

On the Cultural Genes and Localized Dissemination of TCM Acupuncture and Moxibustion in the US

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Based on the theory of cultural genes, this paper decodes the cultural gene system of Traditional Chinese Medicine (TCM) acupuncture and moxibustion and explores the dissemination, adaptation and reshaping pathways of TCM acupuncture and moxibustion in the United States (US) by analyzing the modern medical translation of its core cultural genes, the adaptive adjustment of technical cultural genes, and the institutional support of environmental cultural genes. This study provides insights for the inheritance and protection of intangible cultural heritage and offers references for enhancing the influence of Chinese medical civilization in the world.

Keywords: TCM acupuncture and moxibustion, cultural genes, US, localized dissemination

Introduction

As the brilliant crystallization of China's outstanding traditional culture and a vital carrier for the global dissemination of Chinese culture, Traditional Chinese Medicine (TCM) acupuncture and moxibustion integrates scientific and cultural attributes. In 2010, TCM acupuncture and moxibustion was officially inscribed on the United Nations Educational, Scientific and Cultural Organization (UNESCO) Representative List of the Intangible Cultural Heritage of Humanity, not only marking the international community's high recognition of the therapeutic and cultural value of TCM acupuncture and moxibustion, but also highlighting its legitimacy and discourse power as an important carrier of Chinese civilization on a global scale. The cultural value and intangible cultural heritage status of TCM acupuncture and moxibustion lay the foundation for this study, and the practical needs and challenges in its cross-cultural dissemination underscore the necessity of this research.

Decoding Cultural Genes of TCM Acupuncture and Moxibustion

The Theory of Cultural Genes

The theory of cultural genes draws on biological genetics concepts to view culture as an organic system capable of replication, adaptation, and evolution. The term "meme", a unit of cultural transmission or imitation analogous to biological genes (Dawkins et al., 2021), was first proposed by British Biologist Richard Dawkins in his work *The Selfish Gene* (1976). Liu Changlin (1988) believes that cultural genes are the underlying psychological structure and ways of thinking that have had a profound impact on the culture and history of a

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nation.

Huang Yonglin (2024) regards cultural genes as a three-tier structure: core cultural genes, formal cultural genes, and environmental cultural genes. Core cultural genes are the most stable elements, and as the foundational components that sustain cultural identity, they determine the essential attributes of a culture that endow it with unique developmental characteristics. Formal cultural genes possess both relative stability and dynamics, and they represent the concrete manifestations. Environmental cultural genes refer to natural, social habitats and diversified cultural contexts, and they exert a pivotal influence on the inheritance and variation of cultural genes. The three elements interact to drive cultural inheritance and development: Core cultural genes sustain cultural identity, formal cultural genes enable cross-temporal and cross-spatial transmission and environmental cultural genes provide survival conditions for culture, and only their synergistic cooperation can realize the continuous inheritance and innovation of culture amid social changes.

On the basis of Huang Yonglin's theory of cultural genes and in light of the inherent characteristics of TCM acupuncture and moxibustion, this paper further decodes the cultural genes of TCM acupuncture and moxibustion into three dimensions: core genes, technical genes, and environmental genes.

Decoding Cultural Genes of Acupuncture and Moxibustion

Core cultural genes of acupuncture and moxibustion culture: Treatment based on syndrome differentiation and the theory of “yin and yang” and five elements. Treatment based on syndrome differentiation and the theory of “yin and yang” and five elements constitute the core cultural genes of TCM acupuncture and moxibustion, and together they form the fundamental basis for the therapeutic efficacy and the determinant of clinical diagnosis and treatment direction. As the theoretical cornerstone of TCM acupuncture and moxibustion, the theory of “yin and yang” and the five elements, together with treatment based on syndrome differentiation that adapts to specific clinical conditions, jointly underpins the scientificity and effectiveness of acupuncture diagnosis and treatment—neither can be dispensed with.

