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Tracing the Origins of Li Shizhen's Theory "The Brain Is the Abode of the Original Spirit"—Focusing on Daoist Inner Alchemy Practices in the Tang and Song Dynasties

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Abstract

Li Shizhen's theory "The brain is the abode of the original spirit" has exerted a profound influence on traditional Chinese medicine. However, there has been a long-standing academic debate regarding whether this concept originates from traditional medicine, Daoism, or Western medicine. In fact, this issue transcends the medical field and is closely linked to profound questions within Daoist culture. By examining Daoist Inner Alchemy Practices, particularly the theories of brain–spirit storage and brain physiology in Daoist Inner Alchemy Practices since the Tang and Song dynasties, as well as their impacts on traditional medical theories, this paper further demonstrates that Li Shizhen's theory derives from Daoism.

Keywords: Daoist Inner Alchemy Practices; Inner Alchemy studies; braintheory; Li Shizhen; the brain is the abode of the original spirit



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1. Introduction

Daoism is a cornerstone of traditional Chinese culture, and its time-honored inner alchemy practices represent a pivotal topic worthy of in-depth exploration with contemporary relevance. Since the late Tang and Five Dynasties period, numerous alchemical schools, particularly the Zhonglü tradition, have risen to become the pinnacle of Daoist Inner Alchemy's development. While many Daoist alchemical texts are infamously abstruse, they share an origin with traditional medicine: both examine human life phenomena within Daoism's philosophical and cultural framework, leading to substantial overlaps with medical knowledge. Cross-referencing with medical classics significantly enhances the accessibility of these texts. Comparative studies reveal that Daoist Inner Alchemy Practices and their methodologies offer unique, valuable insights into human physiology. Hu Fuchen describes Zhonglü alchemy as "a systematic human engineering initiative that amalgamates spiritual and physical cultivation."¹ Though Daoist Inner Alchemy has profoundly shaped the theoretical evolution of traditional medicine, its potential as a resource for advancing the latter remains insufficiently explored.

A central question in traditional Chinese medical theory is whether the heart or the brain governs the spirit—a topic still highly contentious in current research that demands further investigation. By examining the brain theories in *Zhonglü* alchemy and related practices since the Tang and Song dynasties, this paper traces the academic origins of Li Shizhen's theory "The brain is the abode of the original spirit."

2. Controversies and Trends in the Study of Brain–Spirit Relations

2.1. The Chinese Academic Research on “The Brain as the Residence of the Primordial Spirit”

Academic discussions on Li Shizhen’s theory “The brain is the abode of the original spirit” have yielded three main viewpoints: first, Li was its originator; second, it derived from Western medicine; and third, it has Daoist roots.

Traditional Chinese medicine long adhered to the doctrine that “the heart-governed.” However, after the introduction of Western brain theory into China, alongside the argument in Li Shizhen’s (1518–1593) Ming Dynasty *Compendium of Materia Medica* (本草綱目) that “the brain is the abode of the original spirit,” an increasing number of TCM scholars have advocated for “the brain governs the mental faculties” during the Ming, Qing, Republic periods and now. This gave rise to the debate between the “brain-governed” and “heart-governed” theories, even sparking discussions over whether the *Huangdi Neijing* (黃帝內經) supported the brain or the heart as the ruler of mental faculties. Further disputes arose over whether the concept of “The Brain is the Abode of the Original Spirit” originated from traditional medicine or Daoism, whether Li Shizhen was its first proponent, and what its true meaning entails. These discussions persist to this day, remaining a hot topic in the medical field.

For a long time, the medical community widely held that the concept “the brain is the abode of the original spirit” was first proposed by Li Shizhen. For instance, Wei Shanchu and others argued, “By the Ming Dynasty, Li Shizhen became the first in traditional Chinese medicine to associate the brain with mental activities, stating ‘the brain is the abode of the original spirit’” (Wei and Li 1980). This view is also echoed in TCM textbooks, such as Hu Peicheng’s *Medical Psychology* (P. Hu 2000) and Li Dexin’s revised edition of *Basic Theories of Traditional Chinese Medicine* (D. Li 2001), both endorsing this perspective. Similarly, Liu Yanchi and Guo Xiazhen’s *Basic Theories of Traditional Chinese Medicine* attribute the phrase to Li Shizhen. However, this work does not advocate for the brain governing mental faculties, noting, “Traditional Chinese medicine often employs visceral manifestation theory to treat mental disorders, which is a unique aspect of its theoretical framework” (Liu and Guo 2002). Some scholars, however, hold differing views. Ren Yingqiu, for instance, suggested the idea originated from the West: “Throughout feudal society, the doctrine that ‘the heart governs the mental faculties’ was rigidly upheld, with no advancement in understanding the brain until Western medicine’s introduction during the Ming Dynasty, which gradually gained attention and acceptance among physicians” (Y. Ren 1980).

In recent years, some scholars have proposed that the notion “the brain is the mansion of the original spirit” originated from Daoism. However, this view has not gained widespread acceptance in academia, particularly in the field of traditional Chinese medicine. Some scholars still adhere to the theory that the concept has Western origins, firmly denying its indigenous roots. Peng Xing, for instance, stated: “As early as the 1980s, a group of Chinese medical historians, including myself and Professor Ren Yingqiu, one of the ‘Five Elders of Chinese Medicine,’ unanimously verified that the ‘brain governs the spirit’ theory (later termed the ‘brain theory’ or ‘brain-marrow theory’ by the renowned Qing dynasty physician Wang Qingren), advocated by late Ming dynasty physicians like Li Shizhen and Wang Ang, was not an indigenous Chinese creation but rather derived from Western medicine” (Peng 2008, pp. 26–27). He further argued: “The shift from the millennia-old TCM doctrine of ‘the heart governs the spirit’ to ‘the brain governs the spirit’ marks a tremendous leap in medical science! This underscores Li Shizhen’s courage as a pioneer and stands as a reform and opening-up in Chinese medical history. However, during the Ming dynasty, many prominent physicians rejected the Western ‘brain theory,’ stubbornly clinging to the *Neijing* (內經)’s dictum: ‘The heart is the sovereign organ, whence the spirit emanates,’ and ‘the abode of the essence and spirit.’ Their refusal to evolve with the times

is utterly laughable. ... Medicine must modernize, scientize, and globalize—there is no other path forward” (Peng 2008, p. 27). His perspective is notably incisive.

On the other hand, due to insufficient attention and research on Daoist medicine in academia, the brain theory within Daoism has not been thoroughly examined. Daoist medical perspectives on the brain primarily feature in Daoist cultivation practices. Investigating this dimension is therefore crucial to resolving the origins of the theory that “brain as the mansion of the original spirit”.

2.2. Overview of International Research on Daoist Neidan Studies and Cultivation Practices

In recent years, international academic research on Daoist Neidan studies and cultivation practices has explored multiple dimensions, including the core concepts, operational mechanisms, historical lineages, and contemporary relevance of Neidan. These studies not only delve into the wisdom of cultivation from classical texts but also conduct dialogues with modern thought, revealing four distinct research trends:

2.2.1. In-Depth Analysis of Core Concepts and Cultivation Mechanisms

This field centers on foundational concepts and practical logic in Neidan studies. Concerning the connection between “heart” and cultivation, Martina Darga (Darga 2021) emphasizes the multifaceted meanings of “heart” in Daoism, framing it as the central hub of cultivation. Zhuangzi’s “heart fasting” establishes the foundation for cultivating mind-nature, while the “mental system” in texts like Neijing Tu (Illustrated Classic of Internal Medicine) and Xiu Zhen Tu (Illustrated Manual of Cultivation) integrates “heart” with the circulation of vital energy within the body, forming a theoretical framework where “the heart governs cultivation.”

In exploring the specific cultivation mechanisms, Stephen Eskildsen (Eskildsen 2019) centers his analysis on Yu Yan’s “Commentary on the Zhouyi Cantongqi” to elucidate the path of “inner harmony” in internal alchemy: Cultivation requires no deliberate breath-holding, visualization, or incantations. By simply returning the body and mind to absolute stillness, practitioners can trigger a suspension of breathing and pulse rhythms, thereby generating and circulating internal energy within the body, ultimately inducing sensory experiences and visions. He further emphasizes the principle of “letting visions pass without interference,” uncovering the subtle details of the Southern School and Quanzhen Sect’s alchemical methods that “cultivate wisdom through stillness and nourish the body with energy.”

Fabrizio Pregadio (Pregadio 2022a) put forward the three-dimensional cognitive framework of “Dan Cheng Zhi Ti” (the Body of Completion), framing the “human body” in alchemical cultivation as the core metaphor of Neidan studies. From a cosmological metaphysical perspective, the human body functions as the medium bridging heaven and earth; politically and ethically, its internal order mirrors the logic of social governance; theologically, it serves as the domain for the meditative practice of inner deities and the transformation of essence and energy. These three dimensions collectively constitute the practical underpinning for the “harmony between heaven and humanity” in Neidan cultivation.

2.2.2. Systematic Organization of Internal Alchemy Literature and Lineage Tracing

The international academic community places emphasis on clarifying the transmission lineage of internal alchemy cultivation systems through textual research, thereby reconstructing the historical evolution of alchemical practices. Teemu Suunta-maa (Suunta-maa 2020) analyzed current internal alchemy research from a Western linguistic perspective, proposing “four research frameworks” and “five conceptual approaches to internal alchemy”. These clearly illustrate the paradigm shift in Western academia’s understanding

of cultivation pathways—from an early focus on “physical cultivation” to later focus on “spiritual-body coordinated cultivation.” Yuria Mori (Mori 2025), through cross-textual verification, clarified the inheritance relationship between Jinhua Zhidong and Zhu Yuanyu’s internal alchemy methods: He revealed that Pan Yian (son of Pan Jingguan), key editor of Jinhua Zhidong, participated in compiling Zhu Yuanyu’s *Zhouyi Cantongqi Chan You* and **Wuzhen Pian Chan You*, confirming the cultivation system in Jinhua Zhidong originated from Zhu’s methods. Simultaneously, he demonstrated its feature of “simplification adaptation”: by transforming complex internal alchemy practices into practical daily manuals, it fills the research gap regarding “elite-oriented adaptations” in internal alchemy cultivation.

