Advances in Social Science and Culture
ISSN 2640-9682 (Print) ISSN 2640-9674 (Online)
Vol. 8, No. 2, 2026
www.scholink.org/ojs/index.php/assc

Original Paper

Constructing Pulse Diagnosis: Western Medicine and the Transformation of Chinese Pulse Knowledge in Modern

Yancheng Zhu[1]

[1] Zhejiang Normal University, Jinhua, Zhejiang, China

Received: December 29, 2025 Accepted: February 27, 2026 Online Published: March 10, 2026

doi:10.22158/assc.v8n2p48 URL: http://dx.doi.org/10.22158/assc.v8n2p46

Abstract

Pulse diagnosis, a hallmark diagnostic method of traditional Chinese medicine, took its modern conceptual form during the fusion with Western medicine in the 19th and early 20th centuries. This article explores how Western doctors and Western-trained Chinese physicians redefined the core meaning of pulse diagnosis during this period of medical transformation. Early Western observers were curious about TCM pulse diagnosis and compared it with pre-modern European medical traditions. However, with the rise of modern anatomy and experimental medicine, missionary doctors gradually regarded it as an "unscientific" method. By the early 20th century, Western-trained Chinese physicians adopted a pragmatic approach, critiquing the fundamental theories of TCM while reinterpreting pulse diagnosis using modern physiology and medical instruments. This article argues that the modern understanding of pulse diagnosis was influenced not only by scientific scrutiny but also by factors such as shifts in medical authority, cross-cultural medical exchange, and institutional power.

Keywords

pulse diagnosis, medical modernization, Sino-Western medical encounter

1. Introduction

Since the mid-19th century, Western medicine has been introduced into China, profoundly reshaping the landscape of Chinese medicine. Missionaries, hospitals in treaty ports, and modern medical education institutions have gradually introduced new frameworks of anatomy, physiology, and experimental science. These changes have overturned the epistemological foundation of traditional Chinese medicine and sparked fierce debates about the legitimacy and future direction of indigenous Chinese medical knowledge.

In this context, pulse diagnosis has a unique symbolic significance in these medical debates. As the core pillar of the TCM diagnostic system, pulse diagnosis mainly relies on tactile perception, clinical

experience, and interpretive reasoning. Unlike laboratory tests or anatomical observations, pulse diagnosis focuses on subtle physiological sensations that are difficult to quantify or verify directly through experimental methods. For this reason, Western clinicians often regard it as a typical example of the "unscientific" nature of TCM in their eyes (Hsu, 2000). However, pulse diagnosis also carries profound cultural connotations in traditional Chinese medicine. Since classic works such as the Huangdi Neijing and Nanjing Medical Classic established the diagnostic framework of "inspection, auscultation, inquiry, and touch," pulse diagnosis has been regarded as an important method for identifying the internal condition of the human body. By palpating the radial artery in the wrist, clinicians interpret changes in the pulse as indicators of blood circulation, organ function, and yin-yang balance (Amber & Babey-Brooke, 1966).

It is precisely this dual identity—both a clinical diagnostic method and a core cultural symbol—that makes pulse diagnosis a focal point of exchange between Chinese and Western medicine. Missionary doctors dismissed it as unscientific, Chinese medical reformers attempted to defend or reinterpret pulse diagnosis, while Western-educated Chinese doctors strived to translate its core logic into the language of modern physiology. Thus, the image of pulse diagnosis has continuously evolved through the complex interaction of scientific discourse, cultural translation, and institutional reform.

This article traces how pulse diagnosis was described, critiqued, and reconstructed from the mid-19th century through the 1930s. Centered on the written works of Western missionary clinicians and Western-trained Chinese doctors, it unpacks how the core meaning of pulse diagnosis shifted amid the wider transformation of medical knowledge in modern China. Rather than framing pulse diagnosis as a static, unchanging tradition, this article argues that its modern image was actively constructed through ongoing cross-cultural negotiation and shifting power dynamics of medical authority.