The theory of “yin and yang” and five elements, as the core cultural gene of TCM acupuncture and moxibustion, holds that all things in the world are formed by the interaction and mutual restriction of the five basic elements including metal, wood, water, fire, and earth, and it interprets the changes and development of all things through the waxing and waning as well as the balance of the two forces of “yin and yang”. In TCM theory, physical disorders are essentially attributed to “yin and yang” imbalance. Such a balance is not a static and fixed state. Instead, it is dynamically maintained by virtue of the multiple inherent characteristics of “yin and yang”. In actual acupuncture and moxibustion treatment, by distinguishing the “yin and yang” attributes of symptoms, and precisely locating the “yin and yang” areas where the pathogenic factors are located, and then selecting corresponding acupoints in line with the principle of “yin-yang” correspondence, needling interventions are ultimately applied to strengthen healthy qi and eliminate pathogenic factors, which restores the “yin-yang” balance of qi, blood, meridians, and collaterals as well as zang-fu organs in the human body and achieves targeted disease treatment effectively.

Technical cultural genes of acupuncture and moxibustion culture: The practical transformation of core cultural genes. The core cultural gene concepts of acupuncture and moxibustion culture are not abstract theoretical expressions, but are concretely materialized through technical cultural genes. The technical cultural genes of acupuncture and moxibustion mainly include acupuncture needles, needling techniques, moxibustion methods, and moxibustion tools. TCM acupuncture and moxibustion possesses a dual nature of culture and

science, and constitutes a unique medical cultural system. The two techniques—needling and moxibustion—are traditional medical practices formed through practical application based on the primitive cultural ecological view of man-nature harmony (Xiao, 2016). Guided by core cultural genes, the technical cultural genes of acupuncture and moxibustion have evolved over thousands of years, shaping needle shapes and treatment methods that adapt to the needs of different eras and cultural contexts. This has also laid the foundation for technological adaptation in its cross-cultural dissemination.

Environmental cultural genes of acupuncture and moxibustion culture: Policy support and cultural ecological contexts. Environmental cultural genes of TCM acupuncture and moxibustion mainly include two major parts, policy support and cultural ecological context. Specifically, policy support covers the formal legal and policy environment as well as the comprehensive education and training system, and the specific contents of education and training include book translation, academic education, and the traditional apprenticeship system, all of which are important components of policy support for TCM acupuncture and moxibustion. On the other hand, cultural ecological contexts cover a variety of specific aspects, including academic exchange activities carried out by relevant institutions, professional medical institutions that provide acupuncture and moxibustion services, and various cultural events related to acupuncture and moxibustion, such as acupuncture museums, special cultural weeks, and cultural blocks with acupuncture characteristics.

The theory of cultural genes provides a critical analytical perspective for exploring the dissemination laws of acupuncture and moxibustion: Core cultural genes anchor the essential attributes of acupuncture culture, technical cultural genes materialize and practice the core theoretical concepts, and environmental cultural genes, as an important external guarantee, provide solid external ecological support for the smooth dissemination and long-term inheritance of TCM acupuncture and moxibustion. Applying the theory of cultural genes to specifically analyze the localization development in the United States (US) and explore suggestions for the inheritance of TCM acupuncture and moxibustion in the future, as well as deeply excavating the contemporary value of acupuncture and moxibustion cultural genes, plays a very important role in building a strong cultural nation.

