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The Final thesis

**A Historical Review of Traditional Chinese Medicine During the Era of the Cultural Revolution**

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## Summary

Traditional Chinese Medicine has existed in China for over 2000 years, despite advancements in the fields of modern science and medicine, Traditional Chinese Medicine has managed to survive until today and still continues to spread its influence internationally. In this paper, we explore the history of Traditional Chinese Medicine in China, from its earliest documented records to the Cultural Revolution during the Maoist period. Shortly before and during the Maoist period Traditional Chinese Medicine underwent crucial changes. The earliest encounters with Western and Chinese medicine were during the 17<sup>th</sup> century through Western missionaries. They opened up medical colleges focusing on the teachings of Western medicine but weren't relevant until the end of the Chinese Dynasty. The National Party, Guomindang became the leading power, and their leader Sun Yat-Sen initiated the gradual eradication of Chinese medicine. Later the Guomindang lost the civil war against the Chinese Communist Party of Mao and Chinese medicine was saved from abolition. During the Maoist period Traditional Chinese medicine went from being nearly abolished and competing over dominance with Western medicine to coexisting with the latter and forming an integrated system, which is largely used in the medical system in China today. This paper aims to give more understanding of the process of unification of Western and Traditional Chinese medicine in hopes to broaden the horizons and give suggestions on what achievements could be made by combining conventional modern medicine with traditional alternative treatment methods.

**Keywords** Traditional Chinese Medicine, Cultural Revolution, Mao Ze-Dong, Integration, Internationalization, Barefoot doctors,

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## Introduction

In recent years, there has been a growing interest in **Traditional Chinese Medicine (TCM)** worldwide, and increasing studies show the positive effects of TCM in the fields of oncology and management of other chronic illnesses, and more recently for the treatment of COVID-19 and its complications. (1) (2)

The relationship between Chinese and Western medicine has been complex and dynamic throughout history, with both systems influencing and learning from each other. It is important to understand how TCM and Western medicine came to exist side by side as equals in China. Alternative medicine is becoming more relevant in recent years and an increasing number of people are willing to try out alternative medicine over conventional medicine. (3) But alternative medicine still doesn't have a secure seat in our healthcare system, it is not covered by every insurance nor is it believed or recommended by every physician. China is a good example where alternative medicine in the form of TCM is well preserved and is integrated into the Western medical system. (4,5)

Understanding the process of integration of Western medicine into China can be integral as it can allow medical professionals to combine alternative and conventional medicine allowing patients a wider spectrum of treatment and therapy options.

Therefore, we believe that our study as well as other similar studies can serve to broaden the understanding of Westerner practitioners towards TCM and contribute to better cooperation between TCM and Western Medicine.

Originating from parents who were the first graduates of the new medical curriculum in China after the Cultural Revolution, I have personally seen and experienced this co-operative form of integrated medicine. Although TCM cannot replace Western medicine in terms of technology and scientific understanding of physiology, we believe that it can help doctors to broaden their horizons and perspective by viewing medicine in a humanized way again. TCM tackles the diagnosis and treatment of diseases on more than just a physical level, the patient is seen as more than a solitary biomedical object, but rather as a universe that is in constant connection with its surroundings. TCM also emphasizes the patient's self-awareness and concern for their own health and lifestyle in order to prevent the development of diseases. And vice versa Western medicine's precision medicine does not mean that TCM will be abandoned, in contrast, both forms of medicine each have their advantages in their respective fields of expertise and function to complement each other. (6)

The history of Western and Chinese medicine can be traced back to the 17th century, but it wasn't until the 19th century that more intense exchange was conducted. (4,5)

Since then, Western medicine has had a tremendous impact on the development of Chinese medicine and introduced fundamental basics of Medicine, such as anatomy, physiology, and Western

surgery. Vice versa, Chinese medicine also impacted Western medicine and lifestyle, such as taiqi and acupuncture. They were adopted and studied by Western medicine and today they are popularly used in Western countries as a complementary therapy for the management of chronic diseases such as osteoporosis and arthritis (7,) but also as part of a healthy lifestyle. (8,9)

Traditional Chinese Medicine (TCM) is over 2000 years old, but the TCM we know today is only a few decades old. It is even speculated that Chairman Mao Zedong can be called the inventor of TCM. (10)

Chinese history has been well-studied by many historians, anthropologists, and doctors such as Elisabeth Hsu, Heiner Fruehauf, and Taylor Kim. It is known from their works, that Mao was an important figure, not only for the development of China's political system but also the medical system. It is said by Hsu and Fruehauf (5,11), that TCM was reinvented under his influence, and he played a significant role in the integration of Western medicine into China.

The cultural revolution is widely regarded as a negative event during which many historically important writings, artifacts, and personalities were lost to destruction, exile, and death. (5) But Hsu says (5) that the Cultural Revolution should not only be viewed as a negative event in the history of China, because it also had positive influences, such as its influences on TCM.

Many papers have been written about the effects of Mao's regime on China and authors like Hsu and Heiner described the effects of Mao's regime on TCM so far. However, the research they conducted before me is missing answers to some important questions about the Cultural Revolution and TCM.

It was said that Mao reinvented TCM during the Cultural Revolution. Were these changes beneficial to the development of TCM? Would TCM have survived in a purer form if it had not been used as a tool of politics and if important TCM practitioners had not been forced into exile/suicide? Would TCM have flourished better without the influences of Mao and the culture or was it "saved" from being replaced by Western medicine? (5)

Therefore, in our study, we have raised the goal to evaluate the impact of the Cultural Revolution on the later development of TCM. The goal is divided into several tasks:

1. To describe the development of TCM and its basic concepts as well as the assumptions for the first contacts with Western medicine before the Cultural Revolution
2. To evaluate the negative and positive impacts of the Cultural Revolution on the development of TCM
3. To describe the symbiosis of TCM and Western medicine today

**In our study we rise the Hypothesis:** Was the cultural revolution beneficial for the development of TCM in China?

## Chapter 1 – Introduction to Chinese Medicine

### 1.1 The Basics of Chinese Medicine

To make the understanding of the following paper easier for all readers we will start by shortly introducing the fundamental ideas of Traditional Chinese Medicine, to bring everyone on an equal level of understanding.

TCM has persisted for over 2000 years and remained the main form of treatment for the people of China until the early 1900s when Western Medicine got introduced into China and it eventually became integrated into TCM becoming what we know as integrative medicine. Even today, not only Chinese people enjoy the benefits of TCM, but people all over the world enjoy the beneficial effects of TCM in the forms of its traditional practices such as acupuncture, Tai qi, and also popular usages of Chinese herbs such as Ginseng. (8,12,13)

In the theory TCM it is believed that besides the anatomical structure of the body, the body is a link for the individual human to connect to the universe, the Universe is the “big body”, and the human body is a “small universe”. In that sense, the holistic approach is used, because it is believed that the human body aside from being its own independent entity is also part of an interplay with its surrounding environment and nature has a principal role in the development of diseases and maintaining health. (14)

Anatomically speaking the body is characterized by the 5 zang organs and the 6 fu organs (五脏六腑), this concept was first described in the “The Inner Canon of the Yellow Emperor”. The five zang organs are the heart, liver, spleen, lungs, and kidneys. The six fu organs are as follows, gallbladder, stomach, small and large intestines, urinary bladder, and San jiao (triple energizer). (15)

Aside from those eleven organs, there are also extraordinary fu organs including the brain, marrow, bones, vessels, gallbladder, and the uterus. The difference between both systems is furthermore shown by their difference in function. The zang organ's primary function is to store Jing-Qi 精气, which can be understood as life essence won from nutrition and is needed to upkeep the maintenance of the body and all life activities. (15)

The main function of the fu organs is to produce Jing-Qi from digested foods, absorbing their nutrients and discharging the waste. From this description Zang organs can be described to be organs with circulatory function meanwhile the fu organs are the digestive and metabolic organs. Furthermore, the zang-fu theory does not only describe the function of each individual organ but also the relationship between each other and the body as a whole organism. (15) The connections of the different fu and zang organs in relationship with their governing, orifice, and external manifestation

can be used by TCM practitioners to diagnose diseases affecting different systems and organs of the body.