2. The Landscape of Medicine in China: Late Nineteenth to Early Twentieth Century

2.1 The Dissemination of Western Medicine and the Construction of a New Knowledge System

The spread of modern Western medicine in China began in the mid-19th century, with Christian missionaries as its main medium of dissemination. From the 1820s onwards, institutions including the London Missionary Society and the Presbyterian Mission Society of America established clinics in treaty ports along the Chinese coast and took medical practice as the core means of spreading the gospel. Important milestones in this early stage included the clinic established by Robert Morrison, the Guangzhou Hospital (Boer Hospital) led by Peter Parker, and the Renji Hospital founded by Benjamin Hobson in Shanghai (Dong, 2008). Although early Western medicine had not completely broken free from the traditional humoral theory framework, the rapid development of anatomy, pharmacology, and pathology steadily guided it toward a scientific paradigm based on systematic experiments and observational research. The introduction of Western medicine into China not only brought new clinical techniques and treatment methods, but also triggered a fundamental change in the original medical knowledge system, establishing "modern science" as a new benchmark for judging the legitimacy of

medical practice. The formation of the formal concept of "Western medicine" in the Chinese intellectual community is inseparable from medical translation work. Since the mid-19th century, institutions including the Jiangnan Arsenal, Tongwen Guan, and Guangxuehui have vigorously supported the translation of a large number of Western medical works. The foundational works in this field, such as Benjamin Hobson's Treatise on Medicine (1857), John Kerr's Treatise on Medicine (1871), and John Dugen's Glossary of Medicine (1873), were among the first publications to explicitly use the term "Western medicine" or "Western medicine" in their titles. (Hao, 2005) The role of these translations went far beyond disseminating medical knowledge in China: they formalized and standardized the core terminology of "Western medicine," making it a unified medical system. By the 1880s, the term "Western medicine" was widely used in newspapers, medical textbooks, and academic journals, and was listed alongside similar concepts such as "new medicine" and "scientific medicine." This linguistic shift marked the consolidation of a new knowledge system centered on science, positivism, and rationality in the modern knowledge system of China.

2.2 Pulse Diagnosis: The Epistemological Core of Traditional Medicine

Even as Western medicine gained traction in China, Traditional Chinese Medicine (TCM) retained its status as the dominant medical system across Chinese society, with a theoretical and diagnostic lineage stretching back millennia. Ever since the Inner Canon of the Yellow Emperor (Huangdi Neijing) formalized the four core diagnostic pillars—inspection, listening and olfaction, inquiry, and palpation—pulse diagnosis (qiemai) has stood as the foundational cornerstone of Chinese clinical diagnostics (Yao, 2010). Subsequent canonical texts, including the Classic of Difficult Issues (Nanjing), Pulse Classic (Maijing), and Secrets of the Pulse (Maijue), further systematized the full taxonomy of pulse manifestations, elevating pulse diagnosis from a basic clinical skill to a complete epistemological framework for comprehending the fundamental nature of human life.

Within the TCM epistemological framework, the human body is understood as an integrated, organic whole, defined by the unobstructed circulation of qi and blood, and the dynamic balance of yin and yang. Shifts in pulse characteristics are thus interpreted as outward reflections of these internal vital and physiological processes. By palpating the three positions and nine indicators of the cun-kou (wrist) pulse through tactile assessment, the clinician can discern the excess or deficiency of qi and blood, as well as the functional state of the zangfu (internal organs), and in turn deduce the underlying pathological mechanism of illness. This diagnostic model, rooted in somatic perception and accumulated clinical sensory experience, encapsulates the core philosophical tenets of TCM: the "unity of Heaven and Humanity" and the foundational primacy of qi. In doing so, it forms a knowledge system fundamentally distinct from the experimental rationality that underpins Western medicine.

Yet it was precisely this fundamental epistemological divide that positioned pulse diagnosis as the most symbolically charged flashpoint of conflict during the Sino-Western medical encounter. From the perspective of Western medicine, the interpretation of pulse patterns lacked verifiable, objective benchmarks. For the TCM community, by contrast, this diagnostic model—rooted in hands-on clinical

experience, clinical intuition, and individualized perceptual discernment—could not be easily fit into the rigid logical framework of experimental science. From the 19th century onward, Western onlookers increasingly framed pulse diagnosis as the quintessential symbol of what they deemed the "unscientific" essence of Chinese medicine. Meanwhile, TCM practitioners upheld it as the irreplaceable core of their medical tradition. As a result, pulse diagnosis emerged not only as the central focal point of controversy in Sino-Western medical exchanges, but also as a critical site where cultural cognitive frameworks collided with the power dynamics of knowledge production (Yin, 2007).

