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# A Study from the Perspective of Chinese Traditional Culture, Social Medicine, and the Healthy China Strategy: The Imperative Revival of Chinese Shoulder-Carrying Culture - A Solution to China's Dilemma of Aging Load-Bearing Laborers

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## Abstract

[Objective] China is currently facing critical social issues such as an aging population, the loss of Chinese agricultural workers and urban load-bearing laborers, and the prevalence of lumbar spondylosis among the youth. To comprehend and address these problems, an investigation of the facts and historical context is necessary. This study explores ancient and contemporary perspectives, spanning a timeline of 5000 years. Additionally, it employs social medicine for the first time to examine the correlation between social factors and health. The objective is to analyze the contemporary social issues in China and propose the latest personal views and solutions.

[Methods] Over a span of six years, the author conducted a study on “Chinese shoulder-carrying culture and the formation of the traditional spine” from the standpoint of social medicine. The findings revealed that “Chinese shoulder-carrying culture can strengthen the body and prevent lumbar spondylosis.” Subsequently, the author applied the “biology-psychology-social medicine” model to address China's current social problems. This involved comparing

different generations horizontally and vertically, employing methods such as historical review, on-site investigation, logical analysis, observation, literature review, interviews, comparisons, and dialectics. The author also examined the perspectives of Chinese scholars and experts regarding “the aging of Chinese agricultural workers and urban load-bearing laborers” and analyzed the social factors contributing to this issue, along with potential countermeasures. The recent surge in social problems is closely related to the disappearance of Chinese shoulder-carrying culture, indicating a causal relationship.

[Results] Prior to 1980, Chinese society strongly embraced shoulder-carrying culture. However, after 1980, the influence of this culture diminished. Consequently, the first-generation Chinese migrant workers developed shoulder-carrying skills and engaged in load-bearing work, both in urban and rural areas. In contrast, the second-generation Chinese migrant workers born after 1980 (referred to as the new-generation migrant workers) gradually moved away from agricultural activities. Physical examinations reveal that elderly individuals who have been accustomed to shoulder-carrying possess distinct body structures, particularly in their spines, which contribute to significantly better physical health compared to modern individuals who do not engage in shoulder-carrying. Over the past 40 years, none of the descendants of the Chinese population have actively embraced practical shoulder-carrying exercises and weight training, leading to the inevitable emergence of the “elderly agriculture” phenomenon with distinct Chinese characteristics in recent times.

[Conclusion] Hence, it is imperative for China to foster the next generation of agricultural workers and urban load-bearing laborers. Modern science should reassess the significance of Chinese shoulder-carrying culture and its impact on the traditional spine. Moreover, it is crucial to correct the public’s misconception regarding “Chinese shoulder-carrying culture and the traditional spine” and acknowledge the fundamental distinction between labor and sports, as well as the importance of spinal stability. China should undertake appropriate measures to revive the traditional practice of shoulder-carrying work, with the aim of cultivating young successors capable of shouldering heavy loads and engaging in physically demanding work. This approach will not only strengthen their bodies and prevent lumbar spondylosis but also alleviate mental disorders, contributing to a healthier China. Restoring the traditional shoulder-carrying culture is of utmost significance for the survival and profound rejuvenation of our Chinese nation, as it addresses a range of critical social issues. Consequently, it becomes essential to innovate in both theory and practice to effectively integrate “shoulder-carrying labor” into the daily lives of people, emphasizing the importance of rural and urban community development in the new era and labor education within schools.

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Spondylosis, Aging in China, Inadequate Peasants, One-Child, Modern Industrialization, Agrarian Culture, Traditional Chinese Backbone, Scholarly Culture, Malformed Aesthetics, Social Medicine, Western Sports, Western Labor, Shoulder-Pole, Free-Range Culture, Captive Culture, Three-Inch “Golden Lotuses”.

## Background

As Liu Cixin, a Chinese science-fiction author, writes in “Wandering Earth,” “At first, no one cared about this disaster; it was just a wildfire, a drought, the extinction of a species, the disappearance of a city. Until this disaster touches all of us.”

Over the past three years, the COVID-19 epidemic has taught us a great deal. Science alone cannot solve every problem, and scientific progress may even lead to disasters. What’s most alarming is our lack of understanding regarding the causes of these disasters. Many of them had been silently brewing for decades, only to be discovered when it was already too late.

This sentence echoes Hegel’s “Philosophy of History.” The only lesson mankind has truly learned from history is that it has learned nothing from history. The word “lesson” holds different meanings before and after. The latter refers to the insights humanity has gained from various historical events, while the former encompasses the generalization of these lessons and the realization that mankind consistently repeats the same mistakes.

Yu Kongjian, dean of the Graduate School of Landscape Architecture at Peking University, stated in a speech on the renowned Chinese TV program YiXi, “For over a thousand years, rural girls in China were considered unsophisticated, and only girls with three-inch ‘golden lotuses’ were considered beautiful. For instance, the two girls depicted here had completely contrasting images. One girl had a dark complexion, large feet, and a strong physique, while the other girl had fair skin and small feet (three-inch ‘golden lotuses’).” It was believed that the latter represented the epitome of Chinese beauty, as a proper lady should not stand straight as it was deemed indecent.

This perception of beauty was established by a select group of urban elites throughout millennia. In their quest to distinguish themselves from the rural populace, these urban aristocrats defined the standards of beauty and taste, thereby turning ordinary people into abnormalities, healthy individuals into unhealthy ones, and laborers into those who were deemed unproductive. Such treatment of individuals became the norm. You may find solace in the fact that foot-binding is no longer practiced. However, why were the Chinese people foolish enough to bind their feet a century ago? Perhaps, a hundred years from now, someone will question why the Chinese of today are still foolishly binding their feet. We are still influenced by the deformed aesthetic and values associated with small feet.

The same applies to our distorted aesthetic attitude and values towards Mother Nature. These issues permeate throughout China’s rivers. If you walk just 500 meters from here, you will encounter the Huangpu River in Shanghai Municipality. The once-in-500-year and once-in-1,000-year flood walls, constructed with cement to prevent flooding, have failed to address the worsening floods each year. Have you ever noticed a peculiar phenomenon? This occurs because

nature's feet are bound, preventing it from effectively regulating floods on its own.

With the advancements in modern science and technology, the discovery and utilization of electric energy have propelled humanity into the era of electrification, surpassing the age of steam engines. It signifies a pinnacle in the history of human pursuit for self-liberation [1]. However, as economic development and social progress unfold, while individuals rejoice in being freed from arduous physical labor, they unknowingly find themselves immersed in an era of “over-nutrition and under-exercise.” Consequently, this has resulted in a decline in physical fitness and an increased vulnerability to “chronic non-communicable epidemics” [2].

As people celebrate the technological progress achieved over more than four decades of reform and opening up, they are dismayed by the widespread and youthful occurrence of lumbar spondylosis both in China and around the world. In recent years, there has been a significant rise in lumbar spondylosis cases among the younger population. The new generation of Chinese individuals faces an array of profound social issues, including deteriorating physical fitness and being trapped in a vicious cycle. Previously, most patients with lumbar spine diseases were between the ages of 40 and 60. However, lumbar spondylosis has now become a prevalent and frequently occurring condition among young people. This phenomenon triggers contemplation [3].

Nevertheless, it is widely believed that cell phones and computers have become indispensable devices due to technological progress and societal development. College students, white-collar workers, and individuals in specialized occupations can often be found engrossed in their cell phones with their heads down or sitting in offices for prolonged periods. They lead a sedentary lifestyle for most of the day, which is a contributing factor to various chronic diseases.

An analysis of the economic burden of chronic diseases in 2017 revealed that individuals over 60 years old accounted for 13.3% of China's population, while those between 35 and 60 years old made up 38.2%. The cost of prevention and treatment of chronic diseases among the 35-60 age group, which constituted 38.2% of the total population, reached a staggering 43.9%. This data also highlights the increasing prevalence of chronic diseases among younger individuals, demanding attention. The burden of chronic diseases in China is on the rise, both in terms of prevalence and mortality, particularly among the younger population. It poses a significant challenge to the health of Chinese residents and public health, necessitating attention from individuals and society at large [4].

However, due to the prevalence of unhealthy lifestyles among Chinese residents, a significant population with CVD risk factors, accelerated population aging, and other factors, the incidence and mortality rates of CVD continue to rise in China. The turning point for a decline in disease burden has not yet manifested. In terms of mortality proportions among urban and rural residents, CVD still holds the highest rank.

In 2020, CVD accounted for 48.00% and 45.86% of deaths in rural and urban areas, respectively. Two out of every five deaths are attributed to CVD. It is estimated that there are approximately 330 million individuals currently affected by CVD in China, including 13 million stroke cases, 11.39 million coronary heart disease cases, 8.9 million heart failure cases, 5 million pulmonary heart disease cases, 4.87 million atrial fibrillation cases, 2.5 million rheumatic heart disease cases, 2 million congenital heart disease cases, 45.3 million peripheral artery disease cases, and 245 million hypertension cases.

China has entered a new stage of transformation, shifting from high-speed development to high-quality development. Therefore, the prevention and control of CVD in China should also transition from previous focus on scale growth to strategies that prioritize strategic and key technological advancements. This shift is crucial in order to curb the increasing trend of CVD incidence and mortality rates [5].

According to China Central Television, the incidence and severity of scoliosis in children and adolescents in China have been on the rise in recent years. Statistics indicate that the number of children and adolescents affected by scoliosis in China exceeds 5 million, with an annual increase of 300,000 cases. Scoliosis has now become the third major health issue among children and adolescents in China, following obesity and myopia. Without timely treatment and intervention, the degree of deformity can worsen, impacting their ability to live, study, and work.

Unfortunately, many scoliosis patients in China experience delays in clinical treatment, leading to increased treatment difficulty and costs, placing a significant burden on families and society. Data census studies have reported an incidence rate of scoliosis at 1.06% in our country, considering the substantial population of over 300 million children and adolescents under the age of 15. Consequently, the number of adolescents with scoliosis is remarkably high, highlighting the urgency for scoliosis prevention and control, as well as addressing poor posture [6].

Adolescent idiopathic scoliosis (AIS) is a three-dimensional spinal deformity affecting the coronal, sagittal, and horizontal planes. It typically emerges during adolescence, and its precise pathogenesis remains undetermined [7]. Adolescence is a crucial stage of growth and development. Recent research indicates a gradual worsening of abnormal body posture among adolescents in our country, with the incidence of scoliosis increasing from 1% to 3%. This has garnered significant attention across various sectors [8].