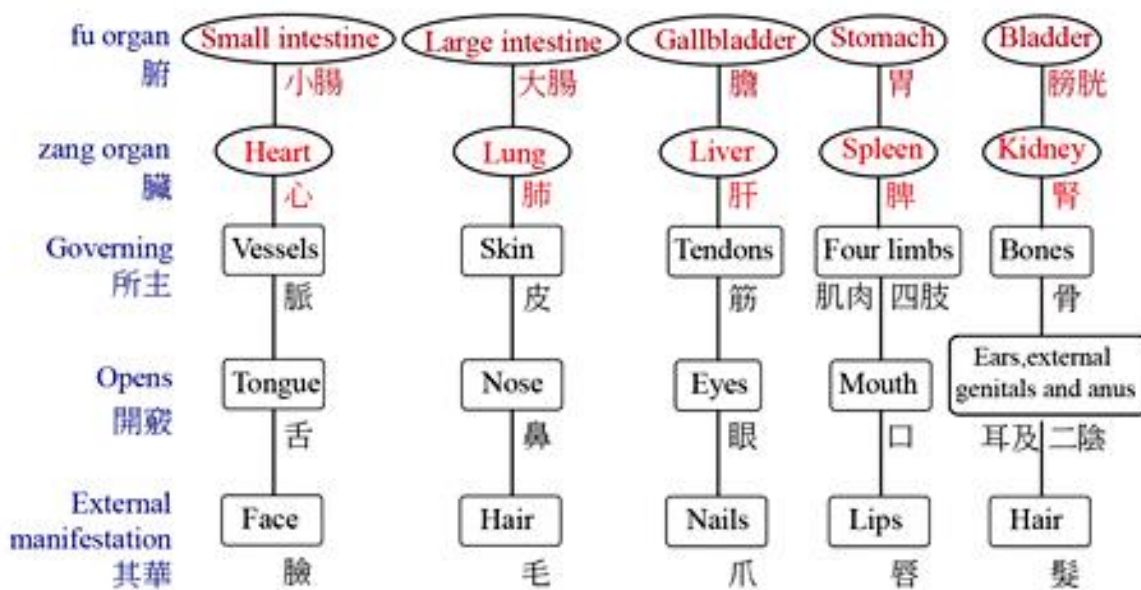


Figure 1. The relationships of the zang organs, fu organs, sensory organs, and the orifices. (15)

Additionally, together with the Yin-Yang theory the use of Five Elements (Wu-Xing, 五行) is what constitutes the basis of TCM theory. Wu-Xing means the “movement” or “process” of “five” and describes the relationship and interplay of the five elements: water, fire, wood, metal, and earth. As Yin and Yang, the elements also stand in relationship with natural occurrences and anatomical structures which they represent. Similar to Yin and Yang the five elements are also in a tight relationship, promoting and suppressing, each other. (15)

To sum it up, it can be understood that the basic theory of TCM heavily relies on the principle of opposites each other and their interaction. If the equilibrium of elements/Yin and Yang within the body is disturbed it is reflected in the human health and manifests as different diseases affecting the anatomical systems that were influenced by the disbalance.

**Table 2.1 Some of the main correspondences of the Five Elements**

	<b>Wood</b>	<b>Fire</b>	<b>Earth</b>	<b>Metal</b>	<b>Water</b>
Seasons	Spring	Summer	None	Autumn	Winter
Directions	East	South	Centre	West	North
Colours	Green	Red	Yellow	White	Black
Tastes	Sour	Bitter	Sweet	Pungent	Salty
Climates	Wind	Heat	Dampness	Dryness	Cold
Stage of development	Birth	Growth	Transformation	Harvest	Storage
Numbers	8	7	5	9	6
Planets	Jupiter	Mars	Saturn	Venus	Mercury
Yin–Yang	Lesser Yang	Utmost Yang	Centre	Lesser Yin	Utmost Yin
Animals	Fish	Birds	Human	Mammals	Shell-covered
Domestic animals	Sheep	Fowl	Ox	Dog	Pig
Grains	Wheat	Beans	Rice	Hemp	Millet
Yin organs	Liver	Heart	Spleen	Lungs	Kidneys
Yang organs	Gall Bladder	Small Intestine	Stomach	Large Intestine	Bladder
Sense organs	Eyes	Tongue	Mouth	Nose	Ears
Tissues	Sinews	Vessels	Muscles	Skin	Bones
Emotions	Anger	Joy	Pensiveness	Sadness	Fear
Sounds	Shouting	Laughing	Singing	Crying	Groaning

*Figure 2 Some of the main correspondences of the Five Elements (16)*

The concept of Qi is also very important in the definition of TCM theory. Qi can be understood as an inner “energy”, “potential fire” or “life force” that resides within every living being as well as everything else around them. The concept of Qi exists outside of the concept of medicine as well and has been found in writings about philosophy that can be traced back all the way to the beginning of Chinese civilization, the most well-renowned documentation of it is in “The Inner Canon of the Yellow Emperor”. (14,16) It can be understood that Qi is what connects the human body to the universe. Qi is categorized into two groups: Yin and Yang, which are opposites of each other. Yin represents the cold, slow, structural, and passive aspects of Qi, whereas Yang represents the warm, excited, functional, and active aspects of Qi (18). Qi runs through the body like a stream through a pathway known as “Meridians”. It correlates to 14 different organ systems (lung, large and small intestines, stomach, spleen, heart, bladder, kidney, pericardium, triple energizer, gallbladder, liver, conception vessel, and governing vessel) and can be accessed through 365 pressure points, each with their own unique function, which sets the fundamental basis for TCM practices, such as acupuncture, moxibustion, and massage (18).

Yin and Yang generate five “phases” or “elements”: metal, water, wood, fire, and earth. Like Yin and Yang, they are opposites of each other, but they also complement each other. And as



mentioned before it is believed by Chinese medical philosophy, that diseases are caused by an imbalance of Yin and Yang, which results in an imbalance in one of the five elements, which manifests as a disease in the corresponding organ system. (17)

In TCM the human body and health are also affected by emotions. According to TCM, there are seven emotions in a person, joy, anger, grief, thought, sorrow, fear, and fright. If a person experiences strong emotions, it will affect the flow of Qi in their body and therefore directly affect their health. (14)

Most of the medical knowledge is collected in a series of well-known ancient literature such as “The Inner Canon of the Yellow Emperor”, and "Compendium of Materia Medica", which are collections of ancient medical stories and an encyclopedia of medicinal herbs and their usages. (17)

**Table 1.** Comparison between Western Medicine and TCM

Western medicine	TCM
Scientific	Philosophic
Analytical	Comprehensive
Local changes	Treats as a whole (holistic)
Surgical	Internal
Symptomatic	Complex-symptomatic
Theoretical	Empirical
Preventive medicine	Hygienic medicine
Social medicine	Individual medicine
Bacterial prevention	Constitutional prevention
Animal experiment	Human body experiment
Cellular pathology	Liquid (functional) pathology
Objective phenomenon	Subjective feeling
Chemical drug	Natural herb

Figure 3 Table comparing the main differences between Western medicine and TCM (19)

## 1.2 The History and Origin of TCM

As already mentioned, TCM has existed for well over 2000 years, the earliest records are from 2697-1122 B.C., which were mostly mythological legends concerning who was believed to be the founder of medicine in China: Shen Nong (神農). His name translates into “Divine Farmer”, and it is believed that he was the deity who not only taught humans how to use various instruments and

techniques for farming but also thought them how to use medicinal herbs and techniques such as acupuncture and moxibustion. According to the myths he ingested thousands of herbs to investigate them for poisonous or therapeutic properties, eventually, he died from a failed experiment. Alongside Shen Nong, there were two other characters, who together were called the "Three Celestial Emperors". Namely Fu Hsi and Huang Di. Fu Hsi who was the founder of the first Chinese dynasty, in 2000 B.C.E., invented the Yin-Yang concept, and Huang Di, who was the last of the Celestial Emperor, founded the measurement of pulse and composed the Huang Di Nei Jing (黄帝内经, The Inner Canon of the Yellow Emperor), which is equivalent to a collection of case reports from Huang Di and his physicians. This text has guided Chinese medicine for over 2500 years. (17)