2.2.3. Expanding the Unique Dimensions of Neidan Cultivation Systems

This research breaks through the traditional male-dominated perspective in neidan studies, introducing two distinctive dimensions: “gender-specific cultivation” and “comparison between internal and external dan practices.” Regarding gender cultivation, Pavel D. Lenkov (Lenkov 2021) The study of Sun Buer’s “Female Dan Techniques” marks the first systematic exploration of female cultivation systems in Daoism by Russian scholars. Sun Buer’s works, *Women’s Neidan Techniques and Sequence of Daoist Cultivation Practices for Women*, establish a unique progression for female practitioners. These contributions fill the long-standing research gap in this understudied field within international academia and enrich the understanding of gender diversity in neidan cultivation studies.

In terms of comparing external and internal alchemical practices, Fabrizio Pregadio (Pregadio 2022b) emphasizes their differing temporal perspectives. External alchemy, focused on refining mineral-based immortality elixirs, perceives time as a “timeless” cosmic process. By contrast, internal alchemy interprets the “immortality elixir” as the body’s essence (jing), energy (qi), and spirit (shen), shifting its temporal perspective to the “yin-yang cycle” that demands alignment with natural rhythms. He notes that after the Tang Dynasty, internal alchemy gradually supplanted external methods due to its stronger compatibility with “body–mind coordination,” mapping a clear historical trajectory of transformation in Daoist cultivation systems.

2.2.4. Modern Transformation and Cross-Domain Connections of Neidan Cultivation Philosophy

The international academic community focuses on exploring the modern value of Neidan cultivation philosophy and advancing its dialogue with fields like psychology. In psychology, Elliot Cohen noted the profound influence of Neidan cultivation on Western psychology. Carl Jung viewed it as “inner alchemy” to analyze psychological transformation processes; contemporary cognitive therapy has also integrated Neidan’s cultivation principles of “non-action” and “mental tranquility,” giving rise to “Chinese Daoist Cognitive Psychotherapy,” which translates “body–mind meditation” into approaches for addressing modern psychological dilemmas.

In summary, international research on Daoist internal alchemy and cultivation studies not only traces the historical evolution of these practices through textual analysis, but also deciphers their core logic via conceptual deconstruction. It expands specialized dimensions such as gender and temporal contexts while promoting interdisciplinary integration with modern psychology. Such research enriches global interpretations of Daoist internal alchemy and cultivation theories, and transforms traditional wisdom into resources for addressing contemporary physical and mental challenges and exploring future survival paradigms. However, existing foreign studies pay insufficient attention to the spiritual dimension—particularly the debate over mind–body dominance—which precisely constitutes the focus of this study.

3. Research Findings: Daoist Brain Theory and Its Integration into Medical Thought

3.1. The Theory and Practice of Brain Cultivation in Zhonglü Alchemy

Daoist internal alchemy seeks longevity and immortality via intricate cultivation—specifically, the refinement of essence, qi, and spirit within the three elixir fields. This practice ultimately manifests in the body, triggering physiological, psychological, and spiritual transformations. The purported benefits of Zhonglü alchemy—namely, disease prevention, health maintenance, longevity, and enhanced cognition—align with conventional medicine and wellness goals. This reciprocal validation underscores the therapeutic significance of internal alchemy.²

Daoist alchemists categorize immortality into two primary tiers: the terrestrial immortal state, attained by “returning essence to replenish the brain” for agelessness; and the celestial immortal state, which transcends earthly attachments, wherein the yang spirit ascends through the brain’s heavenly gate (fontanelle) to the immortal realm, achieving a transcendent union of form and spirit, impervious to decay. The Zhonglü Chuandaoji asserts: “Qi originates in the kidneys but has not yet ascended to the middle elixir field; the spirit dwells in the heart but has not yet ascended to the upper court.” Without the convergence of essence and qi, even the three elixirs prove ineffectual (J. Shi 1988b, p. 672). The Daozang Jinghualu Zhaiyao (道藏精華錄提要) summarizes the internal alchemy principles of the Lingbao Bifa. The three elixir fields engage in reciprocal interaction, with the essential element being the mudball (brain). Though complex, these principles can be succinctly stated: “Qi produced in the kidneys embodies the true water of unity; reintegrating this water into the lower elixir field sustains the spiritual root, thereby facilitating the natural emergence of qi.” The fluid generated in the heart encompasses the virtuous yang qi; reintegrating this qi into the middle elixir field cultivates the spiritual source, allowing the spirit to manifest organically. Integrating the spiritual with the divine and assimilating the divine into the Dao restores it to the upper elixir field, facilitating transcendence (J. Shi 1988b, p. 672). Consequently, cultivation within the upper elixir field—the brain—occupies a pivotal role in internal alchemy. We herein analyze the alchemical comprehension of the brain from a medical standpoint.

3.1.1. Returning Essence to Replenish the Brain

Returning essence to replenish the brain for immortality is a key tenet of Zhonglü alchemical practice, conceptually contiguous with essence-return techniques in early Daoist sexual cultivation. Early Daoist sexual practices inherited the cultivation methods of the sexual school from the Warring States, Qin, and Han periods, treating the technique of returning essence to replenish the brain as a vital means for achieving longevity and immortality. Ge Hong summarized: “There are more than ten schools of sexual techniques, some aimed at healing injuries, some at curing diseases, some at harvesting yin to benefit yang, and some at prolonging life—but the core lies in the practice of returning essence to replenish the brain. This method was orally transmitted by true practitioners and was not originally written down. Even if one takes renowned elixirs, without understanding this essential technique, immortality cannot be attained” (Ge 1988). Later, the methods multiplied. The *Taixi Jingweilun* (胎息精微論), likely dating from the Tang Dynasty, states: “There are hundreds of sexual techniques, but the essence lies in returning essence to replenish the brain” (Anonymous 1988c, p. 447). The *Huangting Neijing Yujing* (黃庭內景玉經) places significant emphasis on restraining desires to nourish kidney essence, with the aim of accumulating essence and qi to enrich the brain palace for the attainment of immortality. As it states: “In the pursuit of longevity, utmost caution is required in sexual practices; why invite death and cause the spirit to weep? Neglect leads to the ruin of the

three luminaries in the land of calamity; one must inhale and gather the essence” (Wei 1988a, p. 447). Liang Qiuzi of the Tang Dynasty commented: “When qi is lost and fluids leak, the marrow and brain wither. Even if replenished by streams, they are drained by the tail gate—caution is imperative.” He further noted: “Imprudence in sexual practices harms essence and causes blindness, hence the spirit weeps” (Liang 1988).

From the Tang and Song dynasties onward, the theory of “returning essence to replenish the brain” in Inner Alchemy can be divided into two parts. For ordinary people, prudent regulation of sexual activities is required to conserve essence. As stated in *Xishan Qunxian Huizhenji* (西山羣仙會真記), Volume 3, “Replenishing Essence,”: “Lewdness and chaos cause the loss of essence, like removing firewood from under a cauldron. The way to replenish essence is not only to abstain from lust but also to be extremely cautious in sexual matters” (J. Shi 1988a). Even when pressed by worldly obligations, restraint must be exercised in accordance with one’s age. For those seeking immortality, strict adherence to sexual abstinence is essential; otherwise, the path to immortality will fail. As the *Lingjianzi* (靈劍子) says: “When essence is displaced, it is like the sea drying up or mountains collapsing, a hundred rivers losing their course, a thousand regions falling into ruin, beyond remedy. All manner of illnesses arise, and malevolent spirits draw near. Attempting to cultivate again becomes nearly impossible, with success in one out of a thousand” (Xu 1988). Thus, the technique of “returning essence to replenish the brain” in Inner Alchemy transcends the domain of sexual practices, evolving into a higher form of internal self-cultivation.

In the *Zhonglü* Inner Alchemy tradition, “returning essence to replenish the brain” constitutes a pivotal stage of cultivation. As recorded in the *Lingbao Bifa* (靈寶畢法), *Zhonglü*’s alchemical methods are categorized into the Lesser Vehicle, Middle Vehicle, and Greater Vehicle, further subdivided into ten stages. The Lesser Vehicle method is the “Human Immortal” approach to prolonging life and achieving well-being, capable of extending lifespan. The Middle Vehicle is the “Earth Immortal” method of immortality, building upon the Lesser Vehicle’s results to further prolong life and sustain existence. It is divided into three stages: “Flying the Golden Crystal Behind the Elbow,” “Returning the Jade Elixir,” and “Returning the Golden Elixir.” Among these, “Flying the Golden Crystal Behind the Elbow” is precisely the technique of “returning essence to replenish the brain.” This method is modeled after the celestial movements of the sun and moon. The initial practice must begin at midnight on the first day of the winter solstice (equivalent to November in the solar calendar). The process unfolds in three phases: the first phase is “the Kan hexagram flies the golden crystal, returning from the lower field to the upper field”; the second phase is “the Li hexagram gathers the medicine, returning from the lower field to the middle field”; and the third phase is “the Qian hexagram restrains the Yang Pass, returning from the middle field to the lower field.” The primary focus is on the Kan hexagram, flying the golden crystal to return essence and replenish the marrow sea in the Mud Pellet (brain). The specific method is as follows:

“When the Yang of the Kan hexagram arises, it is precisely midnight, neither beginning nor end. The Gen hexagram signifies kidney qi interacting with liver qi (water generating wood). Before this interaction, sit upright in a quiet room, draped in robes, hands clasped firmly, legs crossed, and the lower abdomen slightly tucked. After a moment, raise the body, lean the chest forward slightly, and tilt the head back. Close the double passes of the spine, gently fan the elbows once or twice, and stretch the waist. From the Tailbone Gate, a sensation like fire rises from the waist and gathers at the spine—take care not to open the passes. When the heat and energy become intense, gradually open the spinal passes to release the energy. Still tilting the head back, firmly close the upper pass and avoid opening it. As the heat and energy grow extreme, gradually guide them to the crown

to replenish the marrow sea in the Mud Pellet. One must endure both cold and heat to lay the foundation for immortality. . . ” (Zhong 1988, p. 356).