In Stage 1, a total of 73,992 participants aged 6-16 years were selected. In Stage 2, 17,524 individuals underwent screening and diagnosis. The weighted prevalence of any psychiatric disorder was found to be 17.5%. Significant differences in the prevalence of psychiatric disorders were observed based on sex, age groups, and developed vs. developing areas. However, no difference was found between rural and urban areas. Males, younger individuals, children, and adolescents from developed areas exhibited higher prevalence rates of psychiatric disorders.

Prevalence of psychiatric disorders decreased with age among males, while it increased with age among females. Individuals diagnosed with attention-deficit hyperactivity disorder, oppositional defiant disorder, tic disorder, conduct disorder, and major depressive disorder demonstrated the highest rates of comorbidity. The overall prevalence of psychiatric disorders was found to be 17.5%, the highest reported in China. This prevalence rate is also higher compared to other nations worldwide. In China, children's mental health has become a significant concern, regarded as a public health crisis. The initiation of Healthy China Action (HCA) aims to improve people's health, with a major goal of promoting the mental health of children and adolescents through enhanced healthcare services [9].

The outbreak of coronavirus disease 2019 (COVID-19) has resulted in mental health issues among the general public and medical staff in China. Particularly for children and adolescents, a vulnerable group, there has been a noticeable increase in mental problems such as depression and anxiety during the COVID-19 outbreak [10].

The complete disappearance of the Chinese shoulder-carrying culture, which occurred during China's reform and opening up, was perceived as a sign of progress in human civilization amidst the rapid modern industrialization of the past 40 years. However, as the average age of agricultural workers in China continues to rise, the availability of urban load-bearing laborers becomes increasingly scarce. How can we address the "crisis of agricultural successors," the "dilemma of inadequate agricultural workers," and the shortage of urban load-bearing laborers? These issues are closely intertwined with the food crisis and affect each individual's well-being.

*"If one day China becomes a world power again, it will depend on our culture, not others." - Ma Weidu, a renowned Chinese cultural scholar.*

## Preface

Chinese society has always consisted of two distinct groups: shoulder-carrying workers and non-shoulder-carrying workers. This differentiation extends to the divide between the upper class and the lower class, urban and rural populations, the bourgeoisie and the proletariat, traditional and modern individuals, and mental and physical labor. Shoulder-carrying is a fundamental skill developed by agricultural and load-bearing workers since childhood.

Fundamentally, these workers grew up in two different cultures: urban culture and countryside culture. China has fostered the notion of the famous "three-inch golden lotuses" under an unhealthy urban aesthetic culture, while rural communities have embraced a practical and healthy "big-feet culture." Urban dwellers may be considered "good-looking" without the ability to shoulder heavy loads, whereas rural residents may be labeled as "hunchbacked" but possess the strength to carry items on their shoulders. This cultural dichotomy has long persisted throughout Chinese history, creating a divide between the upper class and the lower class. This can be exemplified by Lin Daiyu, one of the key characters in *The Dream of the Red Mansions*. With China's reform and opening up in the 1980s, the country transitioned from an agrarian society to an industrialized one, leading to several significant changes in Chinese society:

1. As Chinese activities, lifestyles, and ideas became westernized, a substantial "off-roots movement" emerged in rural China. Essentially, this movement aimed to eradicate the shoulder-carrying culture, resulting in the gradual disappearance of many traditional Chinese cultural practices.
2. The first-generation Chinese migrant workers, who possessed shoulder-carrying skills, left their rural origins and began to detach themselves from the land.
3. A new generation of young people, born and raised in urban areas, emerged. Similar to their urban counterparts, they lacked the ability to shoulder heavy loads and displayed no interest in agricultural activities.
4. With China's aging population, the elderly, lacking the ability to shoulder heavy loads, have become the primary labor force for load-bearing work. Forty years ago, the majority of individuals could carry a hundred pounds on their shoulders and toil until their last breath. However, as urbanization continues and numerous villages vanish, the aging of the rural population has become a widespread phenomenon. Consequently, elderly agriculture has become the



predominant model of agricultural production in China. While elderly agriculture may be somewhat efficient, it should be acknowledged that there exists a significant gap between elderly agriculture and the requirements of rural modernization and agricultural modernization [11].

5. In urban areas, heavy manual laborers are becoming older, fewer in number, and increasingly reliant on machinery.

## 1. Data

1.1. What is the total population of China in 2021? It exceeds 1.4 billion in 2021!

**1.1.1.** Total population and elderly population in China: According to the World Report on Aging and Health released by the World Health Organization (WHO) in 2017, global aging is further deepening, and the number of people aged 60 or above is expected to double by 2050 [12]. China has the largest elderly population and the fastest aging rate in the world. The latest data from the National Bureau of Statistics (NBS) show that by the end of 2021, Chinese people aged 60 or above account for 18.9% of the total population; the aging issue has posed a serious threat to the provision for the elderly [13].

**1.1.2.** The new-generation migrant workers are not the kind of peasants with shoulder-carrying ability in the traditional sense but are actually no different from urbanites. According to the NBS report, the total number of migrant workers was 292.51 million in 2021, among which the new-generation post-80s migrant workers account for 48.2% of the total number of migrant workers in China. The so-called new-generation migrant workers refer to those born after the 1980s who hold rural household registration yet work or do business in cities [14].

## 1.2. Literature Review

**1.2.1.** The literature shows the current status of the productive labor of the representative Chinese elder population of all ages: In modern times, the Chinese elder population is still the mainstay of agriculture and urban load-bearing laborers. The current unique aging issue in China has puzzled scholars at home and abroad. In the process of industrialization and urbanization, as the rural population, especially the young and middle-aged labor force, has shifted to non-agricultural industries and cities, China's agricultural labor force is constantly shrinking, with a cumulative reduction of 140 million people in the past 30 years.

Aging is becoming an increasingly prominent issue, with more than one-third of the agricultural workforce aged 55 and above. Meanwhile, varying degrees of arable land abandonment can be observed. It is evident that "The post-70s do not want to farm, the post-80s do not know how to farm, and the post-90s neglect farming" [15]. In contrast, the rural elderly aged 50-60 (or the post-60) constitute a significant labor force. Apart from those who still earn money in cities, those who remain in their hometowns are not inferior to young and middle-aged laborers, taking on all their household farming work. Some of them also cultivate others' contracted land. Individuals aged 60-70 (or the post-50s) fall into the category of the "young elderly." They can not only farm to sustain themselves but also support their children with the fruits of their labor.

People aged 70-75 (or the post-40s) are considered the “middle-aged elderly.”

Although their income has decreased due to reduced labor on arable land and fewer types of agricultural products, those in good health among the elderly can still engage in independent labor and live independently. Individuals aged 75 or above (or the post-30s) fall into the category of the “old elderly.” They are true old people, yet they continue to participate in fieldwork, tend vegetable gardens, raise poultry and livestock, and perform household chores as long as their health allows. For most rural elderly people, they can only be idle when they are sick or incapable of doing farm work, relying on their children’s support in their old age [16]. Some rural elderly individuals in their 70s and 80s exhibit greater endurance and strength than young people, effortlessly carrying loads exceeding 100 kg. They can be considered the last generation of Chinese individuals with shoulder-carrying ability, laboring until the end of their lives. Simultaneously, the Chinese elderly also constitute a significant load-bearing labor force in urban areas.

**1.2.2. Major Views on Social Factors and Solutions to the Proposed Dilemma (typical example).** In 2012, it was reported that 15 academicians from the Chinese Academy of Sciences and Chinese Academy of Engineering, led by Shi Changshu, collectively submitted a proposal to the central decision-making level addressing the “Three Agriculture Problems.” The academicians emphasized that if the issue of arable land abandonment among the new-generation peasants was not strategically studied and addressed, the populous country would encounter a critical dilemma: a lack of farmers [17].

The question of “who will cultivate the arable land” has gained significant attention from the media after the topic of “who will feed China” was raised. Solving the problem of “no one would farm” involves identifying those who will take up the task of land cultivation. In seeking a solution, a comprehensive analysis of the root cause becomes essential. Such an approach allows for a historical and holistic perspective, fostering the necessary historical determination and patience required in addressing the “Three Agriculture Problems.”

It is important to consider why Europe and the United States have fallow farmland but do not face the challenge of “who will cultivate the arable land.” This discrepancy can be attributed to the historical stage of their respective societies. Europe and the United States have undergone the transformation of industrial modernization, establishing a relatively stable industrial status and operational mode for agriculture. In contrast, China is in the process of modernization, and social transformation manifests in various ways, including the issue of “no one would farm” [18].

According to Xie Linghong, with the rapid development of industrialization and urbanization, the rural population, especially the young and middle-aged laborers, are migrating to non-agricultural industries and cities. Consequently, the size of China’s agricultural labor force has significantly decreased. However, this does not imply that China is destined to face the dilemma of “no one would farm.” No matter whether in the past or the future, China possesses a substantial rural labor population. When compared to the required labor force for agricultural production, China still maintains a surplus of agricultural labor. Therefore, it is imperative to pursue long-term development by optimizing mechanisms that ensure revenue for grain cultivation and cultivating new subjects and service providers in the food production sector. These measures should be accompanied by strengthened policy incentives to encourage peasants’ engagement in grain cultivation.



Efforts must also be made to address seedling issues and improve the management of abandoned arable land<sup>[19]</sup>. Lan Yubin states that the ultimate objective of exploring ecological unmanned farms is to achieve their replicability and scalability. This will enable intelligent machines to actively participate in the entire agricultural production process, gradually replacing human labor and contributing to the management of resolution plans. As artificial intelligence (AI) agricultural robots continue to advance and be implemented, they will gradually substitute manual labor, thereby addressing the shortage of rural labor<sup>[20]</sup>.

According to Zhang Ruidong, the government should ensure the legal transfer of peasants' land contracting rights and provide comprehensive support to peasants in terms of grain subsidies, agricultural supplies subsidies, technical assistance, and market development. These measures aim to overcome the challenge of "no one would farm" and alleviate the concerns of peasants working in cities. Such initiatives are also beneficial for the urbanization process and economic development. Additionally, it is crucial to intensify efforts in promoting income distribution reform, bridging the income gap between urban and rural areas, and actively investing in rural infrastructure. By doing so, historical debts related to the "Three Agriculture Problems" can be repaid, and sufficient state support for agricultural production can be provided<sup>[21]</sup>.

### 1.3. Talking about the ancient and the present, spanning 5,000 years

The research materials for this project encompass the author's personal experiences and reflections in this era of significant changes regarding shoulder-carrying and non-shoulder-carrying cultures. It includes research on the author's journey towards health, contemplation on past and present Chinese health issues, studies on the personalities, thoughts, lifestyles, activity habits, and physical health status of individuals with whom the author has interacted, as well as a closer examination of the similarities and differences between those with shoulder-carrying ability and modern individuals.