2.3 Institutionalization, Political Crisis, and the "Scientization" of Tradition

Even as Western medicine gradually becomes more widespread in China, traditional Chinese medicine (TCM) still maintains its dominant position in Chinese society, with its theoretical and diagnostic traditions dating back thousands of years. Since the Yellow Emperor's Inner Classic formally established the four diagnostic methods of sight, auscultation, inquiry, and palpation, pulse diagnosis has always been the cornerstone of TCM clinical diagnosis (Deng & Cheng, 2000). Subsequent classic works, such as the Nanjing, the Pulse Classic, and the Pulse Secret, further systematized the complete classification of pulse patterns, elevating pulse diagnosis from a basic clinical skill to a complete epistemological framework for understanding the essence of human life.

Under the epistemological framework of TCM, the human body is understood as a complete organic whole, characterized by the smooth flow of Qi and blood and the dynamic balance of Yin and Yang. Changes in pulse patterns are therefore interpreted as external reflections of these internal life and physiological processes. Through palpation, clinicians can perceive the three locations and nine characteristics of the pulse, thereby judging the state of Qi and blood and the functional state of the internal organs, and further inferring the potential pathological mechanisms of diseases. This diagnostic model is rooted in the accumulation of bodily perception and clinical experience, reflecting the core philosophical thought of TCM: the unity of heaven and man and the fundamental position of "Qi". Thus, it formed a knowledge system that is completely different from the experimental rationality upon which Western medicine relies.

However, it is precisely this fundamental epistemological divergence that makes pulse diagnosis the most symbolic point of conflict in the exchange between Chinese and Western medicine. From the perspective of Western medicine, the interpretation of pulse patterns lacks verifiable objective standards. In contrast, for the Chinese medicine community, this diagnostic model based on clinical practice experience, clinical intuition, and individual perception is difficult to incorporate into the rigid logical framework of experimental science. Since the 19th century, Western observers have increasingly regarded pulse diagnosis as a typical symbol of the "unscientific" nature of Chinese medicine in their eyes. At the same time, practitioners of Chinese medicine regard it as an indispensable core of their own medical tradition. Therefore, pulse diagnosis has not only become the focus of controversy in the exchange between Chinese and Western medicine, but also a key place for

the dynamic collision between cultural cognitive frameworks and the power of knowledge production (Yin, 2007).

3. Western Encounters with Pulse Diagnosis: From Contact to Re-evaluation

3.1 Initial Contact and the Shift toward Criticism (17th–19th Century)

The West's first systematic engagement with and observation of Traditional Chinese Medicine (TCM) dates back to the Jesuit missionaries who arrived in China. When Jesuit missionaries first reached China in the late 16th century, Western medicine was still governed by the Galenic medical system. Grounded in Aristotelian natural philosophy and Hippocratic humoral theory, this framework explained disease pathogenesis through the balance of bodily temperament and humors. In this era, Western medicine, much like TCM, depended heavily on long-established theoretical precepts and accumulated clinical experience.

As pulse examination was a core clinical practice shared by both medical traditions, early Jesuit missionaries documented Chinese pulse diagnosis with a notably neutral stance. Matteo Ricci, for example, observed that Chinese physicians' "method of feeling the pulse is similar to ours, and their treatment is quite effective" (Ricci & Trigault, 1983). Across Jesuit written accounts, pulse diagnosis was consistently singled out as a distinctive, highly refined diagnostic method.