Through long-term practice, Inner Alchemy (Neidan) has concluded that the human body’s Ren and Du meridians, known in Traditional Chinese Medicine as the Conception Vessel and Governor Vessel, are paramount in alchemical cultivation, serving as the primary energy circulation pathways. According to meridian theory, the Ren meridian runs along the front of the body, starting below the Zhongji point, ascending through the pubic region, following the abdomen to the Guanyuan point, and reaching the throat. It is called the “sea of yin meridians,” meaning human meridians flow like water through all yin aspects of the body, with the Ren meridian as their convergence. The Du meridian, on the other hand, travels from the perineum along the spine, ascending through the spinal cord to Fengfu point, entering the brain and reaching the crown, then descending the forehead to the bridge of the nose. Termed the “sea of yang meridians,” it governs all yang meridians, acting as their regulatory core. Effectively circulating the Ren and Du meridians mobilizes and regulates the body’s physiological functions, achieving the effect of “opening one meridian to unlock all others,” thereby curing illnesses, enhancing health, and prolonging life. Inner alchemy techniques pursue longevity and immortality through the cultivation of these meridians. The first step in alchemical practice is to unblock the Ren and Du meridians. Inner alchemy identifies three critical passes along the Du meridian: the Tailbone (Weilü), the Jiaji, and the Jade Pillow (Yuzhen), collectively called the “Three Passes.” Unblocking the Ren and Du meridians is also referred to as “passing the Three Passes.” At the foundational stage, this involves only qi circulation, known as the “Small Heavenly Cycle.” In true alchemical methods, the Small Heavenly Cycle requires the upward movement of the “elixir” to the Mud Pellet (Niwan), refining it to remove impurities, then descending it to the Dantian for sealing—only then is the cycle complete. The *Zhonglü* alchemical method of “Flying the Golden Crystal at the Elbow” represents an advancement beyond the foundational Small Heavenly Cycle: it further refines and gathers the elixir to nourish the brain palace. After a hundred days of practice, when essence, qi, spirit, and elixir power are fully integrated, the essence is transported to the brain to replenish the upper dantian, achieving the state of “colliding through the Three Passes to directly enter the upper palace, the Mud Pellet” (Zhong 1988, p. 356), thereby completing this stage of the practice.

As recorded in the *Lingbao Bifa*, when this stage of practice bears fruit, practitioners may experience startling dreams, spontaneous healing of ailments in the limbs and internal organs, and visions of halo-like radiance when closing eyes in darkness. Evidently, its disease-curing effects align with medical objectives, achieved through the method of “returning essence to replenish the brain.” This fully reflects the *Zhonglü* alchemical tradition’s recognition of the brain’s vital role in life and health.³ Furthermore, per *Zhonglü* alchemical theory, mastering this essence-replenishing and brain-nourishing method enables one to become an immortal on earth and attain eternal youth. This underscores the brain’s decisive influence over human lifespan, diverging significantly from traditional medicine’s categorization of the brain within the visceral system. The practice process also reveals physiological connections between the brain and other body parts, offering valuable insights for both theoretical exploration and clinical research in traditional medicine.

After the validation of “elbow-flying golden essence,” methods like “jade-fluid elixir return” and “golden-fluid elixir return” can be implemented. In essence, these techniques represent progressive advancements of the former. When the sixth stage, “jade-fluid elixir return,” manifests, “the body gleams, spirit and qi exude elegance. . . mortal bones transform, consciousness shifts, movement becomes swift as galloping horses; eyes dark as lacquer, skin smooth as congealed fat, indigo hair regrows, wrinkles fade, preserving youth-

ful visage; one sees the finest details from a hundred paces. Old scars and blemishes vanish naturally, and traces of tears or saliva disappear. . .” (Zhong 1988, p. 358). Rejuvenation ensues, with essence, qi, and spirit brimming, elevating life toward greater perfection. The seventh stage, “golden-fluid elixir return,” similarly focuses primarily on returning essence to nourish the brain:

The so-called “golden fluid” arises when kidney qi harmonizes with heart qi without ascending, steaming the lungs. As the lungs act as a canopy, they envelop these two qi, drawing pulmonary fluid daily. This fluid rises from the lower dantian via the coccyx, termed “flying golden essence,” entering the brain to replenish the Mud Pellet (niwan). Once replenished, it descends back to the lower dantian, completing the “golden-fluid elixir return” (Zhong 1988, p. 359).

The *Wuzhen Pian* (悟真篇) in the *Xiuzhen Shishu* (修真十書) provides a more detailed anonymous commentary on the golden-fluid elixir return:

Through continuous embryonic respiration, one navigates the interplay of Kan (Water) and Li (Fire), whose union generates the golden fluid. During fire-phase circulation, a sudden surge of true qi from the spine rushes to the Mud Pellet, producing a trickling sound. A sensation as if something touches the brain manifests, soon forming egg-like droplets descending via the throat like silvery paste, offering incomparable sweetness. This state confirms the golden-fluid elixir return. Gradually swallowing it back to the dantian, maintaining unbroken flow, purifies the organs. With closed eyes, internal observation reveals viscera as clearly as candlelight, while myriad golden rays emanate, spiraling to envelop the body (J. Shi 1988b, p. 736).

When the golden-fluid elixir return manifests:

With inner purity lofty enough to merge with the great void, the soul does not wander, thus ending all dreams. The yang essence forms the body, the divine abode becomes unshakable, unafraid of cold or heat in any season. The divine aura naturally transforms one’s appearance. . . When the merits are fulfilled, the Three Pure Truths’ registers are secretly bestowed. The changes of yin and yang, the fortunes and misfortunes of human affairs, all can be foreknown by the divine spirit. Eyes untouched by worldly clutter, the heart severed from all realms. True qi fills the body, eliminating the need for food and drink, while extraordinary qi emanates. Golden immortal flesh, comparable to jade stamens. Wherever one goes or stays, the deities will come forth to meet, summoned and commanded as if by one’s own will. . . (Zhong 1988, p. 360).

In terms of religious idealism, this stage’s efficacy surpasses the previous one, endowing the ability to commune with spirits and achieve immortality.

The above primarily elaborates on the method and mechanism of “returning essence to replenish the brain” in Zhonglü alchemy. Zeng Zao of the Southern Song Dynasty succinctly summarized this concept in Volume 10 of *Daoshu Huayang Pian* (道樞·華陽篇): “What is meant by returning essence to replenish the brain? Essence resides in the kidneys; replenishing it with qi leads to longevity. Qi resides in the heart; calming it with spirit leads to immortality. Marrow originates from the brain; replenishing it with true yin and yang leads to rejuvenation. Drawing kidney qi from behind the elbow and sending it to the upper palace is replenishing with true yin. Returning true qi and observing inwardly beyond the inner court is replenishing with true yang. Remaining silent all day, free from thoughts and schemes, the two qi interact and condense in the marrow sea—this is replenishing with yin and yang” (Zeng 1988, p. 660).

3.1.2. Cultivating the Muddy Pellet to Achieve Immortality

Zhonglü alchemy holds that returning essence to replenish the brain for longevity only attains the status of a terrestrial immortal, not alchemy’s supreme goal. Its superior

approach lies in the Mahayana path of transcendence and sagehood, where the elixir ascends to the muddy pellet, the yang spirit emerges from its shell, and refining the spirit returns it to the void, ultimately becoming a “celestial immortal.” *Yuqing Jinsi Qinghua Miwen Baonei Liandanjue* (玉清金司青華祕文寶內煉丹訣) states in its “General Discourse on the Essentials of the Golden Elixir”: “The human body is entirely yin, save for a single point of yang. With this single point of yang, moving from afar to near, turning and turning again, it overcomes the masses of yin, so the yang path grows daily, and the yin path diminishes daily. . . Only when yin is exhausted and yang is pure can the elixir ascend to the muddy pellet, and the true person emerges resolutely” (B. Zhang 1988). Transcendence and sagehood entail refining into a true immortal and transferring one’s spirit to the sacred isles.

The Mahayana method of transcending the mundane to enter the sacred comprises three stages: “Convergence of the Primordial Eighth,” “Inner Vision Ninth,” and “Liberation Tenth.” The “Primordial” in “Convergence of the Primordial” refers to the true origin, while “Convergence” denotes the ascent of the true qi of the five zang-organs to the Niwan (Mud Pellet) region. The underlying principle is that primordial qi first divides into Yin and Yang, which then settle into the positions of the Five Emperors, each governing a direction and corresponding to a zang-organ in the human body. The Green Emperor of the East, associated with the Wood phase of the Heavenly Stems Jia and Yi, governs the qi and fluids of the liver; the Red Emperor of the South, linked to the Fire phase of Bing and Ding, governs the qi and fluids of the heart; the Yellow Emperor of the Center, tied to the Earth phase of Wu and Ji, governs the qi and fluids of the spleen; the White Emperor of the West, connected to the Metal phase of Geng and Xin, governs the qi and fluids of the lungs; and the Black Emperor of the North, related to the Water phase of Ren and Gui, governs the qi and fluids of the kidneys. Liver qi flourishes in spring, heart qi in summer, lung qi in autumn, kidney qi in winter, and spleen qi thrives during the 18 transitional days between seasons. Cultivation adheres to the seasonal waxing and waning, generation and restriction of the five viscera according to the seasons, aligning with celestial movements. By practicing according to the method, the green qi of the liver, red qi of the heart, white qi of the lungs, black qi of the kidneys, and yellow qi of the spleen naturally manifest and ascend to the Niwan. Inner Alchemy also speaks of the “Three Flowers Gathering at the Crown,” as Zhang Boduan’s preface to the *Jindan Sibaizi* (金丹四百字) states: “Transforming essence into qi, qi into spirit, and spirit into emptiness—hence the name ‘Three Flowers Gathering at the Crown’” (J. Shi 1988b, p. 620). Thus, both the “Convergence of the Five Qi to the Primordial” and the “Three Flowers Gathering at the Crown” embody a core principle of advanced alchemical methods: the five zang-organs and three elixir fields revolve around the brain.