The Han Dynasty, starting from 206 B.C. was the most eminent and memorable period for TCM in China, as some of the most historically important and well-known doctors lived during that time, such as Zhang Zhongjing (張仲景) a Chinese pharmacologist and physician who wrote the Shang Han Lun (伤寒论, Treatise on Cold Damage Disorders), which was a book that focused on the treatment of infectious diseases causing fevers during that era. The Shang Han Lun described and explained how diseases develop from being exposed to "cold winds", which travel through the pores of the skin into the inner body's channels. The book primarily describes acute illnesses but also emphasizes the chronification of acute diseases if left untreated. Today the contents of the Shang Han Lun provides valuable information for new treatment methods for chronic diseases such as chronic obstructive pulmonary disease, liver diseases, and chronic pancreatitis. (20,21) It is considered to be one of the four canonical works in TCM, alongside the Huang Di Nei Jing (黄帝内经, The Inner Canon of the Yellow Emperor), Jin Gui Yao Lue (金匱要略, Essential Prescriptions from the Golden Cabinet) and Wen Bing Xue (温病学, Warm Disease Theory). (22,23)

Medical practices during the dynasties were very different from what we know today, even though it could be seen in the Chou Dynasty (ca. 1122–221 B.C.E) that institutions and academies for medical education existed already, but most practitioners were trained in apprenticeships and even were largely self-taught. To be an imperial physician, one had to take place in yearly examinations hosted by the imperial palace and those who passed would be able to practice medicine in the court and treat the royal family and officials. Of course, the physicians who practiced public/street medicine far outnumber those who made it into the imperial palace. (17)

It was not until 1911 when the last Dynasty came to an end and the imperial medical system with it a few years later. After the end of the last Dynasty, the Nationalist Party, **Guomindang (GMD)** in 1928 unified China which until then was separated by warlords. One of the first programs on their agenda to make China into a modern society was the establishment of a Ministry of Health in Nanjing,

this was the first time China had a center that took care of all health care related issues nationwide. (24)

At that time in China, there were Western-style doctors, who were Chinese-born nationals, who received formal medical education in either Western countries or Japan or received medical education from Western missionaries. With the end of the last dynasty, Western medicine finally had its breakthrough in China and the aforementioned missionaries opened medical education facilities in addition to their churches. These medical education facilities also became some of the first medical universities and colleges in China. (5)

At the same time, more and more Chinese doctors choose to pursue medical education abroad in Western countries or in Japan, where the German medical education system has been implemented since 1869. (5) Unlike the missionaries, who already existed in China for up to a century, the newly educated Western-styled doctors did not try to convert the general Chinese population to Christianity and Western beliefs, instead, they targeted the national medical administration and pushed for funding of medical education and hospitals where they could advertise Western teachings. (24)

Also, instead of trying to compete with TCM practitioners and physicians they straight out advocated for the abolishment of TCM. Dr Yu Yunxiu (俞云岫, 1879-1954) since the early 1920 had been actively campaigning for the abolition of Chinese medicine, in which he saw nothing but a national disgrace. Due to the personal background of Sun Yat-sen, who was the leader of the GMD party and a physician trained in Western medicine, his party unanimously passed the bill to abolish “Old-Style Medicine in Order to Clear Away the Obstacles to Medicine and Public Health” (废止旧医以扫除医事卫生之障碍案) on the 25<sup>th</sup> of February 1929. (24)(25)

Even though the order was passed by the court, it was never put into power, because the previously unorganized TCM practitioners, who did not have an organization unifying them, came together and uprooted a massive national movement of TCM practitioners and physicians to defend their rights. (11)

On the 17<sup>th</sup> of March 1929, the Chinese medical community held a national demonstration in Shanghai, which won enough public and political support to overturn the bill. Perhaps this is where the Chinese medical community felt a spark of threat to their existence and decided to push back against the Westernization of medicine in China. For a brief period of ten years, TCM practitioners in China wrote books, opened schools and academies, and published journals to overcome their image of being an outdated remnant of the past. Their efforts were fleeting, after ten years of attempted rebuilding followed twelve years of war. (24)

First, the 2<sup>nd</sup> Sino-Japan War (1937-1945) happened, which ended with the capitulation of Japan following the bombing of Hiroshima, and right after the war with Japan, the National and

**Chinese Communist Party (CCP)**, who for the period of the Sino-Japanese war fought side by side to defend against Japan, picked up their decade long feud once again and the civil war broke out from 1945-1949.

It was an uphill battle for Mao, but the CCP eventually emerged victorious and on 1<sup>st</sup> October 1949 **the People's Republic of China (PROC)** was founded with Mao Ze Dong as its Chairman. (26)

In 1958 Mao fully started his integration movement called "Chinese-Western medicine integration" (中西医结合). This integration movement in short served to take out the "old fashioned" elements of TCM by taking it out of the hands of its forefathers and putting it into the controlled hands of Western medicine, which was supported by modern science. (11)

In the same year, Mao started the 2<sup>nd</sup> phase of what is known as the "Great Leap Forward". Mao's wish was to strengthen China on an industrial level, and this led him to take people away from the farmlands and put them into iron-making facilities. The newly founded China, which was isolated from the Western society lacked the knowledge and equipment to produce high-quality iron, yet they still had the unrealistic expectation to overtake Great Britain, which was the leader of industrialization at that time. Farmers who were recruited to smelt iron did not know how to do so, when firewood became sparse farmers would burn their house doors and personal belongings, and even coffins, instead of digging for iron ores they smelted screws and everyday household items such as spoons and pots and pans. The iron that was made was low-quality and unfitted to strengthen China's industrial power, the so-called "pig iron" was merely fit to fill the railway gaps. (27)

The consequence of this action was that there weren't enough farmers taking care of the crops, corruption happened, and farmers were unfairly taxed out of the little crops they had leading to the Great Famine starting in 1960. From 1959 to 1961, 30 million Chinese people starved to death, and the same number of pregnancies were lost. Mao had to take responsibility for what happened and resigned as President of China in 1959, though he remained the Chairman of the Communist Party. Still, Liu Shaoqi, who was the new President of China, and Deng Xiaoping took over control of China's economy in 1959. After spending 5 years away from the state and economic affairs of China, Mao found himself caught in an internal struggle with the higher-ranking officials in his party. This is why in 1966 he unleashed the "Great Cultural Revolution" to invalidate his enemies. (27)

The goal of the Cultural Revolution was to preserve Chinese communism, to do so the Chinese community was purged from all remains of capitalism and traditional elements of Chinese culture. Mao called the young people to "rebel", and the youth responded by forming the "Red Guards" which could be compared to a cult. They were students who each held a copy of "Little Red Book", also known as the "Mao bible" which was a collection of his quotes. Following the quotes, the Red Guards

would travel through the country and serve justice under the name of Mao, in the form of destruction of valuable cultural goods such as temples and ancient texts. (28,29)

In a speech in 1965, shortly before the beginning of the Cultural Revolution Mao said that medical education needs to be reformed “it is completely unnecessary to engage in so much studying.”. (11)

He stated: “How many years of formal education, after all, did Hua Tuo have? And how many Li Shizhen? There is no need to restrict medical education to people with high school diplomas, middle school and elementary school pupils studying for three years will do. The real learning will happen during actual practice. If this type of lowly educated doctor is then sent to the countryside, he will always be able to do a better job than the charlatan shamans; and the peasants, moreover, will be able to afford such care. Studying is a stupid endeavor for a doctor.” (11)

This speech ultimately led to the consequence that from the years 1966-1971 there were no new students enrolled in higher education, including medical academies and colleges. During this time many renowned academics including the five old master practitioners of TCM (Wu-Lao, 五老), who were the founding pillars of TCM after the CCP became the government in power, became subjects to mockery and disrespect. Many people of culture burnt their books and belongings to avoid persecution or died from grief and abuse. Much of China’s cultural heritage was permanently lost during that time. (11) (30)

Even though Mao stopped the Cultural Revolution in 1969 it did not fully come to a halt until 1976, when Chairman Mao passed away. Only after 1970 did universities and colleges slowly open admission for new students again, though admission criteria were heavily based on the student’s family and political background. A high school graduate must have at least two years of experience working in a commune, or factory or have attended the army before they were eligible to apply for university. His working attitude and performance, family background, and political attitude were then evaluated by a committee of his supervisors at work, only having passed the screening their university application would be processed. In 1978 entrance exams for universities were re-introduced, allowing a broader selection of young people to attend universities again. (5,31)

## Chapter 2 – Chairman Mao and TCM

### 2.1 Mao’s Opinions on TCM

Chairman Mao has always been a person who firmly believed in science and was an advocator of Western medicine, yet he was a great devotee of TCM and promoted it heavily in his speeches and political campaigns. Conflicting with his devotion and support Mao said: “Even though I believe we

should promote Chinese medicine; I personally do not believe in it. I don't take Chinese Medicine.” (32) How does someone who does not believe in TCM, promote it, and why?