Speaking of the ancient and the present, spanning 5,000 years, this article categorizes the individuals the author has interacted with into four groups: The first group consists of people born in the Qing Dynasty, all of whom have now passed away. The second group comprises individuals born in the Republic of China. The third group refers to those born from the establishment of New China until the 1980s. The fourth group includes individuals born after the 1990s, 2000s, and 2010s. As the environment and the economy undergo changes, people and their physical constitutions also change. With the passage of time, ordinary individuals or special figures who carry the imprints of their era and have personally experienced the shoulder-carrying era can be considered witnesses of history, heirs of intangible heritage, and living fossils.

The shoulder-carrying culture, as a part of folk and folklore culture, has never been given due attention in China. Preserving folk and folklore culture can only be achieved through narrating its history like a legend. If not investigated or studied, the demise of such figures will mark the end of an era. Today, many individuals or popular figures who carry the imprints of their time and have personal experiences from the shoulder-carrying era are passing away. Due to the rapid pace of change, these folk and folklore cultures are often unable to be salvaged and documented, particularly the Chinese

shoulder-carrying culture. The past can only be found in books, and sometimes even books fail to mention a single word about it. The past may become a historical enigma, leaving a lasting misunderstanding and regret about the Chinese shoulder-carrying culture.

As someone born in the post-70s era, the author has had interactions with individuals from the shoulder-carrying era and possesses knowledge of stories from the farming era related to shoulder-carrying. This includes understanding the characteristics, thoughts, activities, and physical health conditions of people from that time. However, mainstream research institutions have not addressed these aspects, they have not been recorded in history, nor studied as genuine academic projects.

Since childhood, the author has been aware of lumbar disc herniation (sciatica) and has observed that farmers with shoulder-carrying ability tend to be exceptionally healthy. They hold a deep respect for this ability and perceive it as indicative of a strong lumbar spine. From an early age, it has been ingrained in people's minds that humans are like monkeys, with adults referred to as big monkeys and children as little monkeys. The characteristics associated with conditions like weak waist or lack of strength are described as "hips up high, collapsed waist, and cotton waist."

The ability to shoulder-carry is considered the foundation of traditional Chinese martial arts. Typically, when learning martial arts from a master, one must assist the master with heavy physical work for three years, including the cultivation of shoulder-carrying ability. The author has witnessed elders effortlessly lifting loads of up to 150kg without experiencing back pain throughout their lives. The author also actively participates in daily activities involving heavy shoulder lifting, with no concerns about developing lumbar diseases unless an injury occurs.

The author belongs to the post-70s generation, which is the last generation in China to be influenced by the shoulder-carrying culture. Having experienced both China's farming era and the reform and opening-up era, the author underwent childhood training to carry 50kg on their shoulder. They grew up as an enthusiast of shoulder-carrying, embracing a free-ranging lifestyle with a foundation in martial arts.

During their upbringing, the author lived with their great-grandmother, who was born in the Qing dynasty and had bound feet measuring three inches, known as "golden lotuses." The author developed a keen interest in the history of that era through listening to stories about the Qing dynasty. If the parents' generation is considered the first generation, consisting of those born in the 1930s, and subsequent generations follow, including uncles, aunts, siblings, cousins, and descendants born in different decades, the author examines the comparison between these generations horizontally and vertically. The transition from shoulder-carrying to non-shoulder-carrying education, along with the corresponding changes in physical conditions, thoughts, lifestyles, and habits, serves as the subject of the author's research.

With their mother working as a medical nurse in orthopedics, the author was born in Zhejiang Xianju People's Hospital and grew up there. They enjoyed observing medical staff treating patients and listening to stories about illness and health. Surrounded by numerous medical books at home, the author was greatly influenced from a young age, developing a certain level of knowledge about health and illness. This upbringing directly impacted their future research in the medical field.

Between 1977 and 1988, the author completed their primary and secondary education in Xianju, Zhejiang Province. In 1991, they graduated from medical school, became an orthopedist, and worked as an orthopedic and neurosurgeon for six years. Following that, they worked in emergency surgery for 18 years, accumulating over 30 years of extensive clinical experience. Additionally, they have engaged in research on healthy living.

In 2017, the author joined the physical examination center of Taizhou Hospital, where they were responsible for conducting surgical physical examinations, particularly focusing on the spine. This marked the beginning of their study on the spine and physical health of all medical examiners. The author categorized the examiners into those with shoulder-carrying spines and those without, engaging in discussions about the shoulder-carrying culture and investigating the lumbar spine conditions of the elderly who had experienced shoulder-carrying. Furthermore, the author is a sports enthusiast who has studied Iyengar yoga for three years and actively participated in outdoor sports. They have encountered numerous outdoor sports enthusiasts, observing their behaviors and physical conditions, differentiating those who have been influenced by the shoulder-carrying culture from those who have had less or no influence. In China, there is a lack of a scientific health evaluation system that can assess and distinguish the health of individuals from the two eras.

Since 2022, the author has established a stone stretcher in Jingjiang Mountain Park in Linhai, Zhejiang Province, and has commenced practical shoulder-carrying exercises with a weight of 70 kg. They have personally practiced and accumulated a wealth of firsthand experience, drawing the attention of countless elderly individuals who have had shoulder-carrying experience. The author engages in communication and learning from them, investigating their past experiences with shoulder-carrying, their thoughts, and their physical conditions for salvage. They also listen to their stories and techniques. Furthermore, the author examines lumbar spondylosis during the era of shoulder-carrying, conducts surveys on the occurrence of lumbar spondylosis among the general public, and explores cultural awareness surrounding this issue. Recently, through their public accounts on platforms like TikTok and WeChat, the author, using the pseudonym “sports dreamer,” has shared numerous shoulder-carrying videos to popularize scientific knowledge, express thoughts, and engage in communication with readers.

1.4. There are other materials that I have participated in discussions, which have been very meaningful and helpful to the research of this article.

**1.4.1.** An article by my friend, the Chinese writer He Mu, titled “Doctor·Patient·Iron Man,” published on the China Internet public platform “Hemu Shanfang” (2021-06-08), has provided valuable insights for my research: Chen Huabin, the deputy chief physician of Taizhou Hospital, graduated from Zhejiang Medical University, Hangzhou Branch (now Hangzhou Normal University Clinical School) in 1991. He was appointed as the deputy chief physician in December 2006. With extensive clinical experience in orthopedics, brain surgery, and emergency trauma surgery, he currently serves as the chief surgical examiner at the Hospital Health Management Center.

I met him during a physical examination three years ago, where he was conducting surgical examinations. I recall seeing a human skeleton model on the table. While examining my spine, he mentioned that a significant factor contributing to the

high prevalence of spondylosis among Chinese individuals is poor habits and incorrect posture in daily life and work. People of our age who spend prolonged periods sitting often experience issues with their lumbar spine, whereas elderly farmers who engage in strenuous physical work in rural areas rarely encounter such problems. He explained that prolonged sitting leads to a collapsed waist and a curved posture of the hips.

The collapsed hip and waist posture is essentially a structural deformity characterized by an S-shaped change in the spine. It is a spinal condition that leads to the pelvis tilting forward and the lumbar spine bending forward. For instance, prolonged wearing of high heels can easily result in the collapse of the hips and waist. Unfortunately, many individuals admire and pursue this as a form of “body shape beauty.” However, he believes that the priority should be placed on health and practicality when it comes to one’s posture, with beauty being secondary. Some individuals who have developed strong and healthy backs as a result of prolonged bending and physical labor are often misunderstood by contemporary society as having a “disability.”

Certain diseases among modern people stem from their diet and exercise patterns during their growth and development period. Additionally, the lack of effective health education and preventive supervision in adulthood leads to suboptimal health and even the onset of diseases. He also mentioned that the deformed aesthetics associated with the practice of binding and deforming women’s feet, known as the “three-inch golden lotus,” has harmed the Chinese population for over a thousand years and has not completely disappeared from history. It may resurface in another form of deformed beauty that combines art and the economy, which is accepted by some individuals and leads them to become obsessed, enthralled, and even consumed by it. He urges everyone to be vigilant and aware of this more destructive, widespread, and pervasive phenomenon.

**1.4.2.** Three researchers recently engaged in a discussion titled “At birth we bring nothing; at death, we take away nothing. Only the precious spirit can last forever” on the ResearchGate website, which is a discussion paper authored by myself.

**My Sentiments:** Although I never had the opportunity to meet Mr. Gong, through a tribute article, I learned about this remarkable man with a precious spirit. Reflecting on the past, my initial encounter with the masterpiece “The Three Excellent Master Mr. Gong Zehua” was through the WeChat Official Account “Hemu Shanfang.” Recently, I discovered the news of Mr. Gong’s passing from the article “It’s Too Cold This Winter” published in “Hemu Shanfang.” Subsequently, I read several mourning poems dedicated to him, which deeply moved me and prompted profound contemplation.

During Mr. Gong’s lifetime, few people paid special attention to him. It was only after his departure from this world that he garnered significant attention. Fortunately, “The Three Excellent Master Mr. Gong Zehua” was written in a timely manner. However, this classic article has now become an archaeological text. Additionally, by reading articles written by Mr. Gong’s students, I have come to understand his nostalgic nature, influenced by both traditional and modern culture. Mr. Gong has provided us with a glimpse into the teacher-student relationships that existed forty or fifty years ago, characterized by genuine affection akin to that of fathers and sons, brothers, and old friends. How many versatile and knowledgeable teachers of this kind exist today? How many sincere teacher-student relationships like these endure in the

present?

I categorize the people I have encountered into four groups: 1) Those born in the Qing Dynasty, although none of them are alive today; 2) Those born in the Republic of China, with Mr. Gong belonging to the late period of the Republic of China; 3) Those born after the establishment of New China until the 1980s; 4) The post-90s generation and Generation Z. As the surrounding environment changes, so do people. Does Mr. Gong's passing signify the end of something? Perhaps we can only find individuals like Mr. Gong within the pages of books.

*"At birth, we bring nothing; at death, we take away nothing. Only the precious spirit can last forever."*

Chen Huabin (the author of this article): Currently, the most popular song on the Chinese Internet is "Little Garden." It talks about digging and cultivating in a small garden, planting tiny seeds, and witnessing the growth of small buds into beautiful flowers. In a larger garden, we dig and plant bigger seeds, leading to the growth of larger buds and flowers. In the garden of human existence, a seed of disease can result in illness, while a seed of health can lead to well-being.