“Neiguan” refers to the cultivation of spiritual focus and wisdom—a purely mental refinement that transcends physical form and material phenomena. It is described as “a clear and pure heart-source, illuminating and dissolving all illusions” (Zhong 1988, p. 362). When harmonious qi gathers without dispersing, utmost emptiness and true nature remain serene and effortless; the spirit unites with the Dao, returning to its natural state. With a mind free of intent and perception unbound by objects, one loses awareness of their physical existence, gradually entering the path of non-action: this is the way to transcend the ordinary and attain sagehood. According to the *Lingbao Bifa*, at this stage, the primordial spirit resides in its celestial palace, and the Muddy Pellet (Niwan). In deep meditation with closed eyes, one may encounter various wondrous visions—but these must not be mistaken for reality. To do so would hinder the emergence of the yang spirit and the formation of the immortal embryo, leaving one merely a long-lived earthly immortal, denied liberation and ascension to the three immortal islands. “Transcendence” is the final hurdle of Daoist

cultivation: “To transcend is to rise above the mortal body and enter the ranks of sages; to shed is to cast off the mundane shell and become an immortal” (Zhong 1988, p. 363). This aligns with what the *Xishan Qunxian Huizhenji* (西山羣仙會真記) calls “refining the spirit to unite with the Dao.” Inner alchemy teaches that the fontanel on the crown, also known as the Heavenly Gate, is naturally open in infants. Through cultivation, it reopens as in infancy. When the true qi returns to its origin, the Heavenly Gate opens spontaneously, allowing the yang spirit to emerge from the Niwan Palace. Sustained practice of releasing the spirit from its shell grants the yang spirit freedom to move at will, even leaving the body to travel afar, until both form and spirit grow robust and resolve solidifies. If the spirit then remains within without emerging, form and spirit attain wondrous unity, enduring as long as heaven and earth. If it re-emerges, the spirit ascends to sagehood, dwelling in the immortal islands. Failing to exit the embryonic stage in time traps the yang spirit within the form, preventing its return to emptiness and spirituality; acting outside meditative stability invites peril. Daoism holds that the liberation of a Daoist’s corpse or a monk’s peaceful passing are both results of the primordial spirit leaving the body uncontrollably, leading to sudden, unexplained death.

The Yang Spirit is formed by cultivating and condensing the vital energy of the three Dantian fields. As stated in Volume 84 of *Daofa Huiyuan* (道法會元): “By focusing the breath to achieve softness, one can become like an infant, gather essence and energy, and transform them into a single spirit, known as the Yang Spirit” (Zhao 1988, p. 345). The Yang Spirit can gather and disperse, and it can leave the body. According to *Haiqiong Baizhenren Yulu* (海瓊白真人語錄): “Shedding the mortal form and gaining a new body, existing beyond the physical form, gathering to take shape and dispersing into energy—this is the Yang Spirit” (Bai 1988). Hu Fuchen posits: “The Yang Spirit is the highest essence of human spirit, utterly intangible and supremely ethereal” (F. Hu 1989). Thus, the emergence of the Yang Spirit from its shell, transcending materiality to become a celestial immortal, represents the ultimate goal of internal alchemy cultivation, further refining the essence, energy, and spirit within the human body. Cultivation at the transcendent stage centers primarily on the brain, accompanied by various physical and mental transformations as well as the manifestation of numerous spiritual phenomena—all pertaining to higher-level spiritual regulation and mastery. Of course, this ideal state of transcendence, as Zhong Lü also acknowledged, has been attained by few since ancient times. Here, religion intertwines with the practice of bodily refinement, inevitably resulting in complex elements that may even blur the line between truth and falsehood. Yet, as Daoism’s highest long-term endeavor to explore the mysteries of human life, the physiological and psychological insights gleaned, such as understanding the brain’s spirit-housing function and its relationship with other organs, constitute invaluable treasures for medical and psychological research.

3.2. Daoist Understanding of Brain Function

Traditional medicine contains extensive discussions on the physiology and pathology of the brain. Building on this foundational knowledge, Daoist cultivation theories offer unique, practice-derived insights that have not received sufficient emphasis in traditional medicine itself. Daoist refinement theories frequently elaborate on the brain’s connections with other parts and tissues via the Ren and Du meridians, particularly the relationship between the kidneys and the brain, such as the passage of medicine through the three barriers and the replenishment of the brain with essence. While traditional medicine also discusses the brain-kidney relationship, Daoist cultivation literature offers richer and more profound content. Having touched on these aspects earlier, we now summarize and highlight their distinctive elements below, for reference in relevant research.

3.2.1. The Physiological Structure of the Brain

Regarding the physiological structure of the brain, early Shangqing School classics such as the *Dayou Miaojing* (大有妙經) and *Huangtingjing* (黃庭經) divide the brain into nine chambers (九宮). These chambers are all situated within a region extending inward and upward, with the midpoint between the eyebrows (Yintang) as the central axis. The nine chambers are further categorized into five male and four female. Liang Qiuzi, in his commentary on the *Huangtingjing*, also mentions the brain being divided into nine lobes. Yan Luozi, a renowned Daoist of the Five Dynasties, created some of history's earliest anatomical diagrams. Among them, the *Yanluozi Shoubutu* (煙羅子首部圖) and *Yanluozi Chaozhentu* (煙羅子朝真圖) provide detailed labels of the brain's structure and the deities residing within. Additionally, the Song Dynasty text *Daoshu* (道樞) offers another description of the brain. *Daoshu Baiwenpian* (道樞·百問篇) first inherits the early theory of the nine brain chambers, stating: "Within the brain, there are nine rooms, with eight bone plates. Among these nine rooms, four are female and five are male" (Zeng 1988, p. 635). The same chapter also describes the Mud Pellet (泥丸): "Its nine rooms are distinct, each shaped square or round, measuring about an inch in size, with a circumference of nine inches, and colored white" (Zeng 1988, p. 632). The Palace of the Cavern Chamber (洞房之宮) is described as: "Located between the eyebrows, extending two inches inward, connected to the front of the Mud Pellet, shaped like a jade mountain, housing the White Origin Deity within the Purple Ultimate" (Zeng 1988, p. 633). While the "nine-inch circumference" may not align with the original theory, the portrayal of the chambers as white and the Cavern Chamber as resembling a jade mountain clearly reflects the brain's white, convoluted appearance—a description akin to anatomical observation. Jiang Sheng, integrating modern neuroscience, conducted in-depth research on Daoist theories of the brain's "nine lobes" and "nine chambers," noting: "Daoist practitioners may have performed anatomical observations on the human brain or acquired remarkable anatomical knowledge through other related means." 姜生 Tang Weixia 湯偉俠: "History of Science and Technology in Chinese Daoism" (Volume on the Northern and Southern Dynasties, Sui, Tang, and Five Dynasties Periods) 中國道教科學技術史 (南北朝隋唐五代卷), Beijing: Science Press, 北京: 科學出版社 2010, p. 1116 pages. The book also points out: "Among the world's major religious systems, only Daoism has developed a unique theory of the brain and cognition—Although it often appears in the form of religious discourse and attempts to use it to achieve the ideal of immortality." At the same time, this body of thought combines such observations with meditative visualization practices, merging tangible brain tissue with the intangible Daoist meditation theory of the nine chambers—a distinctive feature of this approach.

3.2.2. Physiological Connections Between the Brain and Other Human Organs

The physiological connections between the brain and other human tissues and organs described here also represent unique insights from Daoist cultivation theory, which are absent from traditional medical doctrines.

As early as Tao Hongjing's *Dengzhenyinjue* (登真隱訣), the brain-throat connection was documented. Tao—both a patriarch of the Shangqing tradition and a celebrated medical scholar—lends considerable authority to this account. In Volume 2 of *Dengzhenyinjue*, it states: "Visualize ten white rays of moonlight descending from the brain into the throat." The annotation adds: "Among the Nine Palaces, only the Mud Pellet Palace (Niwan Gong) has an opening connecting to the throat" (Tao 1988). This paper contends that such a description corresponds to the pathway depicted in the *Huangtingjing*, where the Red City Child (the heart-mind deity) travels from the Crimson Palace (Jiang Gong) to the Mud Pellet Palace in the brain. The *Huangtingjing* states in the "Ruode Chapter": "The

Jade Hall (i.e., the Bright Hall) and the Crimson Abode (i.e., the Crimson Palace) are all part of the Mysterious Palace. The Jade Pivot (referring to the throat bones) shines like blue jade. Gazing at the Child (the Red City Child of the Crimson Palace) sitting in repose, I ask, ‘Whose child is this within my body? Where does this person go to enter the Mud Pellet Palace?’” (Wei 1988b). While the *Huangtingjing* vaguely implies a connection between the Crimson Palace and the Mud Pellet Palace through the motion of visualized deities, Tao Hongjing’s explicit anatomical description provides a concrete correlate. This parallel suggests that such descriptions of deity traversal and bodily linkages in Daoist visualization and internal alchemy were not purely imaginative, but grounded in physiological observation.

In alchemical practices and related cultivation, the relationship between the brain and the spleen appears particularly unique and intimate. This connection, however, is seldom addressed in conventional medical theory, thereby rendering the Daoist perspective on this matter highly significant.

In Volume 15 “*Xuemaipian*,” Volume 10 “*Taiqingpian*,” and Volume 11 “*Nijinpian*” of *Daoshu* (道樞), the special relationship between the brain and the spleen is mentioned when describing the physiological functions and dynamic changes of the qi of the five zang organs. *Daoshu Xuemaipian*, Volume 15, states: “The spleen corresponds to earth, and its spirit is called Gou Chen. Its qi ascends from the back along the spine and enters the brain, transforming into saliva. Saliva is the true earth, and the remaining qi flows to the left upper lip, forming the Yellow Sprout.” (Zeng 1988, p. 684) *Daoshu Baiwenpian*, Volume 5, discusses the Yellow Sprout in alchemy: “Chunyangzi asked: ‘What is the Yellow Sprout?’ Zhengyangzi replied: ‘It is born within the brain, resides in the central palace, and is the saliva of the brain and the fluid of the spleen. The remaining qi of this fluid flows to the upper lip.’ Chunyangzi asked: ‘What is Gou Chen?’ Zhengyangzi replied: ‘It is the spleen, corresponding to earth, governed by the stems Wu and Ji. Within it lies the spirit qi, which passes between the kidneys, ascends along the spine, penetrates the muscular interstices, and enters the brain.’”⁴ Thus, the pathway linking the brain and the spleen is as follows: the spleen’s qi travels between the two kidneys, ascends along the spine, penetrates the muscular interstices, and enters the brain—essentially moving through the Governor Vessel to reach the brain. Human saliva is formed when the spleen’s qi transforms upon reaching the brain and then flows to the lips. This also serves as an explanation for the mechanism described in *Huangdi Neijing* (黃帝內經) that “the spleen’s qi connects with the mouth” (Hebei University of Chinese Medicine 1982).