“What I believe is that Chinese and Western medicine should be integrated. Well-trained doctors of Western medicine should learn Chinese medicine; senior doctors of Chinese medicine should study anatomy, physiology, bacteriology, pathology, and so on. They should learn how to use modern science to explain the principles of Chinese medicine. They should translate some classical Chinese medicine books into modern language, with proper annotations and explanations. Then a new medical science, based on the integration of Chinese and Western medicine, can emerge. That would be a great contribution to the world.” “Even though I believe we should promote Chinese medicine, I personally do not believe in it. I don't take Chinese medicine. Don't you think that is strange?” – Mao (32)

Unlike the GMD, which aimed to abolish TCM, the CCP's goal was to promote TCM and unite it with Western medicine. Mao valued TCM as part of China's long and prosperous history, he said: "Chinese medicine is a grand cache of knowledge that we should actively bring to light and further evolve."(11) (33)

A big reason why Mao supported TCM so much in his time as Chairman and leader of the CCP stemmed from the time of the civil war between the CCP and GMD. The CCP was inferior to the GMD in many aspects, such as military strength, size, and technical advancement, despite these disadvantages the CCP still defeated the GMD. (24)

The target group of the GMD has mainly been the population living in large cities and paid little attention to the majority of China's population that lived in the rural countryside, which Mao used to his advance. (24)

Mao won the civil war by carefully manipulating population groups that were segregated and not well taken care of by the regime of the GMD. Groups such as farmers living in remote areas, and lower-class citizens, which also included TCM practitioners. It was with the support of the people Mao was able to win the civil war. And it was because of the support from TCM practitioners during the civil war, that TCM was able to experience a period of flourishing after taking over China. (24)

TCM's biggest flaw during the time of early communistic China was, that it still retained a lot of the non-scientific, folklore-like aspects from the Dynasty period. Mao accepted the flaws and said in response:” We should critically accept the legacy of this part, remove its dross, preserve its essence, add its reasonable part to medicine in order to treat diseases and serve people better.” (5) His efforts to erase TCM's unscientific flaws can be seen later in the Cultural Revolution, where he tried to purge China of its old-fashioned and capitalistic elements. This will be discussed further in detail in a later chapter.

Mao's support for TCM was also due to national pride, in a time where Western countries had a large influence on China's culture, especially with many doctors and common people looking down on TCM when comparing it to Western medicine. In response to the negative opinion many people held against TCM, Mao said: "It is a crucial issue for protecting and developing TCM. Because TCM is related to the prevention and treatment of diseases for hundreds of millions of working people. Furthermore, TCM has a long history and rich content. It is also a part of the duty concerning the dignity, independence, and self-confidence of our Chinese nation." (33)

He furthermore said: "Admittedly, Western medicine which came from modern times, has its own merits. But only the one who was enslaved by the influence of Western ideals would consider that all the things imported from abroad are better than our own. It is the extremely despicable and abominable bourgeoisie's ideology that misleads people to look down upon China, disrespecting the Chinese nation and her cultural heritage." (33) Another reason for Mao's support of TCM was that the nature of it fit into the promotion of Mao's unique brand of communism: "among the people", "native", "patriotic" and "self-reliant". (11) The last point proved to be another very important reason why Mao was so fond of TCM. Mao suspected that China was becoming overly dependent on the Soviet Union for products and expertise, particularly modern medical equipment, and pharmaceutical goods. (11)

In conclusion, it can be said that Mao's relationship with TCM was a very complicated one. On one hand, he believed that TCM was old-fashioned and stood in the way of his mission to modernize China, but on the other hand, he also saw the potential TCM had as a political tool as well as its actual benefits for the people of China. (34) In his opinion TCM had existed in China for over thousands of years and in contrast, Western medicine had only been practiced for about 100 years in China. According to Mao, China's population would not be able to grow to over 500 million if they had not depended on TCM and if it hadn't proved itself to be a reliable and effective method of treating and preventing diseases. (32) Mao not only respected TCM for being a key component in Chinese history but also as a reason for national pride. Aside from patriotism Mao also saw and appreciated the practicality of TCM. By the late 1940s, China had over 540 million inhabitants, but only about 51,000 Western doctors, who could only function using expensive equipment and medicine after a time-consuming education. In a speech on 30<sup>th</sup> October, 1944 Mao said: "To rely solely on modern doctors is no solution" (29), to simply rely on Western medicine alone was not realistic for Mao.

Mao also saw TCM as a tool to enter the world market, he said in July 1954: "First of all, we must make it clear: such efforts are not only for China but also for the whole world." (33) But to prepare TCM for the world market, and specifically for the Western world, it first had to be cleansed of all its "unscientific" and "folklore like" traits.

## 2.2 What the Cultural Revolution changed about TCM and Medicine in General in China

### 2.2.1 Medicine in China Before the Cultural Revolution, the Importance of healthcare system reform

To answer the first question, we must first understand how TCM, or at this point General Medicine practices in China, was before the Cultural Revolution. As mentioned in the first chapter of this paper, studying medicine in China used to be on an apprentice-teacher basis, students wishing to learn the arts of medicine had to go through extensive training under the supervision of their master, before joining them in their practice, most doctors stayed within the family lineage and the knowledge was passed onto family members. Doctors coming from these lineages virtually only treated the rich and elites. People living in rural areas of China, therefore, were dependent on the services of a broad spectrum of people such as Buddhist and Daoist clerics, spirit mediums, fortune tellers, witch doctors, acupuncturists, bonesetters, illiterate local herbalists, and midwives. Medicine was very un-unified, and it was not required to hold any special papers to call yourself a "doctor" or a "healer" at that time. Resulting of this phenomenon many rural medicine practitioners presented themselves as elite doctors with prestigious backgrounds hence why many rural medicine practitioners are seen as quacks by physicians and patients, this spectacle proved to be a big hindrance in the further development of Chinese medicine/TCM. (29)

It was only when the Chinese dynasty ended, and the Republicans took over control of the Chinese state that an organized system for medical education was established.