Now, I find myself in the modern medicine garden of the world, digging the soil. What am I digging for? Initially, I believed it was a medical issue, specifically a spinal problem. However, I soon realized it is a global spinal problem. As I studied the standard spine worldwide, I came to understand that it is a social problem. Further exploration made me consider it as a political economy problem. Delving into political economy, I discovered its philosophical nature. Deepening my study of philosophy, I realized it is a question of cause and effect. Reflecting on the concept of cause and effect, I found it intertwined with the notion of reincarnation. Exploring the concept of reincarnation, I concluded that everything is predetermined. It's all intricate and interconnected.

Ultimately, I believe we are born with nothing, and when we leave this world, we take nothing with us. Only our precious spirit of constant exploration and research can endure eternally, passing from one generation to another. Generation after generation, we continue to explore, embodying the determination to triumph over obstacles like the Foolish Old Man who removed the mountains. We carry the resolve to achieve victory and the courage to overcome any difficulty.

Stephen I. Ternyik (Magister Artium (EQ=Master of Research): double major/with thesis on AI: summa cum laude///Master Certifications in Management Economic Research Analyst at Private Entrepreneur):

*To effectively halt a civilization's progress and hinder its development over an extended period, there is only one method: eliminate its scientific advancements. "(Liu Cixin, The Three-Body Problem).*

Chen Huabin, the direction of scientific thinking is crucial. The culture and values of sustainability, based on classical scientific methodology and philosophy, appear to be the key to humanity's survival and progress. When faced with imminent destruction and the potential end of the world, human society will undergo extreme, intricate, and profound transformations. (Liu Cixin)

Anita Z. Goldschmied (Doctor of Philosophy, Senior Lecturer, and Researcher at Sheffield Hallam University, Sheffield,

United Kingdom) made a comment on my article on ResearchGate:

*Thank you for sharing this idea. As I read your post, one thing that struck me, which is quite general, is our tendency to identify points, whether it be a person, a date, or an event, as the beginning and end of something, as well as the cause and effect. While such separation may be useful for certain purposes, nothing exists in isolation but rather in connection to others and things. However, I do recognize the importance and role of symbolism. I also enjoyed the comments and I agree with Stephen. Whether it's age, value, science, or culture, things are interconnected, and connections give rise to capabilities. The effects are diverse and interdependent, with the audience playing a key role.*

## 2. Methods

The author of this research has been studying “Chinese shoulder-carrying culture and traditional Chinese spine” for six years. The research methodology includes historical review, field survey, logical analysis, observation, and comparative methods. Since 2017, the author has conducted studies on 100,000 medical examiners ranging in age from 1 to 100 years old at the medical examination center where they work. The study aims to identify differences in spinal conditions between individuals engaged in shoulder-carrying and non-shoulder-carrying work. Investigation sites include streets, alleys, and fields, and relevant literature is collected online.

From the perspective of social medicine, the author concludes that “Chinese shoulder-carrying culture facilitates the strengthening of the body and prevents lumbar spondylosis.” The research results have been published on Qeios, an early presentation website, and have undergone review by scholars from 16 countries. After being posted on ResearchGate (until June 24, 2023), the results have received recommendations from 35 scientists worldwide. The author has frequently explained the research findings to individuals concerned about lumbar spondylosis, receiving overwhelming support, understanding, and praise, while also listening to their personal views and thoughts on the matter. The author now applies these findings to address real-world problems in China.

By comparing different generations horizontally and vertically, the author reviews and studies the views and opinions of Chinese scholars and experts on “China’s dilemma of aging load-bearing laborers” using methods such as historical review, field survey, logical analysis, observation, documentation, interviewing, dialectics, and comparison. The aim is to examine loopholes and gain a comprehensive understanding of the problem. This research is the first to explain the social problems faced by modern China through the integration of medicine, culture, and social medicine, while also proposing fresh personal views and solutions to address the shortcomings of Chinese scholars and experts in this field.

## 3. Results

Based on the literature analysis conducted above, it becomes apparent that the proposed dilemma is a foregone



conclusion. Chinese experts and scholars have acknowledged this serious social problem and provided their own views and solutions. While they excel in their respective fields, they are not experts in medicine and have thus overlooked the hidden social medicine issues.

Modern scientific research on Chinese shoulder-carrying culture and the traditional spine has fallen behind, and modern Western-based medicine has demonstrated significant errors in the conceptual system and evaluation criteria for normal and deformed spines.

Economic changes directly impact people's way of life, behavior, and thinking. This study aims to break through the proposed dilemma based on the biopsychosocial medicine model. Despite the widespread adoption of modern mechanization, load-bearing laborers remain crucial in both rural and urban areas. By gaining a better understanding of the social phenomenon of "aging Chinese agricultural workers, the reluctance of young people to engage in farming, and the increasing prevalence of young patients with lumbar spondylosis," the government can effectively formulate countermeasures.

Prior to 1980, Chinese society was heavily influenced by shoulder-carrying culture. However, after 1980, the influence of shoulder-carrying culture diminished with the westernization of China. The Chinese shoulder-carrying culture gradually disappeared, and its heirs have aged. Moreover, there has been no training in shoulder-carrying reserves in rural China for the past four decades. Physical examination results also indicate that the shoulder-carrying elderly possess a distinct body structure compared to modern non-shoulder-carrying individuals, particularly in terms of overall spinal shape and stability.

This has raised concerns about the lack of successors in China's agriculture sector and the decreasing number of individuals engaged in heavy labor in urban areas. The recent serious social problems in China are directly related to the disappearance of Chinese shoulder-carrying culture, demonstrating a causal relationship. The loss of Chinese shoulder-carrying culture has created a cultural void that Western culture has taken advantage of.

Discussion: "Can't you solve that problem? Then go and investigate the present state of the matter and its history. Once you've done your research thoroughly, you'll have a solution to the problem. All conclusions come at the end of an investigation, not at the beginning. Only a fool, whether alone or in a group, would not investigate but only meditate to 'find a way' or 'ideas'. It must be noted that this is not about coming up with any good ideas, but rather about having the right approach and the right idea." - Mao Zedong

1. Definition of Chinese shoulder-carrying culture: According to the anthropologist Edward B. Taylor in his book "Primitive Culture" published in 1871, "Culture, or civilization, taken in its broad, ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society." Culture plays a leading role in social development and permeates all areas and stages of social development [22].

Traditional Chinese culture encompasses ethics represented by Confucianism, the natural life perception derived from I Ching and Tao Te Ching, and the accumulation of Chinese wisdom in transforming nature over thousands of years. It

also includes “strategic thinking” influenced by the competition for limited resources in the harsh natural environment. Due to technological underdevelopment, primitive production tools, limited transportation, numerous mountainous areas, poor living conditions, and a lack of livestock, heavy burdens in transportation and agricultural production have historically fallen on the shoulders of the majority of Chinese ancestors. This has given rise to the unique Chinese shoulder-carrying culture, which is at the core of Chinese agrarian culture. Every Chinese descendant had to undergo shoulder-carrying exercises since childhood, which served as a guarantee for continuous labor resources, physical and survival abilities, and a strong willpower for the entire nation [23]. According to Chinese historian Gao Chengyuan, throughout ancient times, East Asia lacked donkeys, horses, and other animals for pulling carts, which led people to rely solely on shoulder poles.

The practice of shoulder-carrying involves carrying heavy objects, typically using a shoulder pole. In China, this practice has been continued for centuries as a means of transportation, especially in rural areas. Donkeys had not spread to the south by the Tang dynasty, as documented in the phrase “qián lǚ jì qióng.” According to legend, there were no donkeys in Qian (now Guizhou), and someone brought a donkey from elsewhere and released it at the foot of the mountain. The tiger, upon seeing the large animal and hearing its loud cry, initially feared and kept its distance. Gradually, the tiger approached and teased the donkey, which angrily kicked the tiger. The tiger, feeling satisfied, proceeded to bite and devour the donkey. This story metaphorically conveys the idea of exhausting all tricks or strategies, as depicted in the fable “The Donkey of Qian” by Don Liu Zongyuan.

2. The long-standing dual household registration system resulted in the widespread stigmatization of migrant workers and load-bearing laborers. The household registration reform in 1978 laid the foundation for the mass displacement of Chinese peasants from arable land.

In 1963, the Ministry of Public Security of the People’s Republic of China defined “non-agricultural household” as a group of people dependent on state-planned commercial food supply, while “agricultural household” referred to those who relied on self-sufficient food production. In colloquial terms, “non-agricultural household” came to be known as “people dependent on state and official food.” These restrictive policies played a significant role in promoting economic progress, controlling population size, and ensuring social stability [24]. Consequently, the Chinese shoulder-carrying culture persisted until the reform and opening-up era in 1980.

The 1978 household registration reform laid the groundwork for the mass displacement of the next generation of Chinese peasants from their rural roots. As the economy developed, however, the household registration system continued to exhibit drawbacks, leading to urban-rural inequalities. After years of accumulation, the widespread disdain for farming eventually set the stage for a large-scale exodus of young Chinese peasants from the countryside following the household registration reform in 1978. As the economy progressed and society advanced, new avenues such as farming, agricultural technology services, agricultural e-commerce, export trade, and marketing absorbed both rural and urban youth. They remained connected to agriculture but were no longer solely “toiling in the field.”

On one hand, the choice of rural youth to seek opportunities in cities aligns with the general trend of new urbanization and personal interests. Population flows to urban areas where higher incomes and greater development prospects can be found, reflecting the inevitable outcome of labor market allocation. On the other hand, the reduction in agricultural employment and the introduction of agricultural mechanization and scale are mutually reinforcing. With improved

production efficiency, a portion of the agricultural workforce can be liberated. Young people, who are more adaptable and better educated, migrate to cities and contribute to the growth of secondary and tertiary industries [25].

Consequently, the Chinese shoulder-carrying culture is gradually fading away, symbolizing the opening of Pandora's box, and its disappearance marks the initial domino to fall among China's social problems.

3. With the rapid advancement of modern agricultural production and the improvement of rural living standards, Chinese shoulder-carrying culture was completely abandoned under the influence of misguided notions at all levels of society. China embarked on the path of reform and opening up in 1980, marking the era of an open economy, agricultural mechanization, and rural urbanization. It was no longer a time of agricultural and commercial suppression. Due to its lack of profitability, those involved in shoulder-carrying and load-bearing work were consistently relegated to the lowest social class, considered backward individuals who sold their physical labor, symbols of a wretched existence. It was widely believed that shoulder-carrying hindered growth in height, and everyone aspired to be "tall," "rich," and "handsome." If a boy's height did not reach 175cm, it was deemed a "third-degree disability," suggesting a lack of "essence," "qi," and "spirit" similar to that of an elderly person. Consequently, Chinese shoulder-carrying culture was abandoned in modern times.