The Taixi Jingweilun (胎息精微論), a text generally dated to the Tang Dynasty, offers a detailed exposition of the physiological mechanisms underlying Internal Alchemy cultivation. It elaborates on the relationship between the brain and the spleen as follows:

Inner elixir refers to fluids, water, saliva, blood, essence, brain, and qi. To nurture the spirit, one must first nurture qi; to nurture qi, one must first nurture the brain; to nurture the brain, one must first nurture essence; to nurture essence, one must first nurture blood; to nurture blood, one must first nurture saliva; to nurture saliva, one must first nurture water. Water is the quintessential fluid of the five splendors, the refined essence of primordial qi. In the mouth, beside the teeth, it is called water. When the fluid is in the mouth, it is called water, and upon swallowing to the lungs, it becomes saliva. Saliva is white, symbolizing metal, as saliva in the lungs belongs to metal and is often scorched by the heart meridian. When saliva flows into the heart, it transforms into blood. Blood is red, symbolizing fire, as the heart belongs to fire and is often subdued by the kidneys. When blood flows into the kidneys, it transforms into essence. Essence is nourishing, symbolizing water, as essence in the kidneys belongs to water and is often subdued by the brain meridian. The spleen qi corresponds to the brain as the Mud Pellet (niwan), which is earth. Two meridians descend

to the kidney essence. Essence in the kidneys is called essence, but when it flows into the Mud Pellet, it becomes the brain. The brain is yellow, symbolizing earth. The brain has two meridians that descend along the spine to three inches below the navel, known as the sea of qi. When the brain is substantial, the sea of qi flourishes; when it flourishes, primordial qi is abundant; when abundant, it is clear; when clear, the spirit is born, thus enabling the nourishment of all things. When water is exhausted, all things wither (Anonymous 1988c, pp. 446–47).

Spirit, qi, meridians, essence, blood, saliva, and water are referred to as the seven treasures in inner elixir studies (Anonymous 1988d). The preceding passage explains the generation of these seven treasures based on the principles of the five phases and the mutual conquest among the five viscera. When discussing the physiological mechanism of earth conquering water, it posits that the brain belongs to earth, the brain meridian subdues kidney essence, and the spleen qi corresponds to it as the Mud Pellet (niwan), with detailed explanations. This understanding, which classifies both the brain and spleen under the Earth phase and integrates the brain into the Five Phases-five zang-organs system, is absent in traditional medical theory. This distinctive feature is also evident in the classification of the five viscera's physiology according to the five phases and trigrams. According to Volume 23 of *Daoshu Jinxuanbasupian* (道樞·金玄八素篇), each of the five viscera governs and generates certain aspects, and the spleen corresponds to:

The spleen corresponds to the Kun (Earth) hexagram. It governs the will, connects with the mouth, pairs with the stomach, and generates flesh, brain, marrow, and saliva. Its sound is singing (Zeng 1988, p. 720).

Here, the brain and marrow are also attributed to the spleen-earth. From the perspective of traditional medicine's brain-marrow theory, the *Lingshu Jingmai* (靈樞·經脈) states: "At the beginning of human life, essence is formed first, and when essence is formed, the brain and marrow are generated" (S. Shi 1988c, p. 401). Daoist cultivation places great emphasis on returning essence to replenish the brain, which further corroborates the brain-kidney relationship recognized in traditional medicine. The argument presented here—that the spleen generates the brain and marrow, and that the brain and marrow belong to Earth—clearly represents a novel theory. The correspondence between brain vessels and spleen qi, whereby spleen qi restrains kidney essence and transforms it into the brain's "Mud Pellet," can be seen as a more refined explanation of how kidney essence transforms into brain marrow. In traditional medical theory, the six vital substances—essence, qi, fluids, humor, blood, and vessels—bear some resemblance to the "seven treasures" of inner alchemy. Among them, the production of humor is closely linked to the spleen and brain. The *Lingshu Jueqi* (靈樞·決氣) states: "When grains enter, qi fills, and the rich moisture flows into the bones. The bending and stretching of bones release moisture to nourish the brain and marrow, while the skin becomes moist—this is called humor" (S. Shi 1988c, p. 420). The phrase "when grains enter, qi fills" naturally refers to grains entering the stomach and the spleen's function of transporting and transforming essence. The mechanism by which this qi flows into the bones to nourish the brain and marrow aligns with the description in *Daoshu Baiwenpian* of the spleen's "spiritual qi passing through the spine from the kidneys, reaching the interstices, and entering the brain." Some scholars argue that this passage from the *Lingshu* introduces the concept of "brain humor" and infers that "the body's humor belongs to the brain" (Yan 1999). By comparison, the Daoist explanation appears more precise.

Regarding the relationship between the brain and the nose, the commentary on the line "All orifices are interconnected, each with its spirit" in the *Taiqing Zhonghuang Zhenjing* (太清中黃真經), Chapter 5, "Interconnected Orifices," states: "All orifices connect to all acupoints, and all acupoints connect to all vessels... The paired acupoints on the palate

connect to the nasal vessels, which in turn connect to the heart vessels. Thus, when the heart grieves, the nose turns sour. The nasal vessels also connect to the brain vessels, so when the brain is hot, the nose becomes dry" (Zhonghuang 1988). Additionally, the *Taishanglaojun Neiguanjing* (太上老君內觀經) notes: "Primordial qi enters the nose and irrigates the Mud Pellet (brain)." (Anonymous 1988a) Volume 16 of the *Daoshu Zhonghuangpian* (道樞·中黃篇) inherits this view, stating: "There are also acupoints above the brain that connect to the nasal vessels. The nasal vessels connect to the heart vessels, so when the heart grieves, the nose turns sour, and when the brain is hot, the nose becomes dry" (Zeng 1988, pp. 688–89).

3.2.3. The Mud Pellet as the Sea of Blood

Traditional medicine refers to the "Four Seas," identifying the brain as the Sea of Marrow, the stomach as the Sea of Food and Water, the Chong Mai (thoroughfare vessel) as the Sea of Blood, and the Danzhong (chest center) as the Sea of Qi. The *Lingshu·Hailun* (靈樞·海論) states: "Humans have the Sea of Marrow, the Sea of Blood, the Sea of Qi, and the Sea of Food and Water," and "The brain is the Sea of Marrow, its upper transport lies at its crown, and its lower at Fengfu (GV16)" (S. Shi 1988c, p. 421). While Daoist medicine acknowledges the brain as the reservoir of marrow, it further proposes the theory of the brain as the Sea of Blood—a unique insight into the brain's physiological functions. As early as the *Huangting Neijingjing* (黃庭內景經), the term "blood-brain" appears. The 26th chapter, "Gao Ben," states: "Ascending to the sun and moon is my path above; Yu Yi and Jie Lin harmoniously protect. Then one sees the Jade Purity, the Void and the Ancient, which can restore the countenance and replenish the blood-brain" (Wei 1988a, p. 911). *Daoshu Baiwenpian* (道樞·百問篇), Volume 5, says: "Chunyangzi asked: What is the Mud Pellet (Ni Wan), and what is its form? Zhengyangzi replied: This is the Sea of Blood. It is divided into nine chambers, each square or round, about an inch in size, with a circumference of nine inches, and white in color. One of these chambers contains blood, hence its name, the Sea of Blood" (Zeng 1988, p. 632). *Daoshu Jinxuanbasupian* (道樞·金玄八素篇), Volume 23, states: "From the Mud Pellet to the neck is the Upper Dantian, named the Brain Palace, divided into nine lobes. It is the converging sea of marrow, brain, and blood, and the gate of Xuanpin (mysterious female)" (Zeng 1988, p. 720).

Then what is the specific meaning of the Mud Pellet (Ni Wan) being referred to as "Sea of Blood" here? From the records, it does not align with the traditional medical theory of the Chong Mai as the Sea of Blood for the entire body. Instead, it refers to one of the Niwan's nine chambers "containing blood," hence named the Sea of Blood. *Daoshu Baiwenpian*, Volume 5, discusses concepts such as true qi and true water, dragon and tiger, lead and mercury, golden crow and jade rabbit in Zhonglü alchemy. Its explanation of "something within the indistinct" is:

What is referred to as the "substance" is the water within the qi. This water is formless, for from the winter solstice, yin ascends to the heavens, accumulating qi to give it life. Thus, it is born from the Supreme Ultimate and becomes yin, with three names: True Water, Lead, and the Essence of the Tiger. Its form is white, and its nature is metallic. Hence, it is called the Golden Crow of the Sun, the Jade of Stone, the Metal of Water, and the Blood of the Brain—collectively termed the Sea of Blood, residing in the brain (Zeng 1988, p. 634).

From the text, it is evident that the "blood of the brain" here belongs to the same conceptual category as the Golden Crow of the Sun, the Jade of Stone, and the Metal of Water in the analogies of inner alchemy. It represents the yin generated from the yang position of the heavens within the human body, and this yin, in turn, contains yang (true qi). It corresponds to the yang qi within the kidneys' "yin position" (true water). Furthermore, Volume 4 of *Daoshu Yuzhipian* (道樞·玉芝篇) states: "The mother's primal essence governs the Muddy Pellet, named the Sea of Blood; the father's primal essence governs the yin

position, located below the navel, named the Sea of Qi, each with divine qi interacting therein" (Zeng 1988, p. 625). Thus, the Muddy Pellet (Sea of Blood) is attributed to yin (the mother's essence)—the yin within yang—and corresponds clearly to the Sea of Qi below the navel, which belongs to yang (the father's essence)—the yang within yin. Therefore, the concept of the Muddy Pellet and Sea of Blood in inner alchemy cannot be fully equated with the anatomical and physiological blood in the human body. Instead, it carries the unique theoretical connotations of Internal Alchemy regarding human physiology—a point that requires further understanding from multiple perspectives.