Sun Yat-Sen the leader of the Republican party, lived a significant part of his life in Hawaii attending a Christian school, and eventually studied medicine at Guangzhou Boji Hospital, which was a Christian missionary academy. Due to his education in Western medicine and science, the public health officials of the Republican party attempted to pass legislation to prohibit the practice and teaching of TCM, which even though was passed as legislation was never implemented due to the massive backlash it received from the general population. Even though the legislation was prevented, this historic event has created a rift between TCM practitioners and Western-styled physicians that tremendously impacted the future relationship between the two. (11)

But even then, under the rule of the GMD, only wealthy citizens of large cities had access to Western medical healthcare, since physicians with Western medical training were sparse and the requirements needed for their medical system to function could only be met in urban areas with medical schools, hospitals, and modern equipment. Most rural people did not have any contact with



Western medicine until the Maoist era. Mao already realized early during his campaigns how important health and access to healthcare are, which is why the modernization of the Chinese healthcare system and Chinese medicine was a big part of his political movement. (29)

When Mao's Political party first began to form in the Jinggang Mountains (1927-1930) one of his first difficulties was the supply of pharmaceutical products and expertise for his army. The GMD had cut supply routes for the Red Army, leaving them severely wounded and sick. Mao realized there the significance of TCM in treating trauma and diseases and ordered troupes made of soldiers and local TCM practitioners to harvest the mountains for traditional Chinese herbs to use in combination with Western pharmaceuticals to make up for the lack of supply. Academician Chen Ke-Ji wrote: "Jinggang Mountains is the cradle of revolution as well as the integration of Chinese and Western Medicine." (33)

As mentioned before Mao already realized at the beginning of his era, that the PROC was severely lacking doctors and healthcare providers, especially in rural areas, therefore especially during the early Maoist period did he promote the education and usage of TCM. In 1956 Premier Zhou Enlai authorized the establishment of the first four colleges of Chinese medicine in Beijing, Shanghai, Chengdu, Guangzhou, and later a fifth one in Nanjing. The "Five Elders" (Wu-Lao, 五老) were housed in these colleges, they would become the most influential teachers of the first generation of new TCM practitioners. (11)

### 2.2.2 The effects of the Cultural Revolution on TCM, salvaged or eradicated?

The infamous Cultural Revolution unfolded from the years 1966-1976. It was known as an attempt by Mao to revolutionize China and rid it of its old-fashioned and capitalistic ideals as well as to get rid of political enemies that threatened his position in the CCP. What also got reformed alongside the political position of the country was the medical healthcare system. (29)

The closing and halting of all forms of higher education were one of the most prominent features of the Cultural Revolution. The class of 1963 was the last class that was able to graduate from a TCM curriculum that was still fit to carry the label "traditional". Following the years of the Cultural Revolution TCM was re-invented into the TCM we know today. (11)

From this saying it can be understood that the TCM we know today is not the same Chinese medicine that was used for over 2000 years. Firstly, we must understand where the term "Traditional Chinese Medicine" comes from. Since the 17<sup>th</sup> century when Western medicine was first introduced there was only Western medicine and (Chinese) medicine. The term Chinese is put into brackets because the people did not see the requirement to give their native form of medicine a specific name

to differentiate it from the aboriginal form of medicine. Later when the GMD took over the government the two forms of medicine were called Western medicine (西医) and Chinese medicine (中医), but it was only describing the origin of both forms of medicine, the term “traditional” has not been introduced yet. (25)

Other terms used to describe Chinese medicine have been seen throughout the history of post-dynasty China such as “the nation’s medicine”, guo-yi (国医), which is a term used in Taiwan until this day, and Mao referred to Chinese medicine as “old” medicine, jiu-yi (旧医). Knowing Mao’s standing on TCM he emphasized that it was old and outdated and has to be renewed. Even in the early Maoist period, it was still described the same way. It was Ma Kanwen (1927-2016) who proposed to translate Chinese medicine into “Traditional Chinese Medicine” in the English language in the mid-1950s. (35)

Continuing the point that was made earlier in this chapter, it can be understood that TCM, as we know it today, is a relatively new “invention”.

According to Hsu (5), TCM would fit the definition of an "invented tradition", which is a concept defined by Eric Hobsbawm and Terence Ranger in their book "The Invention of Tradition" in 1983. In the introduction of the book Hobsbawm argues, that many “traditions”, “appear or claim to be old are often quite recent in origin and sometimes invented.”

In his book “The Invention of Tradition”, Eric Hobsbawm proclaims that traditions we believe are ancient and unchanged by time are actually relatively young inventions. He argues that traditions, in contrast to their definition, are not timeless and unchanging, but continuously evolving and adapting to their current circumstances. He uses examples from many parts of the world to prove his point, for example, the rituals of the British coronation and Hindu and Muslim traditions in India. These examples show that often traditions are invented to serve certain political and ideological goals of specific groups of society. Often these traditions are created to appear as if they have existed for centuries and remained unchanged throughout time, but Hobsbawm argues that “invented traditions” are not by definition based on the flow of history and historical events but rather are constructed to serve a certain purpose in their current time period, such as building a national identity, strengthening political power and sense of national unity. (36)

TCM would fit into this definition because, from a historical point of view, TCM was invented as a "Communist project" by Mao during a period when China as a state and country was being rebuilt after the fall of the Imperial Order in 1911 and rule of the Republican party (1911-1949) when the country was rebuilding its sense of “self”. (5) Fitting with Hobsbawm’s definition of invented tradition, TCM remains characteristics and key elements, such as its core theories of five elements,

qi and 5 zang organs and the 6 fu organs, but at the same time, it was changed fundamentally to function as a political tool for Mao's communistic campaign.

Mao has always underlined the importance of healthcare coverage in the PROC, numbers from 1944 to 1955 show that there was a serious misbalance of Western and Chinese medical practitioners and inhabitants, even after the proportion has improved numbers from 1965 still show that the 1,5 million Western medicine doctors only 10% worked in rural areas, where 90% of the population resided as farmers. In addition, only 25% of national funds for medicinal expenditure went to rural areas. The elite TCM institutes also mainly focused on urban areas. To combat this inequality Mao decided to fully disassemble and reassemble the healthcare system of China during the Cultural Revolution. (29)

The Soviet Union and CCP had a gradual fallout during the mid-1950s and eventually split completely in 1960. This led to the departure of previously stationed medical personnel and their equipment. Now Mao had enough power to overthrow and remove high-importance figures from the Health Ministry and put forward his own idea of Marxist medical practice. Mao's brought medical care to the countryside by forcing about 1/3 of Western and Chinese medical practitioners to serve in the countryside, primarily as rotating medical teams, and eventually permanently seated doctors. This was an effort of Mao to destroy the elitist medical system that only served the rich people in urban cities. (29)

Western physicians and TCM practitioners alike spent the 1960s watching the Cultural Revolution destroy their medical culture and tradition. During the revolution, colleges eventually reopened with a medical course consisting of a three-year curriculum. The admission of students and the content of studies were highly politicized and propagandized. Admission of students no longer was based on their academic achievements but based on their political background as well as their families. Prior to the Cultural Revolution, despite higher education being available to everyone, mostly children of primarily elitist families and communities who had better academic abilities and resources were accepted to universities. In the eyes of Mao these students even if academically gifted were politically "incorrect", yet most of the politically "correct" children of rural families were not able to pass the entrance exams for university. The consequence of this was that for a decade, in medicine and other fields of higher education, there was poor quality teaching and graduates of these programs were ill-equipped with insufficient knowledge and training. During the Cultural Revolution research was stopped, libraries with irreplaceable medical writings were burned, temples and lineage halls were destroyed, many elite elderly doctors were exiled, tortured, and even killed or driven to suicide, many students were also pinned against their teachers and pressured into mistreating and betraying them. Medical and scientific progresses in China was regressing in comparison with the

rest of the world, which was rapidly industrializing and advancing rapidly in the fields of modern medicine. (37)

To further expand the reach of healthcare in rural areas, on June 25<sup>th</sup>, 1965, one year before the Cultural Revolution was started, Mao insisted on the necessity of “barefoot doctors” to improve rural healthcare services. (26)

### 2.2.2.1 Barefoot doctors

Barefoot doctors were an invention unique to the period of the Cultural Revolution. They were mostly teenagers and young adults who had just graduated middle- or high school. They were chosen by their communities and sent to community colleges to complete a short medical training; this training would last between 3-6 months. During this vocational training, they receive basic knowledge in how to treat a variety of common public health problems such as infections, trauma, basics of hygiene, vaccination as well as the basics of family planning. During their training, they cover a wider variety of different treatment methods, but only in a very simplified form, the treatment methods they studied are both from the fields of TCM and Western medicine. In TCM the mainly discussed contents were acupuncture, moxibustion, and herbal medicine, and for Western medicine, it was mainly the use of antibiotics. After completing their training, they then returned to their communities to serve them as healthcare workers. (5,26,38)

As for the training mode, there was no single uniform model for the training and education of barefoot doctors. Because of the size of China, the government was highly decentralized resulting in each region developing its own training program, which was accommodated according to local needs and available resources. Also, the location of education varied from place to place, while some trained in local commune hospitals others were part of mobile service teams and traveled from country to country for the sake of their training as barefoot doctors. (39)

The barefoot doctor training can be distinguished into three training models.