By the late 17th century, pulse diagnosis had started to make its way into European intellectual circles via systematic translation work. 1671 saw the translation and publication of the first Chinese text dedicated to pulse theory (Wang & Fu, 1963). Jesuit scholar Michel Boym, who had previously served as royal physician to the Polish court, not only translated core Chinese pulse theories, but also introduced Chinese materia medica and medicinal prescriptions in his treatise Clavis Medica ad Chinarum Doctrinam de Pulsibus (Key to the Medical Doctrine of the Chinese on Pulses). His unpublished manuscripts were later drawn on by German physician Andreas Cleyer, who published Specimen Medicinae Sinicae in 1682 (Kajda ń ski, n.d.). This volume included excerpts from foundational TCM classics, including the Secrets of the Pulse, Pulse Classic, Classic of Difficult Issues (Nanjing), and Inner Canon of the Yellow Emperor (Huangdi Neijing). English physician John Floyer took inspiration from these translated works, undertaking an early attempt to synthesize Chinese and Western clinical experience of pulse diagnosis (Han, n.d.). It is clear that, within the 17th century intellectual landscape, the European medical community retained a notable degree of openness toward Chinese pulse diagnosis.

This open stance shifted dramatically by the late 18th century, however, as Western attitudes toward Chinese pulse diagnosis began to split sharply. George Thomas Staunton, a member of the Macartney Embassy to China, documented a stark example of this shift during his travels: in Zhoushan, he observed a Chinese physician who "asked no questions about the symptoms or origin of the disease," but instead "sat with his eyes fixed... regarding nothing but the pulse," making a diagnosis exclusively

through pulse palpation. Staunton took a deeply critical view of this practice, stressing what he saw as its rigid, mechanical, and one-sided nature.

Conversely, the British physician Dr. Gillan, while treating the official Heshen, used pulse diagnosis but commented, “Europeans do not require so much time to feel the pulse” (Staunton & Ye, 1997). This remark suggests that while Western physicians of the time did not completely reject pulse diagnosis, they emphasized a practice distinct from the Chinese method. It is worth noting that the traditional “Four Examinations” of Chinese medicine place equal weight on inspection (wang) and inquiry (wen) alongside palpation (qie); Staunton’s account evidently failed to accurately grasp this comprehensive diagnostic system.

Entering the nineteenth century, sinologists and their medical partners gradually institutionalized their criticism. Studies by Jean-Pierre Abel-Rémusat and François-Albin Lepage questioned Chinese pulse theory. Their views subsequently sparked discussions in journals such as the Medical Times and the Boston Medical and Surgical Journal, alongside anonymous articles in popular publications like the Indo-Chinese Gleaner. During this period, pulse diagnosis transformed into a specific “object of medical criticism.”

Concurrently, criticism from medical missionaries became increasingly strident. Research by Huang Wenjiang points out that Benjamin Hobson, active in China from the 1830s to the 1850s, leveled the harshest critiques against pulse diagnosis among all Chinese medical theories. He bluntly stated: “The Chinese not only do not understand blood circulation, but they are also unclear about the cause of the pulse—they are completely ignorant of the heart’s pumping function and the conductive role of the arteries” . In his Treatise on Physiology (Quanti Xinlun), Hobson further claimed that William Harvey’s seventeenth-century theory of blood circulation had thoroughly superseded Chinese pulse diagnosis, emphasizing that this view was “universally considered correct” (Wong, 2024). This assertion displayed the confidence of Western missionaries in their own knowledge, while also reflecting their disregard for the internal diversity of Chinese medicine.

It is important to note that missionary and Western medical practice in the mid-nineteenth century was not “modern scientific medicine” in the contemporary sense. Bacteriology had not yet been popularized, and humoral theory and holistic medicine still prevailed in the West. Consequently, pulse theory did not immediately become invalid in the Western medical context but persisted in diagnostic practice for a long time (Rosenberg & Vogel, 1980).

After the Opium Wars, as the disparity in power between China and the West widened, missionary attitudes turned further toward negation. William Lockhart criticized pulse classifications as “endless and mostly distinct from reality” (Lockhart, 1861). Hobson deemed Chinese medicine “confused and full of errors,” lacking scientific understanding of circulation, cardiac function, and even the brain (Hobson, 1857). John Dudgeon argued: “Reading Chinese pulse texts, they speak of five viscera (zang) and six bowels (fu) and twelve meridians. Counting the organs yields eleven, which does not match the number twelve. Chinese medicine forces connections... causing endless dispute and speculation... it is

nothing but forced analogies and arbitrary judgments, misleading future generations" . He further contended that the division of the pulse into three positions (cun, guan, chi) on two hands creates six sections; "if diagnosing diseases of the five viscera, there is one section too many; if waiting for the twelve meridians, there are six sections too few". Consequently, he claimed Chinese medicine often led to misdiagnosis, noting that "women's pregnancy is often mistaken for amenorrhea, leading to the use of blood-breaking drugs that abort the fetus and harm both mother and child" (De, n.d.).