3.2.4. The Brain as the Celestial Pool, Water Emanates from the Brain

Daoism refers to the three pools in the human body, with the brain designated as the Celestial Pool. Volume 5 of *Daoshu Baiwenpian* states: "The mouth is the Jade Pool, the Muddy Pellet is the Celestial Pool, and the stomach is the Central Pool" (Zeng 1988, p. 635). According to Daoist classics, the physiological functions of the Celestial Pool are as follows.

First, the Celestial Pool is the essence of all yang and the foundation of life. *Taishang Yuanbao Jintong Wuweimiaojing* (太上元寶金庭無為妙經) states: "The Queen Mother of the West said: The upper dantian's palace is the palace of all yang. The supreme essence of yang gathers in the Celestial Pool, which is the palace of the middle dantian in the brain—the root of life and the abode of primordial qi" (Anonymous 1988b). The renowned Ming dynasty physician Li Zhongzi, whose ideas were often influenced by Daoism, incorporated Daoist medical theories into his works. Regarding the brain, he noted: "The head resembles the heavens; the clear yang qi of the six bowels and the refined blood of the five viscera all converge here" (Z. Li 1987). His theory bears striking similarities to the Daoist concepts of the brain as the Celestial Pool and the Sea of Blood, suggesting it was likely shaped by Daoist medical thought, which he then synthesized with traditional medical knowledge. This is presented here for reference.

Secondly, in the celestial pool, the yang pole generates yin, with yang containing yin, thus becoming the source of water. Of course, the water here does not refer to the material water we commonly know, but rather a theoretical term in Daoist cultivation that describes the interplay of water, fire, yin, and yang. In the early Shangqing sect classic *Dayoumiaojing* (大有妙經), the upper Mud Pellet (the brain) is referred to as the "mountain source of bodily fluids." *Taishang Yuanbao Jintong Wuweimiaojing* (太上元寶金庭無為妙經) states: "The upper Mud Pellet is the fountainhead of essence" (Anonymous 1988b). The Zhonglü alchemical tradition inherited this understanding, proposing the argument that water originates from the brain. *Daoshu Baiwenpian*, Volume 5, says: "Chunyangzi asked: 'What in our body serves as fire?' Zhengyangzi replied: 'The foolish take the heart as fire, yet within the heart resides the spirit, called the furnace of heaven and earth. The cauldron of yin and yang lies beneath the heart. To regard the heart as the fireplace above—how then can it cook? This is not the way of mutual completion. Fire should rise from below, like steam in a pot. Thus, fire is the true primordial qi of the lower elixir field, which, when intensified, becomes fire, arising below the navel. Water, however, originates from the brain'" (Zeng 1988, p. 633). This principle of yin and yang containing each other is fundamental to alchemical theory and has been validated through cultivation practices. The Southern Song dynasty work *Liaomingpian* (了明篇), compiled by Mao Rixin and narrated by Master Song, includes a lyric titled "Spring in Wuling": "How can one comprehend the sevenfold return of the elixir? Once understood, what difficulty remains? In the stillness of night, preserve the spirit and gaze inward—divine water fills the Mud Pellet" (J. Shi 1988b, p. 924). This seemingly affirms the theory of "water originating from the brain" in the context of cultivation, and the medical theories embedded within it deserve attention.⁵

The Yuan Dynasty's *Taiji Jilian Neifa* (太極祭煉內法), compiled by Zheng Suonan of the Three Outsiders, is primarily a Daoist liturgical work focused on spirit-guiding rituals, yet it contains detailed discussions of medical theory. The scripture asserts: "Above the Mud Pellet (niwan) lies the celestial palace... Below the Mud Pellet are the river sources—the twelve river sources are the origins of the twelve meridians. The water of the Eastern Well and the Heavenly River is the divine water, ascending to the Mud Pellet and descending to nourish" (Zheng 1988, p. 448). It further states: "The twelve river sources are the origins of the twelve meridians in the body" (Zheng 1988, p. 457). "Between the two kidneys lies the source of the twelve meridians. Focusing solely on the head, in celestial terms, there is an acupoint above the neck where the Great Emperor of Fengdu resides—the northernmost point of the head nearing the neck. Thus, the twelve river sources lie below the Mud Pellet and brain palace, akin to heavenly rivers coursing through the sky" (Zheng 1988, p. 458). The analogy of the brain as the celestial river and the source of the twelve rivers aligns with the view of the brain as a heavenly pool and the origin of water, bearing close connections to traditional Chinese meridian theory.

In the Yuan Dynasty, Lin Yuan composed the *Gushenpian* (穀神篇) in two volumes. Uniquely regarding primordial qi as the foundational substance of the human body, the work formed an independent school of thought and may have inherited the Southern School tradition initiated by Zhang Ziyang (J. Ren 1991). Among its contents, the chapter "Theory of Primordial Qi" elaborates that humans are formed through the transformation of primordial qi, offering distinctive insights into the genesis of internal organs, flesh and blood, tendons and vessels, limbs, and bones—along with discussions of spiritual phenomena, disease mechanisms, and cultivation principles. This chapter details the physiological transformations of primordial qi extensively, including the notion that the brain is the "spring of spirit." It describes how primordial qi divides into two manifestations: qi and liquid. Qi corresponds to spirit and mercury, while "the liquid embodies nature, essence, and true lead. Through tranquil cultivation, it returns internally to the kidneys as essence, moves to the liver as the ethereal soul, to the heart as blood, to the spleen as rich nourishment, to the pericardium as the nourishing vessels, to the lungs as the corporeal soul, to the triple burner as defensive qi, to the interstices as moving qi, and to the brain as the spring of spirit. Descending to the nose, it becomes jade nectar; reaching the throat and tongue, it turns into spiritual liquid. Upon entering the stomach and being drawn to the heart, it awaits the circulation of the nutritive and defensive qi throughout the body. It then reunites with the various liquids from food and water in the large intestine, where it separates into clear and turbid portions. The clear qi is transported to the small intestine, converges at the kidneys, and permeates the bladder, which returns it to the sea of origin. The sea of origin generates vitality ceaselessly day and night. At this moment, it is said that the spirit returns to qi, and qi reunites with liquid" (Lin 1988). This passage meticulously depicts the physiological circulation and transformation of liquid derived from primordial qi across the body's organs and tissues. The transformation of this liquid into the "spring of spirit" in the brain is but one part of this process, differing from earlier theories. Many of these ideas align more closely with understandings of general human physiology, rendering them particularly noteworthy.

3.3. Li Shizhen's Incorporation of Daoist Theories

Daoism emphasizes the reverence for life, rooted in its cultivation practices and lived experiences. The profound understanding of the brain in Daoist alchemy and related cultivation techniques, as discussed above, is undoubtedly significant. Given the vastness of Daoist texts, this exploration of the brain's role in Internal Alchemy and cultivation practices, while not exhaustive, sufficiently demonstrates Daoism's enduring focus on the

brain's spirit-housing function and its physiological dimensions. These insights not only align with traditional medical theories but also supplement and enrich the conventional understanding of the brain, clarifying the origins of the concept that "the brain is the abode of the original spirit."

Traditional Chinese medical theory emphasizes holism and the connections among various tissues, viewing the human life system through the framework of the five zang-organs and six fu-organs with the heart as its core. It integrates the brain's functions into this system from the perspective of the unity and interrelation between the brain and the internal organs, forming a medical viewpoint centered on the concept that "the heart governs the spirit." By contrast, Daoist cultivation studies have long explored the physiological functions and even the structure of the brain, yielding numerous innovative insights. One significant achievement is the proposition of the "brain governs the spirit" theory, which positions the brain as the core of human life—existing alongside traditional medicine's "the heart governs the spirit" and the theory of the five zang and six fu organs. Moreover, the coexistence of these two theories—"the brain governs the spirit" and "the heart governs the spirit"—is not contradictory (Yongming Liu 2005). The phrase "the brain is the residence of the primordial spirit" precisely encapsulates the Daoist understanding of "the brain governs the spirit." On this issue, beyond the closely related investigations mentioned earlier, Daoist texts contain a wealth of relevant content. Below, several typical examples with similar or identical expressions are cited to illustrate the origins of this concept.

The *Laozi Zhongjing* (老子中經), dating from before the Han-Wei period, quotes the *Yulijing* (玉曆經) as saying: "The Lord of the Muddy Pellet is the brain's spirit" (Zang 1988b).

The *Huangting Neijingjing*, from before the Eastern Jin dynasty, states: "The supreme Dao is not complicated; it preserves the true. The Muddy Pellet and all joints have spirits. The hair and (spirit) are named Canghua and Taiyuan; the brain's spirit, the essence root, is named the Muddy Pellet... The spirit of the face reveres the Muddy Pellet" (Anonymous 1988f). Liangqiuzi's commentary further elaborates: "The brain's spirit is the dantian, the master of all spirits" (Anonymous 1988f). This further reveals the "sovereign" status of the upper dantian's brain spirit, the Muddy Pellet, within the human body. In traditional thought, the numerous "bodily spirits" originally symbolized the physiological functions of their respective organs. The brain spirit, as the "ruler of all spirits," correspondingly aligns with higher-order physiological functions. Thus, the *Huangtingjing*'s description of the seven spirits of the head and face actually reflects the medical understanding of "the brain governs the spirit."

Tao Hongjing's *Zhengao Fushuxu* (真誥·服術敘) Volume 6 describes truth-cultivation methods dating to the Jin Dynasty, contains passages such as: "guarding the true cinnabar in the crimson palace, paying homage to the primordial spirit in the Mud Pellet (niwan), preserving bodily fluids without depletion, sealing the esoteric techniques at the life gate..."⁶ and states that practicing these can rival the longevity of metal and stone. From the phrase "paying homage to the primordial spirit in the Mud Pellet," it can be inferred that the primordial spirit resides in the Mud Pellet brain palace, aligning with the idea that "the brain is the abode of the primordial spirit." This reference to the brain's spirit as the "primordial spirit" appears to be the earliest recorded instance.