One contributing factor to the decline of shoulder-carrying was an aspect of human body structure that posed challenges to its widespread practice: learning to use a shoulder pole required great effort. The diminishing relevance of shoulder poles in Chinese life became evident with the popularity of "tap water." Towards the end of the 19th century, the first waterworks were established in Shanghai, while at the beginning of the 20th century, the introduction of tap water led to the loss of jobs for many water carriers in Chengdu. Previously, urban households relied on shoulder poles to bring water into their homes, and in rural areas, individuals of all ages used shoulder poles and buckets to fetch water from wells. In the 21st century, the "modernization" of both urban and rural lifestyles has rendered shoulder poles obsolete [26].

Additionally, the widespread use of gas in China has eliminated the need to gather firewood from mountains or hills, further accelerating the decline of shoulder-carrying techniques. Moreover, Chinese society tends to prioritize mental strength over physical strength, as reflected in the saying, "Nothing is lofty except reading books." Rural children receive more education with the aim of avoiding manual labor, and they take pride in becoming white-collar workers, avoiding toiling in the fields. They associate shoulder-carrying with notions of brute force, tedium, punishment, inefficiency, stupidity, susceptibility to lumbar spine injuries, other underlying diseases, and a shortened life expectancy. Consequently, the labor-intensive nature of shoulder-carrying work has been rapidly abandoned in modern times. As modern agricultural production and rural living standards rapidly improve, China's agrarian culture and traditional customs, which have persisted for thousands of years, are undergoing significant changes and even facing extinction [27]. Within Chinese agrarian culture, the shoulder-carrying technique is gradually fading away, and after a thousand years of existence throughout Chinese history, it has essentially vanished.

4. The first generation of Chinese migrant workers, who were the most hardworking and capable of shoulder-carrying and load-bearing work, are now aging. Influenced by the misguided notions of urban culture, there is a widely accepted belief that shoulder-carrying labor is arduous and should not be imposed on their descendants. Consequently, the millennium-old Chinese traditional culture, including the practice of shoulder-carrying, is being isolated from

subsequent generations. Moreover, the next generation is a product of China's "one-child policy," and parents tend to spoil their single child.

The first-generation migrant workers include individuals from the post-50s, post-60s, and post-70s age groups. As labor-intensive manufacturing industries flourished along the coast and the rural household contract management system became popular, a significant number of surplus rural laborers sought employment in economically developed coastal regions in search of higher incomes. This gave rise to the first-generation migrant workers in China. Born in the 1950s and 1960s, they ventured out to work in the 1980s and 1990s, predominantly in sectors such as construction, processing and manufacturing, security, and cleaning. Their sweat and hard work have played a crucial role in urban development and have made significant contributions to national industrialization [28]. They constitute a substantial labor force in cities.

Prior to industrialization, where education did not lead to wealth, children around the world actively participated in their families' work. In societies where education did not offer economic benefits, it was more practical for children to focus on labor rather than education. Only the privileged elite could afford to prioritize education over work. However, with the advent of industrialization, children in first-world countries transitioned from being laborers to being consumers of education. By the mid-20th century, children in first-world countries contributed so little to family labor that studies on the division of labor in North America and Europe seldom touched upon this topic. In contrast, children in third-world countries continued to serve as a valuable resource for family labor [29]. Understanding traditional Chinese culture reveals that Chinese labor practices differ significantly from those of Western countries or the third world, beginning from childhood. China places great importance on shoulder-carrying training from an early age [30].

In China, the post-60s generation represents the final generation of peasants in this era and is deeply influenced by the shoulder-carrying culture. The post-70s and post-80s generations are less influenced by Chinese shoulder-carrying culture (the author of this research, born in 1970, has received shoulder-carrying training, making them an ideal candidate for studying Chinese shoulder-carrying culture). These generations have witnessed the transition from agrarian to industrial civilizations and exist in a unique space between rural and urban lifestyles. However, influenced by Chinese society, they also hold a disdain for Chinese shoulder-carrying culture.

On the other hand, the post-80s, post-90s, and post-00s generations are predominantly urban, often being only children in their families and having severed ties to the land. They have little influence from the Chinese shoulder-carrying culture due to the disappearing countryside. They worry that their children would be burdened by shoulder-carrying labor, hoping to steer them away from agricultural work, and they themselves hold a negative view towards shoulder-carrying labor.

Unlike their parents who had participated in shoulder-carrying labor in the production teams before moving to the cities, most of the post-80s, post-90s, and post-00s generations completed their education before entering the workforce. As a result, they lack farming experience and general knowledge of agricultural practices and local rural culture. They have limited familiarity and identification with their hometowns. The increased physical distance, waning interest, and changing environment after moving to the city have further reduced their attachment and connection to their hometowns. They have little understanding and may even hold a negative attitude towards certain practices and traditions in rural areas [31], resulting in a disconnect from the rich traditional Chinese culture that spans millennia.

Due to differences in upbringing and social background, the new generation of migrant workers show distinct changes compared to the first generation in terms of their work values and employment attitudes. Unlike the first generation, the new generation faces less economic pressure and earning money is not their sole objective. They prioritize the pursuit of a higher quality of life and have shifted their goals and preferences accordingly. The new generation places increasing importance on social status, legal rights, social security, human dignity, and education for their children. However, the new generation also exhibits negative and individualistic tendencies, often lacking a strong work ethic. While the first generation of migrant workers were steadfast in accepting the dirtiest, most exhausting, and seemingly “unproductive” jobs, the new generation tends to switch jobs frequently due to long working hours and high labor intensity [32]. The new generation of migrant workers view their ancestors as enduring hardships without recognizing their superior physical health and strength, nor do they acknowledge their ancestors’ strong and resilient spines. Consequently, they do not hold their ancestors in high regard. Once the new generation of migrant workers attain financial stability, they compel their older generation to give up physically demanding or agricultural work, mistakenly attributing basic ailments of the first generation to labor, without understanding the health benefits associated with regular physical labor. When the author explains that a moderate amount of traditional labor is beneficial for health, the new generation of migrant workers readily comprehend the concept, as it had never occurred to them before. The first generation of migrant workers, recognizing the weakness of the next generation, understand that they have no influence or voice in this matter.

5. The post-80s generation has sparked a prolonged period of controversy in China, a phenomenon rarely seen in Chinese history. However, this controversy has largely overlooked the crucial role of “Chinese shoulder-carrying culture” in shaping the upbringing of the post-80s generation.

In 1979, the Chinese government implemented the one-child policy, leading to an increasing number of one-child families. As a result, the term “little emperor” emerged, referring to the child who became the center of attention in the family. These only children were often perceived as privileged and overly pampered, leading to concerns that they would grow up to be vulnerable and irresponsible. They were labeled the “Lost Generation” by the press and the education sector. The post-80s generation, born in the 1980s, represents the first generation of children raised in a market economy as only children. Their parents belong to the post-50s generation, the first generation of the new China, who experienced the struggles of class under the planned economy and emphasized the importance of education and their own experiences.

Since birth, the post-80s generation has faced various worries and accusations from the adult community. It was not until the Wenchuan earthquake and the Beijing Olympic Games in 2008 that the post-80s generation began to demonstrate their capabilities, marking a turning point in public perception. This prolonged period of controversy between two generations presents a unique opportunity to understand the youth and foster intergenerational harmony. According to scholars studying generational theory, the generational gap is typically around 30 years. As an old Chinese saying goes, “At thirty, I planted my feet firm upon the ground,” emphasizing the significance of this age in the context of family lineage. In Chinese culture, the interval of ten years is referred to as an intergenerational generation, representing an important milestone in the dynamics of Chinese generational issues [33]. According to the latest interpretation of this research, the post-50s generation grew up in the traditional Chinese culture of shoulder-carrying

and free-range activities, while their children, the post-80s generation, grew up in a Western culture that does not emphasize shoulder-carrying. There are fundamental differences between the two generations in terms of their ideological education, physical structure, and the development of their bodies in different cultural contexts. Their living habits, environment, and ideological education have diverged. Currently, they seem to be the first generation that has become distant from the traditional Chinese shoulder-carrying culture. As time passed, it took more than 40 years for various social problems to surface.

“Will this generation of China’s only children, with unprecedented educational achievements and ambitions, forge a path that enables them, their families, and their country to dominate the capitalist world system? Is the path wide enough to accommodate everyone? If not, what will happen to those who are left behind?” These questions were raised by Vanessa L. Fong in her book “Only Hope: Coming of Age under China’s One-Child Policy” in 2004 [34]. Now, after more than 40 years since the start of the reform and opening up, more serious social problems have emerged. In 2023, the author of this paper, using a different perspective of social medicine, observes that the descendants of the Chinese nation have moved away from the traditional educational model and are now facing a series of more significant social problems, particularly related to physical health and other areas. How should we respond to and address this situation? How can we deal with and prevent more complex and unforeseen situations that have already emerged?

6. Modern scientific research on Chinese shoulder-carrying culture and the traditional spine has been lagging behind, while modern Western-based medicine has shown serious errors in its conceptual system and evaluation criteria for normal and deformed spines. As a result, there is a misunderstanding of the traditional Chinese shoulder-carrying culture, and many believe that its disappearance is inevitable. However, they fail to realize that shoulder-carrying culture is the foundation of heavy labor, and mistakenly attribute it as the main cause of lumbar spondylosis. Since childhood, Oriental people have been accustomed to using the shoulder pole, which is a folk tool that astounds Western scientists and garners their admiration. The Chinese people frequently carry and transport objects using a shoulder pole in their daily lives and work, giving the Chinese shoulder-carrying culture a history spanning thousands of years. Currently, there is global research on the dynamics and mechanics of Chinese farming load-bearing tools, such as the shoulder pole. Does shoulder-carrying involve a scientifically advanced structural form of the lumbar spine of the person carrying the load? Does it adhere to principles of normal ergonomics? Is load-bearing beneficial or detrimental to the lumbar spine? What are the differences between the lumbar spines of Eastern and Western individuals? Which form of physical exercise is most suitable, traditional shoulder-carrying labor or sports? Surprisingly, no one has studied or provided answers to these questions. Admittedly, there were individuals with lumbar spondylosis during the late agrarian era and the early reform and opening-up period, which led to significant doubts and skepticism about the Chinese shoulder-carrying culture in the country. Through extensive discussions with experienced veteran peasants during clinical sessions and leisure time, the author has explored the relationship between shoulder-carrying and lumbar spondylosis. According to many of these veterans, the burden of carrying heavy loads became a relentless competition. When working in production teams, individuals had assigned carrying amounts and targets to showcase their strength. Carrying 100-150 kg or more was a source of pride, while failing to do so was considered laziness and resulted in earning fewer work points.



In the 1960s and 1970s, China witnessed extensive water conservancy and civil engineering construction, both heavily relying on shoulder-carrying work.