Model one – this model has the shortest training time, ranging from one to three months. Barefoot doctors training under this model primarily served as peripheral healthcare workers with very few responsibilities. Most of their work consisted of environmental and sanitation work. Core tasks were, giving out vaccinations, treating common illnesses, and health education such as family planning.

Model two – barefoot doctors of this model received an intermediate level of training and education. They were more involved in direct patient care in commune hospitals and serve as provisional healthcare deliverers until fully trained physicians arrived. The training time is the same as model one barefoot doctors with the same primary tasks, but model two barefoot doctors received

more advanced training in fields such as surgery and internal medicine directly supervised by a physician.

Model three – the duration of this training is at least six months and is performed in a more formal setting, usually in district hospitals. Barefoot doctors graduating from this model still carry out the same main tasks as the previous models with the addition of surgery and emergency first aid. Barefoot doctors of this model were also involved in the training of other health aides. (40)

Table 2: Curriculum for Initial Training in Yexian

Content	Total Hours	Lecture	Practice
Rural health	50	30	20
Basics			
Traditional Chinese medicine	90	80	10
Western medicine	144	104	40
Treatment of Frequent Disease			
Traditional Chinese medicine	104	96	8
Western medicine	260	222	38
Basics of Diagnosis and Treatment	60	35	25
Frequent used drugs			
Traditional Chinese medicine	60	48	12
Western medicine	80	66	14
Total	848	681	167

Table 3: Proportion of Clinical Theory and Practice

Content	Hours	Percent	Percent
Basic Theory			
Traditional Chinese medicine	150	12	57
Western medicine	334	26	
Clinical Theory			
Traditional Chinese medicine	104	8	43
Western medicine	260	20	
Practice	448	34	
Total	1,296	100	100

Figure 4 Table showing the training hours of barefoot doctors (39)

This phenomenon even attracted the attention of the **World Health Organization (WHO)** which was praised for successfully tackling the problem of shortages of healthcare services in developing countries. Despite the low quality of services in terms of expertise and skill the barefoot doctor program effectively reduced costs as well as increased coverage of health care services across China. This mass production of low-quality healthcare workers also had severe consequences. Often barefoot doctors only knew a very limited number of diagnoses and prescriptions and therefore lacked the knowledge to differentiate other diseases. Once their assortment of antibiotics and common herbal concoctions was exhausted, they were very little help. Another problem that was encountered was that there were no clear guidelines of the spectrum of procedures performed by a barefoot doctor, it mostly depended on their confidence and guts. While some referred their patients to larger healthcare facilities and "proper" doctors when they arrived at the end of their wits some even dared to perform surgery when they deemed it as needed. (29)

The perception of the barefoot doctor's program was mainly positive despite critiques when it came to the quality of services. They enjoyed political protection and compassion from the people of the country and government alike, TCM practitioners and Western medicine doctors were among the ones who viewed the barefoot doctor movement most critically, their lack of medical knowledge and crude expertise was looked down upon. But most barefoot doctors were aware of their shortcomings and very willing to improve their skills and have better training. This directed the development of a symbiotic relationship between barefoot doctors and TCM practitioners/Western medicine doctors. Barefoot doctors were willing to provide political protection while TCM practitioners and Western medicine doctors shared their clinical knowledge and expertise. This proved to be salvation for many healthcare providers that were forced to go to the countryside in the name of "reeducation", which for most of them was demoralizing humiliation as they were forced to work in places like pig stalls, shoveling dirt and feces. (29)

In March 1973 the Barefoot Doctor Journal was published monthly and was easily accessible to all barefoot doctors, where it talked mostly about curative means of common diseases and less frequently about preventive measurements. Eventually, during the mid-1970s the Chinese press criticized the practice of barefoot doctors, calling them out for their mistakes in the treatment of diseases and malpractice by overstepping the boundaries of their skills and knowledge. In 1973 with the reopening of universities and higher education and in response to their willingness to learn and further educate themselves, commune and county hospitals offered courses to barefoot doctors in which they could acquire knowledge in more specialized fields of medicine. In 1979 in Shanghai and Beijing, examinations were carried out to pick out barefoot doctors who had unacceptably low levels of expertise and knowledge of their fields. However barefoot doctors who failed the exam were not stripped of their title immediately as another change was given. (39)

The healthcare reform in the early 1980s resulted in the downfall of this cooperative medical system and was changed into a payment-based system, meaning that economic benefit was put before public health and barefoot doctors lost their institutional and financial support. The number of villages with a cooperative medical system fell from 90% in the 1960s to 5% by 1985. Having lost the financial and political advantages of being a barefoot doctor many of them returned to being regular villagers and farmers or changed to other professions. In January 1985 the title of barefoot doctor was entirely abolished by the Ministry of Health. (38)

Coming back to the original question, it is truly debatable whether the Cultural Revolution was beneficial to the preservation of TCM or not. Just like in many other academical fields, TCM and Western medicine both took heavy hits. But it can be reasoned that TCM was affected more severely than Western medicine. Many valuable texts and knowledge as well as well-acknowledged TCM physicians have been lost permanently through the vandalism executed by Mao's Red Army. While it cannot be denied that much valuable information about the art of TCM has been lost, the Cultural Revolution also helped to weed out a lot of what made TCM unreliable and non-scientific, which were mainly aspects, that made TCM unpredictable and uncontrollable such as self-proclaimed TCM practitioners without any formal means of training and/or education in TCM, non-standardized recipes for herbal concoctions and the belief in voodoo and sorcery. (17,29) Mao did not only remove what was old fashioned about TCM but also reorganized that, what could be explained by the theory of TCM, such as meridian points, the theory of five elements and qi as well as other concepts which were introduced at the beginning of this paper. This step is what would help TCM in the later decades to develop more smoothly outside of China. (41)

It is very difficult to objectively determine the nature of the Cultural Revolution when focusing on medical practices alone. It can be believed that the Cultural Revolution was the highlight of integrated medicine and the revival of TCM, but also argue that Western medicine won the fight against TCM, and the latter was marginalized.

This incongruent understanding of medicine during the Cultural Revolution can be explained by the difficulty in finding reliable sources of information. The Cultural Revolution was a time of heavy propaganda and censorship, scholars that visited or wrote papers about the medical system during and shortly after the time period of the Cultural Revolution were most likely only shown what they were meant to see by the government and/or pressured into exaggerating statistics. (29)

In conclusion to this chapter, the aim of the CCP, unlike the GMD, was never to abolish TCM. The goal of Mao and the CCP was to reinvent TCM to make it viable in an age of science and reason and introduce TCM into the world market. When observing nowadays numbers of TCM usages in various fields of medicine it can be confidently said that Mao's plan to introduce TCM to the world has undeniably worked out with the help of the Cultural Revolution, even though incontrovertibly the

price which was paid was great. The opinions on this topic remain split, but it can be reasoned that during the Cultural Revolution, TCM underwent major changes and was “reinvented” by Mao. (9)

	<b>Elite Chin. Med</b>	<b>West. Med</b>	<b>Mao’s Rev. Med</b>	<b>Actual Rev. Med</b>
<b>Basis of medicine</b>	Knowledge	Knowledge	Will + ideology	Knowledge
<b>Knowledge transmission</b>	Lengthy master-disciple → systematised knowledge	Lengthy classroom, preceptorship → systematised knowledge	Brief class, mainly practice → unsystematised knowledge	Brief class, master-disciple/preceptor, practice → unsystematised knowledge
<b>Medical Practice: basic stance and response to the unknown</b>	Generalist. Innovate within tradition and consult with head of medical lineage	Specialist. Implement newest protocol vetted by experts and referral	Generalist. Constantly innovate practice based on current conditions (indigenisation)	Specialist and collaborating specialists. Innovate in and beyond own tradition helped by other specialists
<b>Medical community</b>	Very hierarchical	Hierarchical	Hierarchical (prior bottom on top)	Less hierarchical, more collaborative
<b>Professional identity</b>	Member of a medical lineage	Accredited physician	Peasant engaged in altruistic brotherhood via personalised care	Caring healer