Tang Dynasty's Wang Xuanhe's *Sandongzhunang Fushipin* (三洞珠囊·服食品) Volume 3 cites the *Dayoushangjing* (大有上經), stating: "The Mud Pellet (niwan), the Heavenly Emperor of the Three Ones, is the spiritual ancestor of the body, the root of life for all spirits, the mountain source of bodily fluids, and the jade chamber of soul essence. Thus, the stomach pool is square to receive matter, while the brain palace is round and empty to

accommodate truth. Ten thousand hairs stand erect, a thousand pores emit mist, virtue encompasses heaven and earth, merging into the great mystery—hence it is called the Mud Pellet. The Mud Pellet is the supreme spirit of the physical form” (Wang 1988). This passage illustrates that the Mud Pellet harbors the body’s supreme divine spirit and fulfills vital physiological functions.

The *Taishanglaojun Neiguanjing* (太上老君內觀經), a text originating from the Tang Dynasty, also elevates the Mud Pellet spirit to the highest status, stating: “The Supreme Unity Emperor resides in the head, called the Mud Pellet Lord, who commands all spirits” (Zang 1988a). Subsequently, numerous Daoist scriptures emphatically express the same understanding.

For instance, during the Five Dynasties, Yan Luozi offered an explanation of the Mud Pellet. Under the title “Mud Pellet,” a marginal note reads: “Also named Valley Spirit, also called the Lower Mysterious Palace.” The explanation states: “The brain is the ancestor of the body, the meeting place of all spirits, in harmony with the great mystery—hence it is called the Mud Pellet” (Anonymous 1988e).

Song Dynasty’s Chen Jingyuan’s *Durenjingjizhu* (度人經集註) states: “The Heavenly Venerable resides in the Shangqing Palace, titled the Supreme Unity Lord; descending into the human body, he becomes the Mud Pellet Lord” (Chen 1988). This indicates that the Mud Pellet Lord serves as the heaven within the human body, holding supreme nobility akin to the Primordial Heavenly Venerable, the highest divine being in the celestial realm. This metaphor emphasizes the paramount importance of the brain’s spirit in the human body.

Southern Song Dynasty’s Zeng Zao’s *Daoshu Shenjingpian* (道樞·神景篇) Volume 9 states: “The Celestial Valley is the palace of the Mud Pellet, red above, black below, green to the left, white to the right, with yellow in the center. This is the abode of the primordial spirit. The Valley Spirit is the utmost spiritual essence of the True One—it is our nature, while the heart serves as its function” (Zeng 1988, p. 654). In essence, this passage asserts “the Celestial Valley is the palace of the Mud Pellet. . . the abode of the primordial spirit.” Moreover, it explicitly states here that the “heart” acts as the functional manifestation of the Mud Pellet spirit.

Additionally, *Daoshu Guantianpian* (道樞·觀天篇) Volume 10 states: “The upper celestial valley, the palace of the Mud Pellet, is where ten thousand spirits gather” (Zeng 1988, p. 661).

Bai Yuchan, the Fifth Patriarch of the Southern School, wrote in his Treatise on the Immortality of the Valley Spirit:

The fifth patriarch of the Southern School, Bai Yuchan, wrote in his “Treatise on the Immortality of the Valley Spirit”: “The ‘valley’ refers to the celestial valley, and the ‘spirit’ refers to the primordial spirit of the body. The celestial valley harbors creation and embraces the void; the earthly valley contains all things and bears mountains and rivers. Humans, sharing the same endowment as heaven and earth, also possess such a valley. This valley stores the true one and houses the primordial spirit. Thus, the head has nine palaces, corresponding to the nine heavens. The central palace is called the ‘Mud Pellet’ (Niwan), also known as the ‘Yellow Court,’ or ‘Kunlun,’ or ‘Celestial Valley.’ It has many names but is the dwelling place of the primordial spirit. Empty as a valley, it is where the spirit resides, hence called the ‘valley spirit.’ When the spirit remains, there is life; when it departs, there is death” (T. Shi 1988d). In short: “The Mud Pellet. . . is the palace where the primordial spirit resides.” The presence or absence of this spirit determines life and death. Further citing the *Lingshu Neijing* (靈樞內經), it elaborates: “The primordial spirit of the celestial valley, guarded by itself, remains true. In the human body, above lies the celestial valley, the Mud Pellet, the abode of the spirit; in the middle lies the responding valley, the crimson palace, the abode of qi; below lies the numinous valley, the gate of origin, the abode of

essence. The celestial valley, the primordial palace, is the chamber of the primordial spirit, where spirituality resides—the essence of the spirit” (T. Shi 1988d). The essence, qi, and spirit of the human body each have their dwellings, with the core being “the celestial valley Mud Pellet, the abode of the spirit. . . the chamber of the primordial spirit, where spirituality resides—the essence of the spirit.” Additionally, in Bai Yuchan’s annotation to the *Xuanzhuge* in Volume 70 of the *Daofa Huiyuan*, states: “The Mud Pellet is the gathering place of all spirits, the dwelling of the Supreme Sovereign” (Zhao 1988, p. 235).

While the Daoist cultivation tradition holds a multifaceted understanding of “spirit,” encompassing both physiologically personified organ-specific body deities and the psychological or mental-level heart and brain spirits (Yongming Liu 2004), the preceding discussion reveals that Daoist texts have long recognized the brain as the abode of the spirit or primordial spirit, with numerous explicit assertions. This confirms that such awareness was already explicit in Daoist visualization practices prior to the Eastern Jin Dynasty, and later alchemical works provided increasingly abundant and precise descriptions. As noted earlier, the most definitive statements identifying the primordial spirit’s residence in the Mud Pellet brain palace emerged no later than the Jin Dynasty; this view grew more prevalent following the rise of Daoist Internal Alchemy during the Tang and Song Dynasties, giving rise to terms like “the celestial valley Mud Pellet as the abode of the primordial spirit” or “the palace housing the spirit”. The *Daoshu*, compiled by Zeng Zao in the early Southern Song Dynasty from earlier writings, and Bai Yuchan, also of the Southern Song period, articulated the idea of the brain as the abode of the primordial spirit with utmost clarity. Later Daoist traditions inherited this view without dispute. For example, Liu Yiming of the Qing Dynasty wrote in his *Wugenshujie* (無根樹解): “Refining essence into qi is the first pass, refining qi into spirit the middle pass, and refining spirit into emptiness the highest pass. Beyond these three passes, the spirit merges with the great void, moving freely without hindrance—this is called ‘penetrating the Mud Pellet,’ for the Mud Pellet palace is the dwelling place of the spirit” (Yiming Liu 1996).

4. Dialogues and Reflections: The Interplay Between Daoist Wisdom and TCM Development

The Daoist understanding of the brain exerted an influence on traditional Chinese medicine from an early period. *Suwenyipian* (素問遺篇), a text originating before the Song Dynasty, integrates Daoist insights with the medical theories of the *Suwen* (素問), and is regarded as a work by Daoist physicians (Yongming Liu 2008). Initially, it was rejected by traditional physicians due to its prominent theories of ghost-induced illnesses and incantation-based healing. However, it gradually gained acceptance and was later incorporated into the *Suwen*. In reality, *Suwenyipian* made significant contributions to medicine.⁷ A passage from the *Suwenyipian Benbinglun* states, “The heart is the sovereign organ, from which divine intelligence emanates. When the spirit loses its position, it wanders to the upper dantian, beneath the Muddy Pellet Palace of the Supreme Unity Emperor” (Shandong University of Chinese Medicine 2009). This passage is derived from the Daoist scripture *Taishanglaojun Neiguanjing*. The Ming-dynasty physician Zhang Jingyue—who lived slightly later than Li Shizhen but was more celebrated for his medical theories—frequently drew on Daoist knowledge in his works. In annotating the aforementioned passage from *Suwenyipian*—“When the spirit loses its position, it wanders to the upper dantian. . .”—he wrote: “The human brain is the sea of marrow, known as the upper dantian, the abode of the Supreme Unity Emperor, also called the Muddy Pellet Lord, who governs all spirits. When the divine intelligence of the heart loses its position, it drifts here” (J. Zhang 1965). This annotation further elaborated on the original text’s meaning, becoming a widely cited theoretical basis among physicians discussing the brain. However, tracing its origins, Zhang

Jingyue merely quoted the commentary from the *Daozang* version of *Suwenyipian*.⁸ This demonstrates that Li Shizhen was not the only Ming-dynasty physician to endorse Daoist theories about the brain.

In the *Compendium of Materia Medica*, under the “Discoveries” section for Xinyi (Magnolia flower), Li Shizhen of the Ming Dynasty wrote:

“The nose connects with the heavens. The heavens represent the head and the lungs. The lungs open into the nose, and the Yangming stomach meridian circles the nose and ascends. The brain is the residence of the primordial spirit, and the nose is the orifice of the life gate. When a person’s central qi is insufficient and clear yang fails to rise, the head droops, and the nine orifices become obstructed” (S. Li 1982b, p. 1936).

In the field of traditional Chinese medicine, Li Shizhen’s assertion marks the first explicit enunciation of the medical viewpoint that “the brain is the residence of the primordial spirit.” However, a retrospective examination of Daoist texts reveals this to be a long-standing, inherent understanding within Daoism. To compile the *Compendium of Materia Medica*, Li Shizhen engaged in extensive and wide-ranging textual research, encompassing Daoist scriptures closely intertwined with medical knowledge. As quoted by Li Shizhen in the preface to the *Compendium of Materia Medica*: “I, Shizhen, am but a humble man from Jingchu. Frail in youth and dull by nature, I grew to immerse myself in books as if savoring sugarcane candy. Thus, I cast my net wide across texts, gathering insights from all schools. Whenever I found even slight merit in the classics, philosophy, phonetics, agriculture, medicine, divination, astrology, or poetry, I would jot down a few words. . . Over thirty years, I consulted over eight hundred works, revising my manuscript three times” (S. Li 1982a). In the *Compendium of Materia Medica*, besides heavily referencing Daoist physician Tao Hongjing’s discussions on medicinal substances, works such as *Zhouyi Cantongqi*, *Wufujing*, *Baopuzi*, *Shenxianzhuan*, the alchemical materia medica *Danfang Jingyuan*, and Li Pengfei’s *Sanyuancanzan Yanshouhu* were also cited. It is therefore natural and indisputable that his claim that “the brain is the residence of the primordial spirit” derived from Daoism. Furthermore, Li Shizhen’s holistic explanation—“The breath of the nose connects to heaven. Heaven is the head and the lungs. The lungs open into the nose, and the Yangming stomach meridian encircles the nose and ascends. The brain is the residence of the primordial spirit, while the nose is the orifice of the gate of life. When a person’s central qi is insufficient and clear yang fails to rise, the head droops, and the nine orifices become dysfunctional”—closely aligns with the statement in the *Taishanglaojun Neiguanjing*: “Primordial qi enters the nose, irrigating the mud-ball palace.” Similarly, in Volume 52 of the *Compendium of Materia Medica*’s “Human Body” section, under the entry for “Heavenly Spirit Cover,” Li Shizhen notes: “A person’s head is round like a cover, vaulted like heaven, housing the mud-ball palace where divine spirits gather. Practitioners of cultivation draw from Kan to replenish Li, restoring pure Qian; when the sacred fetus is perfected, they open the cranial fontanel to exit and enter. Hence, it is called the Heavenly Spirit Cover, among other names” (S. Li 1982b, p. 2961). These details undoubtedly serve as further conclusive evidence that the concept of “the brain is the residence of the primordial spirit” originates from Daoism.