Therefore, the content of shoulder-carrying loads in modern times has shifted from low-density, large-volume crops and trees to higher-density and heavier construction materials like cement and stones. This change in load type leads to significant vibrations in the shoulder pole, which indicates its excellent mechanical properties [35]. Loads with high density are challenging to carry with large vibrations, and the body cannot efficiently save labor, increasing the risk of lumbar injury. Additionally, frequently carrying overweight and over-intense loads or engaging in overloaded shoulder-carrying labor contributes to the prevalence of lumbar spondylosis. Many peasants who previously performed heavy-load labor developed lumbar spondylosis due to work transitions, loss of land, lifestyle changes, over-nutrition, and subsequent changes in body size and spinal structure. However, they mistakenly attribute their lumbar spondylosis to their past shoulder-carrying activities.

During the era of the “Down to the Countryside” movement, people were generally unaware that shoulder-carrying required cultivation from childhood and a step-by-step approach. Educated youth, who had primarily been in school and lacked exposure to shoulder-carrying education and training, suddenly found themselves engaged in shoulder-carrying labor upon arriving in the countryside. This sudden transition likely contributed to the development of lumbar spondylosis in many individuals. Each production team established a “work point system” as a measure of labor quality, where earning “ten work points” per day meant achieving the full labor quota. Work points determined the quality of life.

According to a web source, one could earn ten work points by digging a 66-square-meter wasteland, carrying 150 kg of firewood, and picking a cubic meter of rocks. At the age of 16 or 17, laborers had to contend with the harsh elements, hunger, and negative emotions such as fear while competing with farm workers and local peasants to earn work points. These experiences fostered fear and resentment towards the shoulder-carrying culture. However, it is important to note that moderate shoulder-carrying exercise is beneficial for physical fitness.

It has been suggested that in ancient times, there were likely many individuals suffering from lumbar spondylosis who were unable to seek medical help due to poverty. Limited access to healthcare, underdeveloped medical technology, and a lack of advanced examination instruments and equipment meant that people in ancient times may not have been aware of their condition. It is true that frequent overweight, over-intensity, and shoulder-carrying labor can contribute to the development of lumbar spondylosis. However, the benefits of scientific shoulder-carrying are also evident. When the amount and intensity of shoulder-carrying are properly balanced, as observed in reality and history, elderly Chinese individuals who maintain a traditional shoulder-carrying lifestyle can enjoy good health and remain free from low back pain throughout their lives.

During years of social and clinical surveys, the author has interviewed individuals from the post-80s generation about their grandparents’ generation. The post-80s respondents mentioned that they had never heard their older relatives complain about low back pain, and some of them continue to engage in labor-intensive work in the fields, which is admired by the younger generation. An article titled “Survey on China’s prevalence of low back pain in people aged over 45” suggests that the prevalence of low back pain decreases in individuals aged over 70. Some studies propose that this phenomenon may be linked to reduced occupational exposure and daily activities that contribute to low back

pain in the elderly, as well as decreased cognitive ability and sensitivity to pain [36]. This statement is quoted from a foreign article titled “A systematic review of the global prevalence of low back pain” by Hoy D, Bain C, published in *Arthritis Rheum* in 2012. It is important to note that foreign studies are based on non-shoulder-carrying spines [37]. In contrast, the Chinese population aged over 70 possesses a shoulder-carrying spine. Compared to the younger generation, individuals aged over 70 have experienced more frequent, tiring, heavier, and prolonged periods of shoulder-carrying labor, highlighting the advantages of Chinese cultural shoulder-carrying.

Every coin has two sides. It is important to approach things with a dialectical attitude, and the same applies to our perspective on physical shoulder-carrying labor. Excessive shoulder-carrying labor can lead to physical harm and the development of occupational diseases. Like any tool or practice, it can be a double-edged sword. However, if used reasonably and effectively, we can harness its strengths and mitigate its weaknesses. Therefore, shoulder-carrying labor should adhere to the principle of moderation and be controlled within certain limits. Failing to do so can result in adverse effects on our bodies.

7. For the Chinese, the shoulder pole holds a significant place as a common, simple, ingenious, and ubiquitous tool in traditional Chinese life. Its importance has always exceeded people’s perceptions. Interestingly, there has been no positive introduction or discussion of the shoulder pole found since ancient times [38]. Furthermore, the results of 100,000 spine examinations reveal that the shoulder-carrying elderly have a distinct body structure compared to modern non-shoulder-carrying individuals, particularly in terms of overall spinal shape and stability. Without further research and recognition, people may only be aware of the agrarian culture without understanding the shoulder-carrying technique, spirit, culture, and its significance in Oriental tradition. If neglected, the Chinese shoulder-carrying culture may become a relic of the past. Chinese scholar Chen Huabin first introduced the concept of the “Chinese load-bearing lumbar spine” and concluded that shoulder-carrying ability can strengthen the body and spine. The disappearance of the Chinese shoulder-carrying culture is closely linked to the high prevalence of lumbar spondylosis in China and worldwide, which has sparked debates in the global scientific community [39].

Some individuals argue that China has remained stagnant for thousands of years, but such claims are absurd and hinder our research interests. Others believe that traditional culture is backward, outdated, and worthless, using its longevity as a basis for criticizing its “antiquity.” There is even a foreign author who has written a history of the world, stating that China has made no progress since the Tang dynasty. However, this perspective is also unfounded.

Therefore, the study of “Chinese shoulder-carrying culture” aims to break through these limitations in thinking. Based on the examination of Chinese shoulder-carrying culture, it becomes evident that in the agrarian era, the “Chinese load-bearing spine” was ingeniously applied to agricultural production and played a vital role in the agricultural revolution spanning millions of years. Thus, the Chinese shoulder-carrying culture contributes to the strengthening of the body and spine.

The statement “the human being created by labor” embodies the value of labor in two aspects. Firstly, labor generates social value and wealth. Secondly, through labor, individuals improve and refine themselves, contributing to the overall perfection of humanity [40]. As Karl Marx once emphasized, a nation cannot sustain itself even if it stops laboring for a week, let alone a year. Labor is essential for human survival [41]. This age-old tradition of the illustrious Chinese nation, built on the foundation of load-bearing labor, is ingrained even in children. Without strong lumbar spines, labor would

simply be impossible for the Chinese nation. Hence, the legacy of resilient lumbar spines has been passed down from one generation to the next. As Chinese children reach adulthood, they actively engage in productive activities to support themselves, alleviating the burden on their families and contributing to their well-being. Through countless cycles of rebirth, the robust lumbar spines, reinforced bodies, and high endurance of the Chinese shoulder-carrying culture have not been in vain. In an era characterized by rudimentary tools, they constructed their homeland and nurtured their families, relying heavily on the strength of their lumbar spines. In traditional Chinese farming before 1980, shoulder-carrying ability served as an indicator of lumbar spine health. The ability to carry heavy loads in old age was regarded as a sign of good health.

It has now been 40 years since China's rapid transition from an agrarian to a modern society since the reform and opening up in 1980. During this time, the influence of Western non-load-bearing thinking has permeated the population. Western culture, with its emphasis on modern "science," quantifies, materializes, and visualizes all indicators in numerical form. Due to the lack of training and testing in load-bearing work during youth, the growth and development of the lumbar spine can be affected. It is only later in life that individuals realize the structural challenges of their spines, which are unable to withstand the constant strain. Lumbar spondylosis has emerged as a widespread condition among the younger population, leaving them uncertain about the appropriate course of action and desperately seeking any possible solution. Unfortunately, after forty years, the true source of this global problem has yet to be identified. Regrettably, no one has successfully pinpointed the underlying issue, leading to a significant oversight that affects nearly everyone involved.

#### 8. Mao Zedong's View of Labor and the "Down to the Countryside" Campaign from the Perspective of Millennial Farming Culture

In essence, educated youth refers to a group of Chinese intellectual youth who have been educated through the lens of Chinese shoulder-carrying culture in rural areas. This historical context serves as a testament to the allure of China's shoulder-carrying culture.

The millennial farming culture encouraged educated youth to combine their studies with shoulder-carrying labor. The "down to the countryside" campaign, which involved receiving re-education from impoverished peasants, essentially entailed engaging in rural shoulder-carrying work. Mao Zedong held a lifelong appreciation for labor. From the age of six, he actively participated in labor and assisted adults in the fields, thereby cultivating his determination, building a robust physique, and deepening his affection for labor and laborers. As he matured, he embraced the Marxist perspective on labor, gaining a profound understanding and unique insights into its significance.

Throughout the revolutionary war years and after the establishment of the People's Republic of China, Mao Zedong consistently emphasized the importance of engaging in productive labor. He stressed the inseparable connection between education and labor, viewing it from two crucial aspects: the physical and mental development of children. Firstly, children need to cultivate healthy and strong bodies. Secondly, they must receive moral education that fosters communist ideals and collectivism. Both aspects are intertwined with labor and must be integrated harmoniously. For instance, Mao Zedong advocated for the participation of all primary and secondary school students in appropriate labor exercises. He believed that schools with available land should establish attached farms, where teachers and students could engage in agricultural labor. In cases where schools lacked land but were located near suburban areas,

teachers and students could participate in labor activities within agricultural cooperatives. Notably, Chairman Mao emphasized the importance of rural schools entering into agreements with local agricultural cooperatives, enabling students to partake in agricultural and sideline production work. Additionally, he encouraged rural students to engage in productive labor during vacations, holidays, or after-school hours <sup>[42]</sup>. Moreover, in the modern Anti-Japanese War, the War of Liberation, and other different conflicts, the quality of our soldiers was demonstrated through their ability to shoulder heavy burdens and their strong will. This ability was a key factor in achieving victory and represents the glorious tradition of the older generation. It is rooted in the traditional Chinese shoulder-carrying culture. For instance, the primary school textbook featuring Zhu De's shoulder pole recounts how Comrade Zhu De would join the soldiers in carrying food on his shoulders. Wearing straw sandals and hats, he would shoulder a basket of grain and climb mountains alongside everyone else.

The "Down to the Countryside" campaign began in December 1968 and concluded in October 1978. In 1968, Chairman Mao Zedong emphasized the importance of educated youth going to the countryside for re-education by poor peasants. This marked the initiation of the "Down to the Countryside" campaign. This campaign refers to the political movement that took place from the 1950s to the late 1970s, during which a significant number of urban intellectual youths were relocated from cities to rural areas. The aim was to address the "Three Major Differences" (Differences Between Urban and Rural Areas, Between Physical and Mental Work, and Between Workers and Peasants) and to enhance their practical role by "settling down in production brigades."