Thus, Western attitudes toward Chinese pulse diagnosis underwent a transformation from early neutral recording and open learning, to skepticism in the late eighteenth century, and finally to comprehensive criticism and negation by the mid-nineteenth century. This process reflected not only the evolution of the internal knowledge system of Western medicine but also the shifting balance of power and cultural status in Sino-Western exchange.

3.2 Acceptance and Adaptation of Pulse Diagnosis by Western Doctors

If most medical missionaries in the 19th century criticized pulse diagnosis as a typical example of the "unscientific nature" of traditional Chinese medicine, then after entering the 20th century, with the changes in China's medical landscape, the attitudes of some Western doctors in China also underwent a transformation. During the Republic of China period, Western medicine had established its dominant position in terms of institutions and education, while traditional Chinese medicine struggled to defend itself in the "debate over preservation or abolition." In this context, missionary doctors no longer needed to constantly belittle traditional Chinese medicine to make room for Western medicine. Instead, they gradually began to re - examine the empirical practices of traditional Chinese medicine, including pulse diagnosis, from the perspective of curative effects.

Edward H. Hume clearly pointed out that the four diagnostic methods of traditional Chinese medicine, especially pulse diagnosis, laid a solid foundation for diagnosis. "Perhaps no other medical system in the world gives such a substantial role to the pulse and its interpretation in diagnosis." This evaluation stands in sharp contrast to the vehement denials of Hobson and others in the 19th century. Similar attitude changes are also reflected in the discussions of deans of medical schools in missionary universities such as Harold Balme and William R. Morse. They began to emphasize that traditional Chinese medicine should be treated with "sympathetic understanding" and acknowledged that it contained valuable empirical knowledge (Hume, 1940).

This change does not mean that Western medicine has fully accepted the theoretical system of traditional Chinese medicine. Instead, it reflects the change in the pattern of discourse power: when Western medicine gradually gained institutional advantages in China's medical field, they were able to adopt a more tolerant attitude and recognize the value of traditional Chinese medicine in terms of experience and practice. As a result, pulse diagnosis, which was regarded as a symbol of "backwardness, mystery, and unreliability" in the 19th century, has gradually been transformed by some Western doctors into a symbol of "empirical and clinical accumulation." It can be seen that the

image of pulse diagnosis is not static but is constantly being reconstructed in cross - cultural exchanges and the transfer of medical power.

However, those who truly transformed these criticisms and re - evaluations into systematic responses were not mainly Western missionaries, but the emerging group of Chinese Western - trained doctors. Caught in a difficult situation, on the one hand, they inherited the critical logic of Western medicine towards pulse diagnosis; on the other hand, they tried to strive for new legitimacy for traditional Chinese medicine through translation, scientificization, and theoretical re - interpretation. It was in their practices that the image of pulse diagnosis underwent a more profound reconstruction.

4. The Role of the Western Medicine Community in China in the Construction of the Image of Pulse Diagnosis

4.1 Chinese Western-Trained Physicians and the Scientific Reinterpretation of Pulse

By the early 20th century, the hierarchy and landscape of medical authority in China were undergoing a profound, transformative upheaval. In the wake of the Qing dynasty's collapse and the founding of the Republic of China, a new generation of Chinese intellectuals framed traditional medical practices against the urgent backdrop of national survival and modernization. At the heart of this movement was a group of Chinese physicians trained in Western medical systems, who returned from studies in Japan, Europe, and the United States to take on a defining, instrumental role in building formal institutional structures for public health and medical education across China (Yin, 2007).