Localization of Acupuncture and Moxibustion in the US

Translation of Core Cultural Genes Into Modern Medical Discourse

The core cultural genes of TCM acupuncture and moxibustion have not been abandoned in the process of dissemination in the US. Instead, they have undergone filtration through scientific discourse, cultural contexts, and philosophical thinking, thus realizing the translation and reconstruction of their discourse system. Physicians with a Western medical background, when interpreting and applying TCM acupuncture and moxibustion therapy, often resort to modern scientific discourse to explain its mechanism of action, in order to enhance its legitimacy and credibility within the medical paradigm of the region. New interpretive approaches have been developed for the core cultural genes of TCM acupuncture and moxibustion, yet they have not deviated from their fundamental philosophical roots. For example, qi is translated as vital energy (life energy), the functions of zang-fu organs are analogized using physiological and anatomical terminology, and meridians and collaterals are described as bioelectric channels or neurovascular pathways. In the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) examination in the US, “yin and yang” disharmony is even translated as homeostatic imbalance. In addition, the functions of zang-fu organs are analogized through physiological models, and treatment based on syndrome differentiation has become more syndromic and standardized. These adaptations are designed to fit the cognitive framework of biomedicine. In this process, the core gene retains the

philosophical core of holistic view and dynamic regulation, and gives rise to many new interpretations. These core concepts form the cornerstone of cross-cultural understanding, indicating that despite changes in language and interpretative models, the core gene remains the foundation and fundamental value of cultural transmission. The core gene exerts a decisive influence on the cultural identity and clinical functional realization of acupuncture and moxibustion.

Adaptive Innovation of Technical Cultural Genes

In the process of TCM acupuncture and moxibustion spreading to Western countries, such as the US, the development of acupuncture needles has further highlighted the extension of the core cultural gene of treatment tailored to the individual—to cater to the American public's lower pain tolerance and higher privacy demands, acupuncture needles have evolved toward ultra-fine and minimally invasive designs, with ultra-fine filiform needles becoming the mainstream to reduce pain during needling. Furthermore, the rapid popularization of micro-needle systems, especially ear acupuncture instruments, is highly compatible with the privacy needs of the American public due to the characteristics of concentrated ear acupoints, no need for body exposure, and convenient operation. This transformation method continues the core gene of “holistic view” by “stimulating ear acupoints to regulate the meridians of the whole body”. To meet the standardization requirements of the US healthcare system, American acupuncture institutions have promoted the procedural standardization of needling techniques. This adaptive process stands as a typical embodiment of the localized variation of technical cultural genes under the guidance of core cultural genes.

Moreover, in course of TCM acupuncture and moxibustion's dissemination to the US, the technologization trend of technical cultural genes has become increasingly prominent. Electronic acupuncture stimulators, infrared acupoint detectors, and other related medical devices have been gradually promoted and popularized among relevant medical institutions and practitioners in the country—some institutions specialized in TCM acupuncture and moxibustion research and application have developed “intelligent acupuncture-assisted systems” that can effectively monitor the skin resistance of patients through high-precision sensors, so as to assist practitioners in achieving the accurate localization of acupoints in clinical operations.

These intelligent systems not only lower the operational threshold for acupuncture and moxibustion practice, but also enhance the technological credibility of the therapy, thereby further boosting the trust and acceptance of American patients in TCM acupuncture and moxibustion.

Institutional Support of Environmental Cultural Genes

Specifically speaking, legislation, education, cultural contexts, and other related key elements provide effective and systematic institutional support for the inheritance and development of TCM acupuncture and moxibustion in the US, and these elements together constitute the environmental cultural genes for the localized dissemination of TCM acupuncture and moxibustion in the country. These environmental cultural genes not only effectively safeguard the core values of TCM acupuncture and moxibustion and ensure that its inherent cultural connotation and therapeutic essence are not lost, but also, through adaptive adjustments tailored to local conditions, enable it to take root firmly and develop sustainably in the diversified medical ecosystem of the US.