There was an article that went viral on the internet, titled: "The Most Awesome Generation since the Founding of the Country." Here are two excerpts from the article: "Nowadays, there is a very special group of people in China. It can be said that they are unprecedented." The post-50s and some post-40s are the most extraordinary and resilient generation in the world. They have experienced trials and tribulations and have participated in various movements. They have driven the dramatic changes of their time and have been shaped by those changes. Collectively, they have dedicated the most productive years of their lives to their country and future generations. During their youthful years, when knowledge and talent were most needed, they went to the countryside and received re-education from peasants while working with shovels and hoes. Interestingly, it was this experience that molded the "educated youth" into the most responsible, hardworking, dedicated, and open-minded generation in China. Many post-80s are amazed by the tenacity of their parents! Many Party and state leaders have once been educated youth. In essence, educated youth is a group of Chinese intellectual youth who have received education through the Chinese shoulder-carrying culture in the countryside. This history serves as a testament to the charm of China's shoulder-carrying culture.

It has been nearly half a century since the "Down to the Countryside" campaign. Through personal experience and more than 30 years of social practice after the reform and opening up, people have come to realize that educated youth are both an unfortunate generation and a generation that has gained valuable wealth. During that particular period, the challenging rural environment forged their strong will and sharpened their social adaptability. Some even believe that cadres and entrepreneurs who have gone through the experience of being educated youth, or the "thinking generation," are more pragmatic and decisive than ordinary individuals. Furthermore, this experience has deepened their understanding of grassroots life and the hardships faced by the public, making them more attuned to the real thoughts of Chinese peasants and generating a stronger affinity for the people. With a sense of civilian

sentiment, they are cherished by the general population. Without the inheritance of farming culture, can we still proudly identify ourselves as Chinese descendants? Can the Chinese nation attain such breadth of time and depth of history? Can the Chinese nation experience rebirth after repeated setbacks <sup>[43]</sup>?

Over the past many years, the author has engaged in communication and discussions with numerous “educated youth” friends. They have explored shoulder-carrying culture together and compared their experiences with the next generation, which has not been influenced by the shoulder-carrying culture. They have observed the behaviors and physical conditions of the next generation. The consensus reached is that the essence of the “educated youth” lies in being a group of Chinese intellectuals who have been educated through the Chinese shoulder-carrying culture. This history serves as a testimony to the charm of the Chinese shoulder culture. Every policy has its pros and cons. Over 40 years after the conclusion of the “go up to the countryside” movement, the educated youth are witnessing firsthand the painful reality of the weak and fragile physique of the next generation, which has not been shaped by the shoulder-carrying culture.

9. In the Chinese film “A Story of Xiangyang Neighborhood Compound” released in the 1970s, it implies that the next-generation Chinese nation needs to combine productive labor. Setting aside political factors, this idea of labor is to receive shoulder-carrying education and “strengthen the body and the spine, cultivate the spirit of hard work, and prevent mental disorders.” The difference between Chinese and Western cultures, for China, is that Chinese children should start cultivating shoulder-carrying ability from an early age. This ability is considered “China’s local sport,” and it has an essential difference from the education of Western children, particularly in terms of spine stability and the cultivation of a strong work ethic, willpower, and resilience against mental illness. In China, labor is not only a basic means of making a living but also a necessity for promoting the all-round development of individuals.

The following excerpt is taken from an online review of the film: From the perspective of present height and development, the film’s theme has certain period and historical limitations. The natural narrative of the film unfolds in a plot that defies logic and fact, appearing somewhat artificial and simplistic. However, the author of this study argues that in terms of tradition, social medicine, and Healthy China, the Chinese shoulder-carrying culture’s ability to “strengthen the body and spine” is ahead of its time and ahead of the global trend. Consequently, how to integrate the concept of the “Xiangyang Neighborhood Compound” into people’s daily lives has become a subject of innovation in both theory and practice.

Since the Industrial Revolution, modern labor activities have gradually shifted from natural settings such as farmland and ranches to factories, shopping malls, and other industrial and commercial locations. With continuous technological advancements, the relationship between labor and technology has become increasingly intertwined, and the importance of labor in natural environments with crops as materials has been overshadowed. Recognizing this, many countries have begun to reassess the relationship between labor and nature and reestablish the connection. Labor education centered around returning to nature involves innovating themes, changing methods, and expanding the scope. It goes beyond traditional disciplines and technologies, focusing on comprehensive human abilities and personal qualities, cultivating socially responsible citizens who are in harmony with nature, and fostering future-oriented core literacy. However, the development of labor education in actual natural environments is constrained by practical conditions. In situations where objective conditions do not permit labor education to take place in natural

environments, some countries opt to create simulated natural settings and design curricula and activities related to nature [44].

In the film “A Story of Xiangyang Neighborhood Compound” released in 1974, under the leadership of Grandpa Shi - a veteran revolutionary of the New Fourth Army, the children from the Xiangyang Neighborhood Compound participate in social work, unite with the working class and poor peasants, and ultimately mature and become more revolutionary through their struggle against reactionary elements.

As Grandpa Shih once said, “The imperialists are trying to place their hopes for peaceful evolution on the third or fourth generation of the Communist Party of China (CPC) by leveraging the changes in the Soviet Union. We must completely shatter this imperialist prophecy.” In the overall context, the Xiangyang Neighborhood Compound played a crucial role and had the most significant function of organizing and educating the youth. In the 1970s, the Xiangyang Neighborhood Compound became a topic of nationwide discussion. After all, who doesn’t love children? However, there was still no consensus on how to educate children and what kind of individuals they should become. The disdain for manual labor also played a role. The integration of education and productive labor aimed to sever the old roots of education and break away from the stereotypical notion that being a scholar equates to being at the top of society. The practice of combining work and study was not merely a change in educational methods but a revolution in educational thinking. This Chinese-style training of children in shoulder-carrying labor would have an impact on the physical and spinal health of Chinese children in their adulthood.

In the mid to late 1970s, many cities established “Xiangyang Neighborhood Compounds” as centers for mass cultural, recreational, and educational activities in the streets and alleys under the jurisdiction of neighborhood committees. During that time, residential houses were typically comprised of adjacent rows of bungalows, most of which were public houses assigned on a national level. Employees from the same organization generally resided in the same neighborhood community.

After the reform and opening up, there was a dramatic change in the economic foundation. The government and enterprises became separate entities, and the relationship between the government and society also underwent transformation. The model of enterprises burdened with social responsibilities has completely collapsed. With the gradual acceleration of housing monetization and commercialization, the rate of home ownership has increased. In addition, the relaxation of the household registration system and the influx of urban migrant population have led to the gradual fading or even disappearance of the “working unit community”. More and more people now live in disconnected residential communities that are not associated with their workplaces. Employees are transitioning from being identified by their work units to becoming part of society as a whole. Interactions among neighbors in the community have become less frequent, and human relationships have weakened. Currently, there is a noticeable lack of a sense of belonging to the neighborhood committee, and the traditional sense of identification with the community, like that of the Xiangyang Neighborhood Compound, no longer exists [45].

Labor education, a crucial component of the socialist education system with Chinese characteristics, plays a direct role in shaping the spirit, values, and labor skills of socialist builders and successors. Over time, regions and schools have consistently emphasized the integration of education and production, yielding some positive outcomes in practical education. However, it is important to recognize that some young people do not appreciate the fruits of labor, lack the



willingness to work, or lack labor skills. As a result, the unique value of labor education has been somewhat overlooked, leading to a weakening of labor education. The Party and the entire community must pay close attention to these phenomena and take effective actions to strengthen labor education [46].

Given the rapid development of AI and the influence of social ideological trends, diverse socialist values intersect, creating a diverse and open environment for cultivating the labor spirit among the youth. However, this environment also exposes them to erroneous thoughts such as “hedonism” and “money worship”. Young people are in a stage of establishing their worldview, outlook on life, and values, and the influx of such erroneous thoughts presents challenges to the cultivation of their labor spirit. To ensure the cultivation of correct labor values, which are essential for achieving national prosperity and rejuvenation in the future, it is necessary to have the collective efforts of families, schools, and society. Leveraging the systematic nature of knowledge and applying appropriate methodologies, the relevant authorities should integrate labor education in schools with labor education in families [47].

Indeed, who doesn't love children? However, there was still no consensus on how to educate children and what kind of individuals they should become. The disdain for manual labor also played a role. The integration of education and productive labor aims to break away from the traditional roots of education and challenge the stereotypical view that being a scholar is the pinnacle of society. Working while studying was not merely a change in educational methods; it represented a revolution in educational thinking. This form of Chinese-style shoulder-carrying labor training for children will have an impact on the physical and spinal health of Chinese children in their adulthood.

In the mid to late 1970s, many cities established “Neighborhood Compounds” as centers for mass cultural, recreational, and educational activities within the streets and alleys under the jurisdiction of neighborhood committees. During that time, residential houses mainly consisted of rows of adjacent bungalows, with most of them being publicly assigned. Employees of the same organization usually lived in the same neighborhood community. As the author grew up in the hospital dormitory area, which had children from various workplaces, nearby or far-off, the author cherishes the memories of that time.

In the current context, the challenge lies in strengthening the construction of urban communities in the new era and revitalizing the Xiangyang Neighborhood Compound in daily life. China needs to recognize the relationship between “shoulder-carrying labor,” “Western labor,” and Western sports. Chinese shoulder-carrying labor represents local sports, while Western labor encompasses Western sports. There are fundamental differences between the two. The question arises: Can we find individuals like “Grandpa Shih,” who participated in the old revolution of the New Fourth Army, possesses rich combat experience, and can lead the next generation in shoulder-carrying labor? As the surrounding environment changes, so do people. The passing of individuals like Grandpa Shih signifies the end of an era. Perhaps we can only encounter figures like Grandpa Shih within the pages of books. We should acknowledge and clearly see the true nature of Western sports, as all of its activities promote a stooped posture, disrupt the stability of limbs and spine, and its movement patterns and theories are flawed. Inevitably, it leads to injuries and necessitates hospital treatment. Instead, we should study our own traditions and learn from them.

It has now been 40 years since China's rapid transition from an agrarian to a modern society following the reform and opening up in 1980, during which people have been influenced by Western non-load-bearing thinking. Western culture, represented by modern “science,” quantifies, concretizes, and visualizes all indicators with numbers. Due to the lack of

training and testing in load-bearing work during youth, the growth and development of the lumbar spine are affected. It is only after growing up that the structural problems of the spine become evident, leading to difficulties in lifting and carrying loads. Lumbar spondylosis has become a common ailment among the young population. They are unsure of what to do and grasp at any solution they can find. Unfortunately, the flawed standard of this problematic world has not yet been recognized, and after forty years, no one has identified the error, resulting in a grave mistake that affects nearly everyone.