Leading figures of this cohort included Wu Liande, renowned for his evidence-based containment of the Manchurian Plague, together with Yan Fuqing and Tang Erhe, all of whom wielded enormous influence in government policymaking and academic circles. For these physicians, Western medicine was far more than a collection of clinical techniques; it was the very embodiment of "Science"—a universal, immutable truth critical to strengthening the Chinese nation (Liu, 2020). In turn, they championed the full professionalization of medicine, built strictly on the foundational principles of anatomy and physiology. Within this national modernizing agenda, pulse diagnosis—long the vaunted pinnacle of Chinese diagnostic practice—emerged as the central battleground for fierce debate over medical epistemology.

The critique put forward by these physicians stood in stark contrast to the detached curiosity of early Western missionary doctors. It was an internal critique, forged from a fervent desire to purge Chinese medicine of the remnants of what they deemed superstitious, pre-scientific thinking. One of the most outspoken, uncompromising critics was Yu Yunxiu, a leading figure in the "Medical Revolution" movement. Across a string of high-impact essays and polemical writings, Yu argued that the very survival of the Chinese people depended on the complete dismantling of traditional Chinese medical theory. He maintained that core concepts including yin-yang, the five phases (wuxing), and the visceral correspondence systems (zangfu) were nothing more than metaphysical constructs with no grounding in empirical observation. In his view, these pre-scientific beliefs blinded practitioners to the physical,

material reality of the human body, and ought to be discarded entirely in favor of modern pathology and anatomy (Yu, 1929).

Pulse diagnosis became the primary target of these critiques precisely because it functioned as the critical link between TCM's metaphysical theoretical framework and its hands-on clinical practice. Traditional pulse doctrine held that the radial artery at the wrist was split into three distinct segments: cun, guan, and chi, with each segment mapped directly to specific internal zangfu organs. Western-trained Chinese physicians tore down this organ mapping by drawing on modern anatomical science. They highlighted the fact that the radial artery is a single, unbroken continuous vessel; per the fundamental principles of hydrodynamics and cardiovascular physiology, the pulse felt at the wrist was simply a manifestation of the pressure wave produced by the heart's contractions and the elastic properties of arterial walls (Yu, 1933). They argued it was biologically and scientifically implausible for a single short stretch of artery to transmit separate, granular information about the functional status of organs like the liver or gallbladder at these specific, localized points.

To lay bare the purported absurdity of traditional pulse theory, critics deployed hypothetical thought experiments and reductio ad absurdum reasoning. A frequently cited critique from this era centered on the so-called "amputee paradox": should a patient lose a hand or forearm in an accident, traditional pulse theory would hold that the diagnostic pathway to the corresponding internal organs was irreparably lost. Critics questioned how a physician could possibly diagnose a kidney ailment if the chi position on the left wrist was physically absent (Pang, 1934). These arguments were designed to expose the fundamental logical flaws in the traditional pulse classification system, and to undermine the theoretical legitimacy of traditional Chinese medicine practitioners (zhongyi).

Yet the stance of these Western-trained physicians was far more nuanced than outright, blanket rejection. While they launched scathing attacks on the metaphysical theory underpinning pulse diagnosis, many could not dismiss the real-world clinical efficacy of the practice itself. They acknowledged that seasoned TCM doctors often possessed a remarkable, almost intuitive knack for identifying physiological conditions—including pregnancy, fever, or circulatory shock—through pulse palpation alone. Instead of writing off this clinical expertise entirely, some reformers sought to reinterpret it through the framework of modern medical concepts [24]. For example, a "wiry" (xian) pulse was reframed not as a marker of "Liver Qi stagnation," but as an indicator of elevated arterial tension or arteriosclerosis. In doing so, Western-trained physicians sought to validate the clinical skill of pulse taking, while redefining its core meaning with modern scientific terminology.