Figure 5 Comparison of different medical traditions to Mao’s revolutionary medicine (29)

## Chapter 3 – Integration of Western Medicine and TCM

### 3.1 Unification of TCM and Western Medicine

The earliest exporters of European medical knowledge were Benjamin Hobson (1816-1873), William Lockhart (1814-1896), and Peter Parker (1804-1888), they founded the Canton Missionary Medical College. In the mid-19<sup>th</sup> century, the superiority of Western medicine in comparison with Chinese medicine was the vaccination of smallpox and treatment of malaria, analgesia (using opium), and anesthesia as well as surgery. (42)

With the introduction of Western medicine into China the medical scene split into two groups, the conservatives, who preferred Chinese medicine, and the reformers, who accepted the new teachings of Western medicine. Generally speaking, the conservative medical party did not reject the teachings and ideas of Western medicine as long as reformers did not demand changes in traditional practices. (42)

Western medicine and TCM coexisted side by side until the 1900s. After 1900, inspired by the Self-Strengthening Movement and the National Essence Movement the main cities of most



provinces established medical associations (Yi xue hui, 医学会), which had imported Western medicine as one of their main purposes. During the early 1900s, it was already realized that TCM had to be reformed in order to survive. When the Empress Dowager and the Guangxu emperor died in a short period of each other in 1908 the Imperial Medical Service was discredited and there was no medical organization that served as a centerpiece until 1934. Western medicine doctors and advocators used the downfall of the imperial government to force the study of Western medicine. (42)

After 1911 Chinese medicine was eradicated from the new educational system as the GMD favored a purely westernized approach when it came to medicine. Over the next century, Western medicine doctors and TCM fought each other, one to abolish the other and the latter to stay relevant. It was not until the Maoist period that the integration and unification of Western medicine and TCM was a proper agenda. (42)

In 1958 Mao voiced his opinion about the future of medicine in China and issued the command to commence the integration of Chinese and Western medicine (Zhong Xi Yi Jiehe, 中西医结合). This movement already contained plans to reinvent TCM by assigning Western medical doctors training in TCM. Mao said: "2000 first-rate Western medicine physicians who are to assist in the evolvement of Chinese medicine." And called these classes thought by Western medicine doctors "Seminars for the study of Chinese medicine by Western medicine physicians on leave, Xiyi lizhi xuexie zhongyi ban, 西医离职学习中医班). 2000 doctors enrolled into this program, but only 10% managed to graduate. These graduates would, later on, take on high-level TCM administration positions in the government from the 1980s-1990s. (11)

In 1962 all TCM colleges adopted a curriculum, in which all students had to study Western medicine for 2 ½ years and then Chinese medicine for the same time after which they entered into an "integrated" clinical internship for one year. The Five Elders of TCM realized that this curriculum in combination with the "Seminars for the study of Chinese medicine by Western medicine physicians on leave" caused TCM to lose respect and the fundamentals of Chinese medicine were lost. Together the Five Elders compiled a letter to the central government, which ended in the abolition of the new curriculum and returned to the classical TCM curriculum taught previously which consisted of three years of only Chinese medicine training. It was demanded that students learned all the major classical pieces of TCM literature and palpated 10,000 pulses and inspected 2000 tongues. (11)

According to Taylor (24), the history of Western and Chinese medicine can be divided into three phases: Cooperation (1945-1950), Unification (1950-1958), and Integration (1958-today)

During the cooperative phase, Western medicine was taught to Chinese medicine practitioners, and in the next phase, Chinese medicine was taught to Western physicians. In 1950 Mao announced that "Integrative medicine" would be a main principle in that year and following that announcement,

Mao founded the **Chinese Academy of Chinese Medical Science (CACMS)** in 1955. Western doctors were trained in Chinese medicine and about 2300 doctors graduated from that course. In 1976 a 10-year-plan was introduced, in which each province, city, and autonomous region had to establish more than one integrative medicine hospital by 1980. Medical colleges and universities of TCM and Western medicine opened programs with integrative medicine as an official academic course. It was possible to study mainly TCM or Western medicine in a separate degree program. (26)

From the mid-1960s-1970s **Integrated Western and Chinese Medicine (IWCM)** were able to make great medical advancements. In 1981 the **Association of Integrative Medicine (CAIM)** was founded and served to further support the academic relationship of Western medicine and TCM for the development of IWCM. Ever since IWCM has gained reputation and acceptance in China and has now been adopted by most medical practices in China. Currently, it is possible to study IWCM in 9 TCM universities as an undergraduate course and in 92 medical schools/universities as a master's degree program, over 100,000 people have received education and training in IWCM and are employed in practice, teaching, and/or research. The CAIM continues to carry out annual conferences for national and international audiences and engages in various academic exchange activities. (43)

### 3.2 Globalization and Future of TCM

One of Mao's futures for TCM was its introduction into the world market and its globalization. Undeniably the main feature of TCM that has made it into the world market and has been widely accepted and popularized in Western countries is acupuncture. In Western countries of the Northern Hemisphere, acupuncture is the most practiced sub-discipline of TCM. The earliest reports of acupuncture used in Europe can be dated back to the 17<sup>th</sup> century. (5)

It was acupuncture analgesia, which was invented by a nurse in Shanghai, that opened the doors of globalization to acupuncture and TCM. (44) When Richard Nixon, the 37<sup>th</sup> U.S. President visited the PROC in 1972 he brought back reports about the usage of analgesia acupuncture, in later articles it was described even, that acupuncture anesthesia replaced general anesthesia, and it was possible to communicate with the patient during surgery. (30,41) This event caused many European and American healthcare providers to visit the PROC to attend acupuncture courses so they could add this ability to their own skill set. In the 1970s acupuncture was popularized as an alternative treatment to biomedical medicine and acupuncture in status could be compared to chiropractic or osteopathy. Clinical research was funded to research the foundations and mechanisms of acupuncture so its effectiveness could be explained. The application of acupuncture was moreover promoted by the influx of Chinese immigrants, many of whom had been trained in TCM. (5)

In 1996 China introduced the concept of “Internationalization of TCM”, which consisted of two major features: expanding the import and export of TCM products in order to “go abroad” and legalization of TCM in foreign countries to ensure market entry and sustainability of its development by gaining legal protection and regulations. (13)

In recent years TCM has gained extraordinary popularity in Europe due to its safety, convenience, and affordability and the demand for it has been rising. Clinics specializing in TCM can be found in several locations such as the **United Kingdom (UK)**, **United States (US)**, Switzerland, Germany, and the Netherlands. Acupuncture has been generally accepted and is even covered by some medical insurance institutions. After being added to UNESCO’s list of intangible cultural heritages, acupuncture’s usage was promoted even more intensely across the world. (9,41)

Furthermore, with the influx of Chinese immigrants and culture, other practices such as Qi Gong and Chinese herbal medicine, found in TCM were also introduced and popularized in the Western world.

Qi Gong or also known as Tai Qi is an exercise that combines meditation, breathing techniques, and martial arts, its origins can be traced back to the 17th century, but it experienced an explosion in popularity in China during the late 20<sup>th</sup> century from 1980-1990. In the last 20 years, Qi Gong/Tai Qi has become a popular exercise in the Western world as well, being well known for its effects in preventing cardiovascular diseases and enhancing the treatment effectiveness of pharmacotherapy in different fields of medicine through enhancing vascular permeability and absorption as well as the metabolism of pharmaceutical elements. (8)

Speaking of Chinese herbal medicine, Ginseng is one of the main exported and produced herbs in China and other Asian countries such as Korea. Even though it is not approved by the **Food and Drug Administration (FDA)** to be used in pharmaceutical products, ginseng is a popular ingredient to be used in various cosmetic products such as face creams and serums as well as food supplements (pills, liquid extracts, candy, tea, etc), which are available without medical prescriptions. Many studies show that Ginseng shows many protective factors against cancer and other chronic diseases such as hypertension as well as performance-boosting attributes, therefore, although the opinions on that topic are split, it is often taken to enhance sexual performance. With the influx of Asian immigrants in the 1970s in America the consumption of Ginseng was advertised as well and by the late 1970s, 5-6 million Americans report usage of Ginseng products. Although America’s climate is suitable for the cultivation of Ginseng, most of it is still imported from Asian countries, mainly China and Korea, which factors into their export market. (12)

Though as popular as TCM is in Europe and the US it still faces difficulties that are difficult to overcome.