## Conclusion

Yu Kongjian: In ancient China, girls were compelled to bind their feet in pursuit of beauty and marriage into wealthy families. This futile and unhealthy practice is a distorted concept of beauty that should not be promoted. Similarly, current urban construction in China, driven by the “urban makeup movement,” tends to prioritize superficial style and exotic aesthetics. It overly emphasizes artificial transformation, akin to the shackling of nature through artificial “foot binding,” leading to the loss of its original ecological function. The concept of “Big Foot Revolution” in urbanism reflects a critique of the small-foot urbanism of the past 30 years. The construction of a livable ecological city necessitates the liberation of nature’s inherent capacity, enabling it to fully manifest its ecological benefits. This represents a new aesthetic that infuses new beauty into the city.

Today, as the country focuses on building a healthy China and promoting cultural self-confidence, China also needs a “spine revolution” to revive the “Chinese shoulder-carrying culture” and rescue the spines of its people. This revival will allow the spine to regain its instinctive load-bearing ability, resist spinal diseases, promote physical fitness, and prevent mental disorders.

For thousands of years, traditional shoulder-carrying laborers did not rely on Western sports. Their labor activities, such as arm movements, lifting hammers, and manual carrying, inherently encompassed basic sports movements. Through repetitive traditional labor movements, the Chinese ancestors were able to strengthen their bodies. However, with the passage of time and China’s reform and opening up, traditional agricultural labor has undergone disappearance and transformation. In recent decades, the rapid influx of Western sports into China has led to the establishment of a vast industry, resulting in a significant number of people suffering from spinal-related diseases or physical injuries. It has been proven that high-quality traditional shoulder-carrying labor cannot be cultivated through Western physical training. The two are unrelated, and Western sports further undermine spinal stability.

As a tool deeply rooted in Chinese culture since ancient times, the shoulder pole has played a significant role in agricultural production and transportation, generating immense value. Despite the modernization of transportation, peasants have not completely abandoned the use of the shoulder pole. While tractors and mowers are now widely employed, the shoulder pole continues to be a cost-effective option for short-distance transport and load-bearing tasks due to its convenience, durability, and speed <sup>[48]</sup>. Even with the advent of modern mechanization, shoulder-carrying labor remains essential in both rural and urban areas. However, there is a concerning trend of an aging load-bearing workforce

and a reluctance among the younger generation to engage in such labor and develop shoulder-carrying skills, leading to a rise in lumbar spondylosis among the youth.

Since the onset of the reform and opening up, a distinct phenomenon known as “elderly agriculture” has emerged in China, propelled by the separate urban-rural structure, the half-working and half-cultivating livelihood model, and the household contract responsibility system. The sound development of “elderly agriculture” is crucial for the steady progress of China’s urbanization in the new era, ensuring food security, and addressing the needs of the elderly [49].

Simultaneously, it is necessary to embrace advanced Western technologies, enhance production output, and transition to lighter and simpler technologies. This includes actions like renovating or abandoning steep arable land, improving utility connectivity (roads, water, and electricity), and cultivating tree shapes conducive to mechanization. By gradually reducing heavy manual labor and maximizing the substitution of human labor with machines, these measures aim to tackle the current challenges. Chinese scholars, experts, and national policymakers are currently studying and focusing on these strategies.

Therefore, there is an urgent need for China to prioritize the training of young individuals capable of engaging in shoulder-carrying and load-bearing work. Whether in rural farming or urban manual labor, the primary workforce still consists of elderly Chinese individuals, who are the last carriers of the shoulder-carrying tradition—a living relic. Additionally, this presents the final opportunity for the global scientific community to study Chinese shoulder-carrying culture and traditional spinal practices, with an estimated timeframe of only 10 years remaining.

Today, we must contemplate why we cannot create a new civilization and achieve new glory while also preserving the civilizations and glories of the past. This will ensure the further inheritance and development of human multiculturalism.

It has been over 40 years since China phased out its shoulder-carrying culture in favor of modernization, and perhaps that was a mistake. However, who can reverse this situation? The traditional Chinese shoulder-carrying culture encompasses various disciplines such as physical culture and human life science. It serves as a valuable part of national culture, representing the rich knowledge within the medical field, including the study of human body structure, physiology, and mechanics. It can ignite the enthusiasm and self-confidence of future generations in learning Chinese traditions and contribute to the reinforcement of “humanistic education” among the Chinese people.

The labor practices of our Chinese ancestors, in alignment with China’s unique national conditions, have been proven by historical practice and will not be phased out by the progress of time. Even with the widespread use of modern mechanization, shoulder-carrying laborers remain essential. China has achieved remarkable feats, such as producing atomic bombs, hydrogen bombs, and aircraft carriers. Chinese families have raised world champions in sports and sent their children to prestigious universities like Harvard and Cambridge as post-doctoral scholars. China boasts a multitude of literary scholars, artists, scientists, engineers, academic professors, teachers, and doctors. It even has the potential to cultivate future Nobel Prize winners and outstanding astronauts. However, due to the decline of the Chinese shoulder-carrying culture, it may become increasingly difficult to cultivate individuals capable of engaging in lifelong shoulder-carrying farming and heavy labor.

For thousands of years, the shoulder-carrying labor within Chinese agrarian culture has been a treasured aspect independent of other nations, and the combination of farming and reading is renowned worldwide. China not only cultivates young successors capable of engaging in shoulder-carrying and load-bearing work but also enhances physical strength and prevents lumbar spondylosis. It is essential to properly restore the traditional shoulder-carrying labor, as the traditional shoulder-carrying culture plays a crucial role in the survival and revitalization of the Chinese nation. The toil of shoulder-carrying labor is akin to the challenges of emotional distress. By actively and regularly embracing the discomfort of labor, we build our tolerance and fortitude. Previous generations, shaped by physical and mental hardships, possessed stronger willpower. In contrast, the younger generation, who have experienced little hardship since childhood, struggle to handle setbacks as they grow older. Additionally, their physical strength is weaker, their willpower is not as robust, and they suffer from numerous mental disorders.

The agrarian culture, unique to Chinese society, originated from the prolonged era of farming and has persisted for thousands of years. Farming sustains scholars, while scholars contribute to the well-being of farming households. The agrarian culture carries and perpetuates the lineage of each family, providing a solid and healthy material foundation for Chinese society. As a result, scholars no longer suffer from delicate health but instead can strengthen their physical vitality and safeguard their cultural heritage.

There was an article that went viral on the Internet titled “The Most Awesome Generation since the Founding of the Country.” Here are two excerpted paragraphs: “Nowadays, there is a group of people in China who are incredibly special. It can be said that they are unprecedented. All the post-50s and some post-40s make up the most unique and resilient generation in the world. They have experienced trials and tribulations, participated in various movements, and driven significant changes of the times while being transformed by them. Together, they have dedicated the most important decades of their lives to the betterment of their country and future generations. In their youth, when knowledge and talent were in great demand, they went to the countryside and received re-education from peasants using shovels and hoes. Ironically, it was this experience that made the ‘educated youth’ the most responsible, hardworking, dedicated, and open-minded generation in China. Many individuals from the post-80s generation are amazed by their parents’ perseverance! Numerous party and state leaders have also once been educated youth. Essentially, educated youth refers to a group of Chinese intellectual young people who have been educated through the Chinese shoulder-carrying culture in rural areas. This historical phenomenon bears witness to the allure of China’s shoulder-carrying culture.”

The shoulder pole holds a sacred place in Chinese culture. Is it possible for young people to engage in shoulder-carrying practice using the shoulder pole from an early age? Is it too late now? Can today’s youth still practice shoulder-carrying? Can China develop a practical exercise program that resembles the agrarian movement, aiming to prevent or reduce the occurrence of lumbar spondylosis and train young successors in shoulder-carrying or load-bearing work?

Scientists are currently working on a practical program that emulates the shoulder-carrying exercises of the farming era. They have asked modern young people to perform these exercises and plan to observe the results in a few years. By comparing the outcomes of the shoulder-carrying and non-shoulder-carrying exercises, researchers can gather tangible and concrete data to determine whether there is a preventive, reducing, or curative effect on lumbar spondylosis and

whether it is possible to restore the ability to engage in load-bearing labor.

According to Chinese historian Gao Chengyuan, the shoulder pole holds significance as an artifact that ensured the survival and development of Chinese ancestors during challenging times. It has also contributed to various unique achievements of Chinese civilization. To gain a deeper understanding of our cultural heritage, it is crucial to prioritize the study of the shoulder pole. However, the last-generation skilled porters are gradually aging and passing away. Therefore, the urgent task at hand is to preserve and generate the missing image data of the shoulder pole. Securing substantial support from cultural funds is contingent upon cultural leaders recognizing the significance of the shoulder pole. Any delay in this endeavor would result in eternal regret for Chinese culture. Hence, it is imperative to apply for the recognition of “Chinese shoulder-carrying culture” as an intangible cultural heritage. Those who saved it from being forgotten deserve the same credit as those who discovered it. This represents the sublime state of exploration that the world should collectively strive for. The process of civilization entails the fusion of subtle origins and broad perspectives.

This research falls within the realm of interdisciplinary studies. The Westernized branch system is inadequate to comprehend the unique form of Chinese civilization, making it challenging for our research on the “Shoulder-pole” and the author’s study on “Chinese Shoulder-carrying Culture and Traditional Spine” to gain recognition in the academic community. The key lies in compelling society and academia, both domestically and internationally, to confront the fundamental question regarding the origins of China as a contrast and complement to Western civilization.

It is of utmost urgency to apply for the protection of “Chinese shoulder-carrying Culture and shoulder-pole” as an intangible cultural heritage of humanity. The Chinese shoulder pole is akin to a baton that represents China, with the culture of shoulder-carrying and the shoulder pole itself being of paramount importance. Exploring the shoulder-carrying practices of Chinese ancestors will unveil many mysteries of Chinese history. The Chinese shoulder-carrying and shoulder-pole culture constitute valuable intangible heritage not only for China but also for the world, and it is the responsibility of the present generation to safeguard, restore, and study this world heritage.

#### Qeios’ Manifesto

*We are unveiling new ways of creating and distributing knowledge. Through our paths, we have come to honor the creativeness of the individual. We have come to value the diverse judgment of the wider community above the assessment of just a few individuals. We have come to believe that the development of an Open Society necessarily depends on free access to knowledge. We have come to believe in simplicity. We have come to value time more than anything, and the right for all of us to make the most of it.*

Quoting the Chinese historian Gao Chengyuan, “The one who saved it from being buried deserves the same credit as the one who discovered it.” This represents the lofty realm achieved by explorers and researchers worldwide.

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