive self-regulation,¹³⁵ indicates that there is competition among self-regulated professions.¹³⁶ Each profession has a self-regulatory agency to set its own ethical codes, standards of care, and membership requirements. Just like competitors in a market, professions may learn from each other and cooperate with other professions to treat patients together. Self-regulation gives professions characteristics like those of separate entities, with title protection as their trademarks. Although more flexible scopes of practice might encourage professionals to provide modalities inconsistent with the philosophies of their professions' disciplines, a profession's self-regulation will not permit member professionals to exercise unlimited scopes of practice because that would confuse the profession's identity in the eyes of consumers. The same phenomenon occurs in the medical profession, where physicians do not provide all

¹³² SARAH CANT & URSULA SHARMA, A NEW MEDICAL PLURALISM? ALTERNATIVE MEDICINE, DOCTORS, PATIENTS AND THE STATE 178 (1999).

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ Anthony Ogus, *Rethinking Self-Regulation*, 15 OXFORD J. LEGAL STUD. 97, 102 (1995).

¹³⁶ *Id.* at 107.

spectra of modalities but only conventional treatments. As a result of the competitive force among professions, a self-regulatory body would allow some modalities that were not consistent with the profession's paradigm to be provided under specific conditions. This is fundamentally the same as a regulatory body of the medical profession setting up guidelines for physicians to provide CAM.¹³⁷ Since certification programs can operate as a form of brand name or trademark identification, certification laws can also regulate CAM disciplines.¹³⁸ In addition, governments could create public agencies to supervise the self-regulatory agencies, disseminate information regarding the performance of those agencies to the public (such as the nature of their professions' practices or the volume of malpractice complaints against the members of each profession), or encourage mutual learning and cooperation among professions.

The application of competitive professionalism to health laws can take place in two forms: voluntary self-regulation and statutory self-regulation. Under voluntary self-regulation, unlicensed practitioners organize themselves, with regulatory bodies and codes of conduct. There is no statutory protection for their titles.¹³⁹ Under statutory self-regulation, the state passes a law to delegate its police power to a professional self-regulatory organization.¹⁴⁰ Because the question of what should be credentialed by statute is difficult to answer, voluntary self-regulation is more common than statutory regulation in CAM.¹⁴¹ However, higher-risk CAM modalities are more likely to be subject to statutory regulation.¹⁴²

An Australian scholar, Anne-Louise Carlton, listed six key principles of effective self-regulating professions. First, the value of protecting public interest should take precedence over professional interest. Second, certification, disciplinary, and complaints-handling procedures should be just and free from bias. Third, there should be mechanisms to keep records of complaints and other personal information confidential. Fourth, self-regulatory bodies should have effective sanctions and accessible appeal mechanisms. Fifth, there should be external scrutiny from other professions to ensure the transparency and credibility of self-regulatory systems. Finally, there should be some external support from

¹³⁷ FED'N OF STATE MED. BDS., MODEL GUIDELINES FOR THE USE OF COMPLEMENTARY AND ALTERNATIVE THERAPIES IN MEDICAL PRACTICE § III (2002), available at http://www.fsmb.org/pdf/2002_grpol_Complementary_Alternative_Therapies.pdf.

¹³⁸ Timothy Stoltzfus Jost, *The Necessary and Proper Role of Regulation to Assure the Quality of Health Care*, 25 HOUS. L. REV. 525, 546 (1988).

¹³⁹ John Lunstroth, *Voluntary Self-Regulation of Complementary and Alternative Medicine Practitioners*, 70 ALB. L. REV. 209, 236 (2006).

¹⁴⁰ *Id.*

¹⁴¹ MINISTERIAL ADVISORY COMM. ON COMPLEMENTARY & ALT. HEALTH, COMPLEMENTARY AND ALTERNATIVE MEDICINE: CURRENT POLICIES AND POLICY ISSUES IN NEW ZEALAND AND SELECTED COUNTRIES 3, available at <http://skeptics.org.nz/download/CAMDiscussionDocument.pdf>.