4.2 Instrumentation and the Modernization of Pulse Knowledge

The reinterpretation and reconstruction of traditional Chinese medicine pulse diagnosis is closely related to the introduction of cutting-edge diagnostic technologies into China in the early 20th century. In the 1920s and 30s, with the rise of the "scientific approach to traditional Chinese medicine," the academic and clinical communities developed a strong interest in instruments capable of quantifying, recording, and visualizing human physiological processes (which are often invisible). (Tang, 1913) One

of the key instruments in this movement was the pulse oximeter, a mechanical instrument used to capture and graphically record arterial pulse waves. Chinese medical educators incorporated the pulse oximeter into the curriculum of teaching hospitals and medical schools to demonstrate the physiological basis of pulse movement. The pulse oximeter played two interconnected roles: it was both a core teaching tool, guiding students to abandon subjective interpretations that reformers considered "superstitious," and an important medium for transformation, mapping long-standing traditional pulse patterns onto standardized, data-driven scientific charts. (Cai, 2018) In medical textbooks and professional journals published during the Republican era, authors increasingly interpreted pulse characteristics from the perspective of quantifiable physiological indicators, such as blood pressure, arterial elasticity, heart rate, and stroke volume (Wu, 1922). These new interpretations aimed to bridge traditional pulse diagnosis with modern physiological frameworks. For example, the traditional "bounding pulse" was redefined and interpreted as a pulse characteristic corresponding to high stroke volume and low peripheral vascular resistance.

Although these instruments were rarely used in the daily clinical work of rural doctors or traditional Chinese medicine practitioners, they held immense symbolic significance in broader medical discourse. The sphygmomanometer (blood pressure cuff), in particular, became a hallmark of modern medical authority. By transforming the transient tactile sensation of pulse palpation into a permanent graphical trajectory or standardized numerical value, these techniques seemed to transform subjective, experience-based clinical judgment into objective, verifiable scientific data (Zhu, 1931). This process further solidified the "visual hegemony" in modern medicine: that medical truth could only be what could be visually observed, precisely measured, and empirically verified. This profound transformation reveals a core reality: the survival of traditional Chinese medicine knowledge in modern China does not stem from a complete resistance to the scientific framework, but from its active absorption, reinterpretation and reconstruction within these new epistemological structures. Pulse diagnosis has not only not been eliminated, but has been partially integrated into the new diagnostic knowledge system, thus forming a hybrid clinical practice that continues to this day (Hong, 1936).

5. Conclusion.

The modern history of Traditional Chinese Medicine (TCM) pulse diagnosis in China lays bare the nuanced, multifaceted processes through which medical knowledge is reshaped amid sustained cross-cultural intellectual encounter. Between the 19th and early 20th centuries, the scholarly and cultural image of pulse diagnosis underwent dramatic, layered transformations: it evolved from a subject of guarded curiosity among early Western observers, into a target of vocal skepticism from missionary physicians steeped in the burgeoning field of modern physiological science. By the early 20th century, this landscape was further reshaped by two pivotal forces: Chinese physicians trained in Western medical systems, and the introduction of diagnostic technologies such as the sphygmograph. These actors launched trenchant critiques of traditional pulse theory, while simultaneously

reinterpreting the tactile clinical knowledge of pulse taking through the lens of scientific visualization and quantitative measurement. Taken together, these historical developments make clear that the modern conceptualization of pulse diagnosis was never shaped by scientific progress alone. Instead, it was defined by shifting dynamics of medical authority, institutional power, and cross-cultural translation of medical knowledge. In turn, the case of pulse diagnosis provides a critical, illuminating lens through which to understand the wider transformation of medical knowledge in modern China. It reveals a dynamic, iterative process of negotiation, in which traditional medical practices were neither outright rejected nor passively preserved, but actively reworked and reconfigured within the bounds of new epistemological frameworks.

Acknowledgments

This paper was supported by Provincial Undergraduate Training Program on Innovation and Entrepreneurship (Number: S202410345***).

References

Amber, R., & Babey-Brooke, A. M. (1966). *The Pulse in Occident and Orient: Its Philosophy and Practice in Holistic Diagnosis and Treatment*. New York: Aurora Press.

Cai, D. F. (2018). *Complete Works of Lu Yuanlei* (p. 1125). Shanghai: Shanghai Scientific and Technical Publishers.

De, Z. (n.d.). *Illustrative Cases of Western Medicine: Treatise on the Pulse* (p. 7). Guangxu Period Woodblock Edition.

Deng, T. T., & Cheng, Z. F. (Eds., 2000). *A General History of Chinese Medicine: Modern Volume*. Beijing: People's Medical Publishing House.

Dong, S. X. (2008). *Between Form and Spirit: A Draft History of the Introduction of Early Western Medicine into China*. Shanghai: Shanghai Ancient Books Publishing House.