TCM philosophy and methodology continue to be a vital part of TCM and China's culture, but it continues to make TCM not provable or measurable by modern science. Much evidence that would prove TCM's efficacy is only passed down orally or through lost texts, hence it is increasingly difficult for TCM practitioners to prove the results of their treatment to disbelievers. (41,45)

Although acupuncture and other techniques have gained legal status in many countries, there are little to no laws protecting TCM as an independent practice. In most countries TCM is still only considered as a form of alternative medicine and TCM practitioners are not seen as doctors and thus are not regulated by medical institutions. Another large barrier to TCM is the registration of medical herbs and their usage. All medical herbs entering the European Union have to be approved and registered by the Directive on Traditional Herbal Medicinal Products or FDA in the US before they enter the market. Unfortunately, most TCM products from China were not able to meet the requirements for registration and are only able to enter the market as supplements rather than curative medicine. To overcome these barriers China has emphasized the international exchange of knowledge about TCM by opening research centers abroad and periodically hosting TCM conferences and seminars. Furthermore, The Journal of Traditional Chinese Medicine along with various other TCM publications have been translated into foreign languages and have been published in their respective countries. Other than that China also opened (as of 2014) 475 overseas Confucius Institutes that promote not only the Chinese language but all sorts of aspects of Chinese Culture. These efforts enabled the construction of a platform to inspire global exchange and communication of international talent as well as the promotion of Chinese/TCM culture. (9)

With the involvement of artificial intelligence (AI), the internet, and computer sciences in various fields of professions TCM also aims to widen its horizons and reach by establishing databases, research institutions, and data mining. The internet plays a crucial role in the future development of TCM, internet applications should enable long-distance consultations and prescriptions as well as drug delivery. Furthermore, AI has been incorporated into TCM through the development of AI facial and tongue recognition and diagnosis. It is planned that TCM shall combine successes and realizations of modern medicine and technology into the fundamental basics of its theory (46)

According to Micozzi, the founding editor of the Journal of Alternative and Complementary Medicine said: "Science shouldn't use the terms "mainstream" and "alternative". Science is science." (19)

Even though in an era of precision medicine, it is proven that Western medicine wins over TCM treatment in mono treatment of many diseases of modern times, such as coronary heart diseases, diabetes, and hypertension, studies published by the Chinese Journal of integrated traditional and Western medicine show that Western medication, such as clopidogrel, show better results when combined with the TCM medication Shexiang Baixin pills. Using the different treatment approaches

of TCM conventional treatment methods of known diseases can be enhanced and therefore mortality can be decreased. (6)

The existence and history of IWCM shows, that by having an open and accepting attitude towards the new and unfamiliar greatness can be achieved. By combining modern knowledge of Western medicine and traditional opinions of TCM they can complement each other and ultimately provide better care for the patients. Furthermore, evidence-based medicine can be used to address one of TCM's vital weak points (43): lack of evidence for its effectiveness. The principles and practice of evidence-based medicine can be used to provide clinical and evidence-based research data to support the theory and knowledge of TCM. (43)

The goal is that in the future different treatment methods such as herbal medicine, acupuncture, moxibustion, and other "alternative" forms of medicine can all work in combination with each other to create a team rather than competition. This integration would provide safer, faster, and more effective treatment results in health care and for the people in need. (19)

## Conclusion

China is a land with rich history and culture, undeniably TCM is a big part of this bottomless culture and has done much to help China set foot for itself on the international market and reputation. Though it can also not be denied that some aspects of TCM still cannot be understood with the usage of modern science and therefore there is a great number of scientists and physicians alike who criticize the usage of TCM in medical practices and regards TCM as pseudoscience.

Nonetheless in the last 100 years, TCM and Western medicine have come a long way together and have changed the medical environment in China drastically. The relationship TCM and Western medicine share can be described as turbulent as China's political history in the last 100 years. From coexisting side by side and not interfering with each other to competing for dominance and then finally union and integration.

Despite the earliest contacts of TCM and Western medicine being documented in the 17<sup>th</sup> century, both forms of medicine existed separately and did not partake in any interchange of practices and knowledge until the early 20<sup>th</sup> century. It was only when the Chinese dynasty ended, that Western medicine found a foothold within the newly founded Republic of China led by the Nationalist Party, Guomindang, and its leader Sun Yat-sen. Sun Yat-sen who was educated and trained in Western medicine, was a firm believer that Western medicine is superior to TCM and in the years of his power his party actively tried to abolish the practice.

The relationship between Western medicine and TCM finally took a better turn when China was governed by the Chinese Communist Party under the leadership of Chairman Mao Ze Dong. One of

the main points in his political campaign to establish a new national identity for China was to enhance and strengthen China's medical power and independence.

Mao believed that Western medicine and TCM both had their advantages and disadvantages and were able to complement each other. Furthermore, he believed that TCM is a treasure of China's deep history and culture, which can aid China in becoming more independent from other countries and should be passed down to further generations. Despite the effort of the CCP and Mao to combine TCM and Western medicine the relationship of both parties with each other was still damaged from the previous years of hostility and attempts to combine both practices were ineffective. However, during the infamous Cultural Revolution Mao critically reformed the educational system in China and TCM as well as Western medicine training and education were impacted tremendously.

Many valuable papers documenting the history and tradition of TCM were lost in the vandalism performed by Mao's Red Army and many highly skilled doctors, both TCM and Western, were sent into exile and torture. During the Cultural Revolution, Barefoot doctors emerged and were one of the first medical personnels who were trained and practiced TCM and Western medicine simultaneously. Though the quality of their services was questionable, and their existence was short-lived, the barefoot doctor system paved the way for the future of TCM and Western medicine.

In the years after the Cultural Revolution, both forms of medicine were combined into what we know today as integrated medicine, which is carried out in China until this day.

To sum up the influence of Mao and the Cultural Revolution on TCM and medicine in China:

Positive influences:

1. Mao never had the intention to completely annihilate TCM, his primary intention was to preserve TCM and unite it with Western medicine. Under his regimen, TCM was able to persist until today
2. By extracting feudal and non-standardized aspects out of TCM, Mao allowed TCM to become more explainable by modern science and thus permitted TCM to enter the world stage by adjusting it to the modern standards of evidence-based research.
3. Mao's healthcare policy and establishment of Barefoot doctors improved China's public healthcare sector remarkably. Medical assistance was made accessible in rural areas of China, where most of its citizens lived.

Negative influences:

1. The Cultural Revolution was a time period of violence and vandalism, many historically and academically important figures, as well as texts, artifacts, and locations, were deliberately destroyed and thus permanently lost.

2. During the Cultural Revolution academic activities were halted, while the Western world was making technological and scientific advancements at a tremendous speed, scientific progress in China was regressing.

TCM continues to be modernized and as more research is carried out the closer, we are getting closer to understanding the science behind it, which will help scientists, doctors, and those who question TCM to understand the theory and mechanisms of it better and dispel their disbelief.

In conclusion, we believe, that medicine is about giving the patient the best medical care possible to relieve them of their ail, whether this is done through modern medicine or forms of alternative medicine (for example TCM) should not matter. Both Western medicine and TCM have their advantages and disadvantages, both are fundamentally and culturally so different, trying to compare both of them would be like “comparing apples with oranges”. (47) In China Western medicine and TCM have been integrated well for the last 60 years and in every hospital, there is at least one TCM department in each hospital. But outside of China TCM and other forms of alternative medicine still struggle to be accepted as viable options for the treatment of different diseases. Modern medicine, TCM, and other alternative medicine forms are each unique and effective in their own ways, instead of competing for supremacy they should aim to find common grounds together and complement each other in order to create a medical system in which the patient can choose from a broad spectrum of therapy options which can effectively combat the disease and ail they are suffering from.

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