¹⁴² *Id.*

the government and industry for the self-regulatory systems.¹⁴³

V. CONCLUSION: LICENSING LAWS FOR MEDICAL PLURALISM AND INTEGRATIVE MEDICINE

Although perspectives on the rise of CAM in modern societies vary, most commentators on CAM agree that states should actively take part in integrating CAM with MSM in their healthcare systems. Should MSM physicians be the only drivers of such integration? Perhaps not. Historically, the boundaries between orthodox medicine and CAM have been dynamic and have changed occasionally, and so have the boundaries of CAM traditions. Although practitioners treat patients based on different theories of knowledge, they treat the same human bodies. The reality is that the paradigms of medical knowledge are human-made and can be changed with human effort. Thus, reasonable legislative policies should extend the scopes of practice of CAM practitioners to overlap with at least a significant portion, if not all, of MSM. If MSM physicians in Taiwan are allowed to integrate complementary medicine, such as acupuncture, into their practices, why is it unthinkable for TCM practitioners to integrate MSM into their practices? The knowledge of TCM should not be kept frozen, like a living fossil, while MSM receives full developmental funding from the public sector. Rigid licensing laws that describe the scope of practice of CAM practitioners in detail restrict the development and innovation of CAM theories. Therefore, this Article suggests that the modalities of healthcare should be defined as provider-neutral, meaning that not only would the current biomedical setting be able to incorporate TCM, but TCM doctors could also integrate modalities that traditionally have belonged to biomedicine and even to other CAM traditions into their practices. If more CAM practitioners are licensed, and their competence is assured, the same freedom to choose modalities should be applied to their professions as well. The legislative scopes of practice of healthcare professions should be designed to permit multiple types of integration. This is the true meaning of medical pluralism: fair competition among health care professions.

Expanding the scopes of practice of CAM providers (in the case of Taiwan, TCM providers) raises the question of whether CAM providers would lose their professional identities, because some of them likely would offer primarily MSM services rather than CAM itself. Nonetheless, such a concern is unlikely to materialize in most CAM professions. Much of the success of CAM originates in the ways in which it differs from MSM.¹⁴⁴ If CAM practitioners provided the same treatments as MSM doctors, patients would visit them for cheaper services, rather than for alternative treatments, which are at the heart of the CAM professions' paradigms. In each CAM tradition, there are many practitioners who insist on adhering to the pure forms of CAM practice—just as

¹⁴³ ANNE-LOUISE CARLTON, *Occupational Regulation of Complementary Medicine Practitioners*, in CRIME IN THE PROFESSIONS 185, 190 (Russell G. Smith ed., 2002).

¹⁴⁴ *Id.* at 186-88.

many in the MSM profession resist any CAM adulteration. Furthermore, other mechanisms, such as regulation and malpractice litigation, can assist CAM groups in developing their professional identities by requiring a theoretical consistency across their healthcare practices. The definitions of CAM in licensing law should not only help patients to identify the treatment methods of CAM practitioners, but also ensure that the CAM services and MSM modalities provided are theoretically consistent. In order for doctors to offer more services in a competitive health care market, expanded scopes of practice and competitive forces can provide strong incentives for MSM physicians and CAM providers alike to explain the operational processes of CAM therapies in the human body.

In such competitive markets, professionalism would play a significantly more important role than in current systems. Broadening scopes of professional practice would require stronger professionalism standards, to ensure the quality of the health care provided by CAM physicians, which could not be guaranteed entirely through the market mechanism. Professional self-regulation could standardize the education and training of providers, and practice guidelines could help delineate standards of practice, which are essential for a stable malpractice regime. Professional discipline could exclude incompetent providers from the health care market. With overlapping scopes of practice, professionalism in CAM groups would not be an obstacle to the decentralization of health care service, but a force for enhanced competition. Finally, patients would benefit by advances in integrative medicine, which cannot be achieved under separate but unequal regulations.