Guo, L. R. (1930). Understandings of Chinese and Western Medicine. *Medical Journal*, *1*(1).

Han, Q. (n.d.). *The Transmission of Chinese Science and Technology to the West and Its Influence*. Hebei: Hebei People's Publishing House.

Hao, X. Z. (2005). *Research on the Debate over the Abolition or Preservation of Traditional Chinese Medicine in Modern China* (Ph.D. Thesis). Central China Normal University, Wuhan.

Hobson, B. (1858). *Report of the Chinese Hospital at Shanghai for 1857*. Shanghai: Pamphlet.

Hong, G. Z. (1936). A Discussion on the Issue of "Scientification of Chinese Medicine". *Chinese and Western Medicine*, *2*(2), 151.

Hsu, E. (2000). Spirit (Shen), Styles of Knowing, and Authority in Contemporary Chinese Medicine. *Culture, Medicine and Psychiatry*, *24*, 407-428.

Hume, E. H. (1940). The Chinese Way in Medicine, Westport, Connecticut (pp. 175-176). Hyperion Press.

Kajdański, E. (n.d.). “Explanatory Notes on Michał Boym’s Works on Chinese Medicine,” in Boym M, Kajdański E (trans., Polish), Zhang Z H, Zhang X P (trans., Chinese), *Collected Works of Michał Boym: Sino-Western Cultural Exchange and the Transmission of Chinese Medicine to the West* (pp. 61-89).

Liu, M. T. (2020). *Medical Periodicals in Modern Shanghai and the Dissemination of Western Medical Knowledge* (Master’s Thesis), Shanghai Normal University, Shanghai.

Lockhart, W. (1861). *The Medical Missionary in China: A Narrative of Twenty Years’ Experience*. London: Hurst and Blackett.

Pang, J. Z. (1934). *Pulse Diagnosis. Shen Bao*. 1934 Jan 15; No. 21823: 15.

Ricci, M., & Trigault, N. (Eds.), He G J et al. (Trans.). (1983). *The Journals of Matteo Ricci in China*. Beijing: Zhonghua Book Company.

Rosenberg, C. E., & Vogel, M. J. (Eds., 1980). *The Therapeutic Revolution: Essays in the Social History of American Medicine*. Philadelphia: University of Pennsylvania Press.

Staunton, G. T., & Ye, D. Y. (trans., 1997). *An Authentic Account of Lord Macartney’s Embassy to China*. Shanghai: Shanghai Bookstore Publishing House.

Tang, E. H. (1913). *Miscellaneous Discussions IV: On Pediatrics in Detail*. Yong Yan.

Wang, J. M., & Fu, W. K. (Eds., 1963). *Bibliography of Foreign-Language Works on Chinese Medicine, 1656-1962*. Shanghai: Museum of Medical History, Shanghai College of Traditional Chinese Medicine; 1963.

Wong, M. K. (2024). *An Encounter between Christian Medical Missions and Chinese Medicine in Modern History*. The Case of Benjamin Hobson. Religions.

Wu, X. H. (1922). *Preface to Lectures on Chinese and Western Pulse Studies*. Shanghai: Wenruilou Lithographic Edition.

Yao, C. P. (trans.). *Huangdi Neijing, “Suwen”* (Vol. 7). Discussion on the Separation and Combination of the Channels (Jingmai Bielun, Chapter 21), Beijing: Zhonghua Book Company.

Yin, Q. (2007). The Emergence and Development Characteristics of the Western Medical Community in Modern China. *Journal of Central China Normal University*, *46*(4).

Yin, Q. (2007). The Formation and Developmental Characteristics of the Western Medical Profession in Modern China. *Journal of Central China Normal University*, *46*(4).

Yu ,Y. X. (1933). *A Discussion on Cun-kou Pulse Diagnosis. Shen Bao*. 1933 Jun 19; No. 21617: 13.

Yu, Y. X. (1929). Unusual Practices of the Old Medicine. *Medical Review*, (7), 4.

Zhu, S. (1931). What Does the Scientification of Chinese Medicine Mean? *Shenzhou Medical Journal*, *1*(1), 26.