In terms of legislation, as of 2024, 47 out of the 50 US states plus Washington D.C. have implemented legislative regulation of acupuncture (Tian, 2024). This ensures the legality and safety of acupuncture practice in terms of professional qualifications, scope of practice, and administrative procedures, thus providing a normative framework for the cultural genes of TCM acupuncture and moxibustion, and guaranteeing their stable inheritance

through unified professional practice standards. US legislation is gradually expanding the healthcare coverage for acupuncture and moxibustion. Medicare covers acupuncture for chronic low back pain, and *The Affordable Care Act* has promoted the inclusion of acupuncture as a benefit in some states. This targeted coverage not only aligns acupuncture with local clinical needs (e.g., pain management), but also expands its dissemination through cost-sharing mechanisms

Acupuncture education and training in the US has completed its localization process. As of September 2024, there are 47 colleges of acupuncture and Oriental medicine accredited by the Accreditation Commission for Acupuncture and Herbal Medicine (ACAHM) in the US (Gong, 2025), which offer Master's and doctoral degree programs. Relevant trade associations, such as the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM), play a crucial role in the standardization of acupuncture education and training. Different acupuncture schools in the US are based on distinct fundamental theoretical frameworks, and two major camps have gradually taken shape through their academic exchanges and collisions. One is the school based on traditional TCM theories ("yin and yang", the five elements, zang-fu organs, and meridians and collaterals), represented by the TCM acupuncture school, including Japanese and Korean acupuncture schools; the other major category is the school firmly rooted in and based on modern biological theories, including but not limited to anatomy, physiology, and pathology. Among all the schools belonging to this category, the medical acupuncture school and the physical medicine acupuncture school are regarded as the most representative and typical ones, fully reflecting the characteristics of this school that takes modern biological theories as its foundation (Wang & Zhang, 2023).

In terms of cultural ecological promotion, professional organizations, such as the American Association of Acupuncture and Oriental Medicine (AAAOM) have promoted the establishment of Acupuncture and Oriental Medicine Day on October 24—a national observance designed to raise public awareness of and attention to acupuncture and traditional Oriental medicine. Professional educational institutions and relevant cultural organizations in many regions across the US usually organize a series of diverse activities, including free medical consultations, professional health lectures, on-site technical demonstrations, academic seminars, and immersive traditional cultural experience activities. These activities are open to local communities and provide community residents with opportunities to experience acupuncture treatment and receive professional health consultation services. Over time, Acupuncture and Oriental Medicine Day has gradually become an important cultural and health communication platform that possesses broad social impact and plays a positive role in the field of integrative medicine in the US.

Overall, the comprehensive institutional support of environmental cultural genes, from legislative normalization and educational localization to cultural ecological promotion, has created a favorable external ecological environment for the localized dissemination of TCM acupuncture and moxibustion in the US. This multi-dimensional support not only consolidates the institutional foundation for the inheritance of its core and technical cultural genes in a heterogeneous context, but also continuously enhances the public recognition and academic acceptance of TCM acupuncture and moxibustion in the US, laying a solid social foundation for its long-term localized development.

Suggestions for the Dissemination of TCM Acupuncture and Moxibustion in the US

Balancing Authenticity and Excessive Westernization

In the dissemination of TCM acupuncture and moxibustion, it is necessary to adhere to its dual attributes

and avoid prejudice and alienation of essence. The core should be to balance the original authenticity of Chinese civilization in TCM acupuncture and moxibustion with excessive westernization. As the cultural soul of the practice, authenticity requires moderate adaptation to the Western context rather than alteration of its core essence. Currently, in the US, it is still classified as complementary medicine. However, with the accumulation of clinical evidence, acupuncture and moxibustion is gradually being included in state health insurance plans, and the right to independent practice is continuously expanding. Its validity is gradually being recognized.

Empowering Technical Genes With High-Tech

The gene of TCM acupuncture and moxibustion can achieve upgrading of traditional technique through technology empowerment. A new generation of acupuncture needles has been developed based on intelligent sensing technology: While retaining the traditional morphology of filiform needles, these needles integrate algorithmic analysis to convert diagnostic data into visual indicators. This shift from empirical judgment to data-based support enhances the “validity” of acupuncture and moxibustion through the use of data. On the basis of retaining core genes, such as “harmonizing qi and blood”, cultural adaptation is achieved through technology empowerment. By synchronizing with augmented reality (AR) technology, the safety and precision of acupuncture and moxibustion techniques can be enhanced, thereby strengthening the practical adaptability of the technical gene.