5. Conclusions

Li Shizhen’s introduction of the Daoist concept that “The Brain is the Abode of the Original Spirit” into traditional Chinese medicine holds profound significance for the development of the latter. The difference between Daoist brain theory and traditional medicine lies in that it regards the brain as an independent center of consciousness, yet “brain-governed” coexists harmoniously with “heart-governed.” Li Shizhen’s key contribution was to integrate this Daoist insight into the framework of Chinese medicine while

fully upholding the classical theory of “heart-governed.” This integration embodies the historical interaction and mutual enrichment between Daoism and traditional Chinese medicine, offering important research directions for the advancement of modern Chinese medicine and the study of the mind–body relationship.

However, it is worth noting that while Li Shizhen cited the Daoist concept of “the brain as the residence of the primordial spirit,” this was primarily an expression of agreement. Throughout his medical theories, he consistently upheld the traditional doctrine of “the heart governing the spirit” rather than “the brain governing the spirit.” Evidently, after thousands of years of practical validation and theoretical refinement, traditional Chinese medicine has constructed a systematic and comprehensive medical framework centered on the “heart governing the spirit” doctrine, forging a vast and profound medical treasure trove that is both clinically effective and inexhaustible. On this established foundation, effectively integrating the important insight that “the brain as the residence of the primordial spirit” (the brain governing the spirit) constitutes a medical undertaking that demands in-depth exploration and rigorous research—it cannot be achieved overnight, nor should it be rushed.⁹

Numerous studies have shown that Daoist medical resources are extraordinarily rich; indeed, it would be difficult to grasp the scientific origins of the development of ancient Chinese medicine without researching Daoist medicine. The *Dongyibaojian Neijingpian* states: “Daoism takes serenity and self-cultivation as its foundation, while medicine relies on remedies and acupuncture for treatment. Thus, Daoism attains the essence, and medicine grasps the coarse” (Heo 1995). This perspective deserves close attention. Furthermore, the methodological approach of “understanding ancient history through religion” is equally necessary and effective in the study of ancient medical history (Jiang 2016).

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Notes

- ¹ Hu, Fuchen 胡孚琛: “Unveiling Daoist Inner Alchemy,” 道教內丹學揭祕 published in *Studies in World Religions* 世界宗教研究, No. 4, 1997, p. 89. The article also notes: “Inner alchemy is a discipline awaiting further research, and its academic achievements will contribute to advancing progress in various fields such as philosophy, physiological psychology, psychosomatic medicine, brain science, and religious studies.”
- ² For an explanation and commentary on Zhonglü’s internal alchemy theory and cultivation methods, refer to Section 3 of Chapter 21, “The Health-Preserving Thought in Zhonglü’s Internal Alchemy Theory,” in Jiang Sheng 姜生 and Tang Weixia 湯偉俠 (eds.), *The History of Science and Technology in Chinese Daoism* 中國道教科學技術史 (南北朝隋唐五代卷) (Volume on the Northern and Southern Dynasties, Sui, Tang, and Five Dynasties), Beijing: Science Press, 2010, pp. 661–76.
- ³ Professor Li Shaobo 李少波 of Gansu University of Traditional Chinese Medicine, a recipient of the 2009 Achievement Award from the Chinese Society of Traditional Chinese Medicine, dedicated his life to the practice, research, and teaching of health preservation. His book “The Science of True Qi Circulation” contains similar cultivation practices for reference. For instance, it states: “After the Governor Vessel becomes unobstructed, with one exhalation, true qi enters the dantian, and with one inhalation, true qi enters the brain. This cycle of inhalation and exhalation forms the Conception and Governor Vessel circulation, anciently

termed the ‘Small Heavenly Cycle’... The essence continuously nourishes the brain and marrow, enhancing the instinctual power of the cerebral cortex. Various neurotic symptoms caused by kidney essence depletion and endocrine disorders—such as dizziness, tinnitus, insomnia, forgetfulness, sore waist and weak legs, irregular menstruation, mental confusion, mood swings, palpitations, shortness of breath, and decreased libido—can all be improved. Persistent practice may lead to recovery. Some individuals with long-standing stubborn ailments due to meridian blockages may experience sudden healing, with remarkably evident effects. Ordinary practitioners often exhibit renewed vitality and agility, appearing as entirely different people.” (Li Shaobo 李少波, “The Science of True Qi Circulation,” 真氣運行學 Beijing: China Drama Press, 中國戲劇出版社 2002, p. 49.).

⁴ The 20th volume of the *Daozang* 道藏, pages 633–4. The 21st chapter of Ten Books on Cultivating Perfection: Miscellaneous Writings and Shortcuts 修真十書雜著捷徑, titled Master Dou of the Western Peak’s Guide to Cultivating Perfection 西嶽寶先生修真指南, states: “The spleen is called Gouchen, the earth element residing at the center, where the Great Sovereign of Longevity dwells. Its qi ascends from the right side of the spine into the brain, transforming into saliva, named ‘True Earth.’ The remaining qi flows into the lips and cheeks, known as the ‘Jade Pond.’” This account differs slightly. (The 4th volume of the *Daozang*, page 700).

⁵ (Ming Dynasty) Li Zhongzi (明) 李中梓: “Essentials of Medical Studies · Inability to Eat (醫宗必讀·不能食),” Volume 10 states: “Scholar Xu remarked: Those who cannot eat should not be treated solely for spleen issues. When kidney qi is deficient and unable to digest food, it is like water and grains in a cauldron lacking the fire beneath—how can they cook? Yan Yonghe noted: Excessive sexual labor depletes true yang, which fails to warm the spleen earth. The central region stagnates, leading to loss of appetite, bloating, or undigested pain. One must understand the need to tonify the kidneys. If kidney qi is robust, the fire in the dantian blazes, warming the spleen earth. With the spleen earth harmonized, the middle burner regulates itself, the diaphragm opens, and eating becomes possible.” Additionally, “Essentials of Medical Studies · Dysentery (醫宗必讀·痢疾),” Volume 7 states: “When the fire of the life gate declines and fails to generate earth, ginseng and aconite must urgently be used to restore yang. ... If the spleen earth is severely deficient, tonify its mother—is this not tonifying fire?” The perspective that fire resides below, in the life gate, aligns with the theories of internal alchemy.

⁶ *Daozang* 道藏, Vol. 20, p. 523. Note: The academic community generally agrees that Zhen Gao 真誥 dates from the Jin Dynasty. As Chen Guofu 陳國符 pointed out: “Chapters 1 to 18 of Zhen Gao were indeed written by Jin Dynasty authors, while the annotations were added by Tao Hongjing 陶弘景. Chapters 19 and 20 were composed by Tao Hongjing.” (Investigation of the Origins of the *Daozang* 道藏源流考, Beijing: Zhonghua Book Company, 1963, p. 234).

⁷ Contemporary renowned medical expert Professor Gu Zhishan 顧植山 highly values the “Supplementary Chapters of the Plain Questions 素問遺篇,” particularly theories such as “Three-Year Transformation into Epidemics” 三年化疫 within it. In his work “Re-evaluating the Supplementary Chapters of the Yellow Emperor’s Inner Canon: Plain Questions,” he argued: “The greatest achievement of the ‘Supplementary Chapters of the Plain Questions’ lies in breaking free from the constraints of the seven major discourses on the theory of five movements and six qi in the ‘Plain Questions’, proposing many original new insights. It has written a glorious page in the history of the development of the theory of five movements and six qi, sufficiently compensating for the shortcomings of the seven major discourses. The occurrence of SARS demonstrated that the ‘Supplementary Chapters of the Plain Questions’ correctly understood the patterns of epidemic outbreaks. Had we paid attention to this pattern in the theory of five movements and six qi when drought and higher temperatures appeared in 2000, we might have been able to predict the ‘Metal Epidemic’ that emerged between 2002 and 2003. Valuing this precious experience and further exploring and researching it holds significant importance for future epidemic prevention.” (Published in “Journal of Traditional Chinese Medicine 中醫雜誌,” Issue 11, 2004, p. 869).

⁸ The annotation in the “Supplementary Chapters of the Plain Questions” from the “*Daozang*” states: “The Supreme Unity Emperor in the head is called the Mud Pellet Lord, who governs all spirits (also). The monarch’s office, when divine intelligence loses its position, wanders to this place, not guarding the heart’s position” (*Daozang*, Vol. 21, p. 483).

⁹ Wang Hongtu 王洪圖, chief editor of Comprehensive Research on the Huangdi Neijing 黃帝內經研究大成, argues: “Viewing things from a historical perspective, the theory of visceral manifestation in traditional Chinese medicine also requires refinement and advancement. For instance, deeper research on the brain is necessary. Regarding such issues, we should neither turn a blind eye nor rush for quick results.” (Wang Hongtu, chief editor: Comprehensive Research on the Huangdi Neijing, Vol. 2, Beijing: Beijing Publishing House, 1997, pp. 1086–87.) He further states: “For now, on the question of which organ governs mental activities, we should naturally adhere to the view that ‘the heart governs the spirit.’ Additionally, we cannot simultaneously uphold the idea that ‘the heart governs the spirit’ while also affirming that ‘intelligence and memory reside not in the heart but in the brain’ as a significant development in traditional Chinese medical theory, because such contradictory assertions not only fail to advance the theory but also introduce theoretical confusion”.

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