Fostering a Favorable Cultural Environment

To overcome the dilemma of “cultural homophobia” and “cultural otherness” caused by the positioning of “cultural output” in the dissemination of TCM acupuncture and moxibustion in the US, it is necessary to bridge cognitive gaps by establishing acupuncture and moxibustion cultural exchange platforms and conducting cross-cultural thematic discussions, thereby promoting the adaptation of acupuncture and moxibustion to American local culture; secondly, we should cultivate high-level translators with both professional expertise and cross-linguistic competence to overcome language barriers. In addition, we should strengthen the publication of academic works and popular books on acupuncture and moxibustion in foreign languages, in order to promote the standardized dissemination and academic recognition of acupuncture and moxibustion in the US, thereby creating a cultural environment of inclusiveness and mutual learning.

Conclusion

The dissemination and localization of TCM acupuncture in the US stand as a typical process of the adaptation and reconstruction of its cultural genes in a heterogeneous environment. In the future efforts should be centered on “cultural confidence”, supported by “technological advancement”, and facilitated by “cross-cultural integration”. This avoids the loss of cultural essence caused by cultural inferiority and prevents communication barriers arising from cultural arrogance. At the level of core cultural genes, it is imperative to strike a balance between cultural authenticity and excessive Westernization which is needed. While promoting interpretation in specific contexts, try to retain the fundamental philosophical essence. At the level of technical cultural genes, high and new technologies can be leveraged for technological empowerment to upgrade the vitality of traditional techniques, thus further enhancing the scientific rigor of TCM acupuncture and moxibustion. At the level of environmental cultural genes, cross-cultural integration needs to be strengthened: Celebrity influence can be utilized to boost publicity and recognition, communication and collaboration with Western medical communities and government departments can be enhanced, and an inclusive and mutual learning cultural

environment can be forged through thematic seminars, transnational training, and talent development initiatives.

Through the synergy of core, technical, and environmental cultural genes, TCM acupuncture and moxibustion—an intangible cultural heritage of humanity—can be advanced from a complementary medicine to an important component of global integrative medicine, ultimately achieving international recognition of the value of acupuncture and moxibustion in traditional Chinese medicine, promoting the global dissemination and development of Chinese medical civilization, contributing to the diversity and prosperity of the global medical and cultural system

References

- Dawkins, R., Lu, Y. C., Zhang, D. Y., Chen, F. J., Luo, X. Z., Ye, S., & Chen, M. Y. (2021). *The selfish gene* (40th anniversary expanded ed.). *Electricity & Culture Today*, 9(9), 104.
- Gong, C. Z. (2025). Development and reversal of acupuncture education in the US. *Chinese Archives of Traditional Chinese Medicine*, 43(6), 9-23.
- Huang, Y. L. (2024). The structural characteristics, protection, and utilization of the cultural genes of intangible cultural heritage. *Journal of Minzu University of China (Philosophy and Social Sciences Edition)*, 51(2), 114-123. doi:10.15970/j.cnki.1005-8575.2024.02.008
- Liu, C. L. (1988). Cosmic genes, social genes, and cultural genes. *Philosophical Trends*, 26(11), 29-32.
- Tian, H. H. (2024). Opportunity, challenge and inspiration faced by overseas spread of Traditional Chinese Medicine acupuncture and moxibustion: Taking the United States of America as an example. *Guangxi Medical Journal*, 46(10), 1445-1449.
- Wang, D., & Zhang, Z. (2023). International dissemination of TCM Acupuncture Theory from the emergence and development of acupuncture schools in the United States: Taking TCM acupuncture school and medical acupuncture school as examples. *Medicine and Philosophy*, 44(8), 64-67.
- Xiao, M. (2016). Protection and inheritance of intangible cultural heritage: Cultural analysis of traditional Chinese Medicine Acupuncture from the perspective of anthropology. *Journal of Original Ecological National Culture*, 8(1), 117-125.