**Writings on Bamboo and Wood Scrolls**

The writing order on the bamboo/wood slips can be from top to bottom, or from right to left. However one can start at the very top and end at the very bottom, or leave a blank area on top and bottom, called “Head (Tiantou 天头)” and “Tail (Dijiao 地脚)” respectively. In addition to writings, images can also be drawn on blank strips.

This is a registration document in Donghai in Han Dynasty, recording the information on local governmental administrative structure, and the official positions.

This is the “Calculation Chart”, the earliest Chinese calculation tool in discovery. The chart used a decimal system and the commutative law of multiplication. Not only can it be used for quick multiplication and division for any two whole numbers within 100, but also the division of two digital numbers, including those of ½’s. Essentially, it is an amplified multiple chart.

This image is the “The Eight Diagram” (Ba Gua) the “Qian Fa” scrolls collected in Tsinghua University, also the oldest of this kind in China.
Punctuation Symbols on Bamboo and Wood Scrolls

Chinese Bamboo/wood scrolls documents reveal early Chinese punctuation symbols, which represent the end of a sentence or mood et cetera, similar to those used in modern days. Their existence aids archeologists to interpret the meanings of the writing.

Combination: This symbol tells readers that this single character is a combination of two other single characters, such as the one shown here: 君子 (Gentleman).

Period: signifies the pause at the end of a sentence.

Small dot: indicates additional explanation.

Black square: indicates the beginning of a paragraph.

Combination: This is a technique in Bamboo/wood Scroll or slip writing, where the writer combines two or more characters into the space of one, so the characters seem as if it were one. When pronouncing, the reader would still pronounce every character. This technique appeared the most in documents in dynasties of Pre-Qin, Qin and Han.
Classic Works Recorded on Bamboo and Wood Scrolls

Works on strips that can be cross referenced with same works written on preserved paper books from ancient time.

- “Lao Zi” excavated from a Chu tomb in Guo Dian
- “Art of The War” discovered from a Han Dynasty tomb in Yinyue Mountain
- “Turtle Divination” recorded the approach of using the eight body parts of a divine turtle and the eight corresponding geographic positions, to determine the location of thieves and their names.
- “Astronomical Record” (Divine Book) documented such events as lunar eclipse and comets for divinations.
- “Understanding Canines” is about how to estimate a dog’s running speed, from its body parts, such as the head, shoulders, eyes and legs, as well as its way of sitting or standing.

They are ancient books or classic writings on bamboo/wood strips, for most of these works are not seen on the preserved historical archives today. Their excavation allows scholars to see original version of the ancient documents, and thus are invaluable to the study of formation and evolution of Chinese ancient books and documents.

- Works excavated from the Han Tomb, “Tale of the Divine Birds”, a story about a personified bird, with a similar writing style as the folk literature. With its excavation, the history of Chinese folk literatures has been extended backwards for more than two hundred years.
- Excavated from a Han tomb, “Astronomical Record” (Divine Book) documented such events as lunar eclipse and comets for divinations.

Excavated from a Han tomb, “Understanding Canines” is about how to estimate a dog’s running speed, from its body parts, such as the head, shoulders, eyes and legs, as well as its way of sitting or standing.
Bamboo and Wood Scroll Classic and Ancient Philosophies

Confucius (551BC-479BC), philosopher, educator, and politician from the Spring and Autumn Period, is the founder of the Confucianism. He spent his entire life transiting wisdom, imparting knowledge, and solving doubts. He was later given the title of “Model Teacher for Ten Thousand Years”. After his death, Confucius’ students and followers recorded and compiled his thoughts and exchanges between him and his students, to develop the classic for Confucianism, the “The Analects” (Lun Yu).

In 1994, Shanghai Museum purchased over 1,200 pieces of bamboo/wood scripts in Hong Kong. After thorough research and scientific test on the characters and ink of the scrolls, it is confirmed they are authentic.

Many of Chu bamboo and wood scroll collections in the Shanghai Museum are documents about Confucius, which have never been seen in the documentations handed down from ancient times. They are important materials to further study the thoughts of Confucius.

The Chu scroll “Way of Governing a Country” from the Shanghai Museum expressed the admiration of the civilians for benevolence of the King of Chu and his way of governing the country and people, which reveals that the way of governing is a valued thought in Confucianism.

Lao Zi (c.571BCE-471BCE), ancient philosopher and thinker, founder of the Daoism. His best known works include “Tao Te Ching” (also known “Lao Zi”). The essence of his thoughts is simple dialectics, claiming the governing by no-interference. These thoughts imposed far-reaching influence on the evolution of Chinese philosophy.

Excavated from a Chu tomb in Hubei Province in 1993, this is the oldest version of “Lao Zi”. Consisting the first three chapters for the well-known work, most of the contents are consistent with the hand-copied edition, but the order in which the chapters appear is different. There are 2,046 characters on the strips, about 2/5 of the prevailing versions of today. They are with high academic value to study “Lao Zi” of the Warring States Period.

These bamboo/wood scripts showcase the characteristics of the writing styles in the State of Chu. Chu style writings are best known for its elegance and beauty, representing the highest quality of calligraphy work at its time.
“The Art of War” is an ancient Chinese war strategy book. Its author, Sun Wu, is from the Qi State of the Spring and Autumn Period. The Art of War is the earliest of its kind in the world. It has influenced many strategy books later, and contributed greatly to the military evolution. It has been translated into many different languages, and holds an important seat in world literature.

Excavated from a Han tomb in 1972, there are two sections of the Art of War. The first section consists of the most well-known part of the Art of War, and the second section consists of five different lost articles, never before seen in the hand-copied paper version.

Sun, Wu (545BCE-470BCE)

Legendary Figure: Sun Bin

“Bin” is an ancient Chinese crucial punishment meaning cutting off one’s feet. According to historic records, framed by his classmate Pang Juan, Sun Bin was given the “Bin” punishment. Sun Bin fled to Qi State afterwards, where he was put into an important position by the King of the Qi State. Sun later led the army of Qi and defeated the army of Wei State led by Pang Juan. Sun Bin is the author of “Strategic Guide of Sun Bin”. Since Sui Dynasty, the “Strategic Guide of Sun Bin” has lost, and many scholars questioned its existence. The excavation of “Sun Bin Strategic Guide” in Shandong Province in 1972 has therefore changed the perspective of the scholars toward this classic.

“Sun Bin and Pang Juan”, a historical story known throughout China
In addition to books, bamboo and wood scrolls were also used in daily life correspondences, including governmental regulations, official letters, and legal documentations, as well as personal letters, and business cards et cetera. Out of the two hundred thousand scrolls excavated so far, over 3/4 are daily life correspondences.

The edict is an order from the emperor about the political situation at the time. Excavated from a Han tomb in Gansu, “The Wang Zhang List of Edict” recorded a series of edicts by Emperor Han Wu, for respecting the elderly, and helping out the widowed.

Excavated in Jiangsu province, this is a bamboo/wood script for daily attendance records. It recorded the daily attendance status for all officials in the Dong Hai county, including records such as business trips, excused absences, funeral leaves, layoffs, impeachments, and en route to the office.

Excavated in Hubei province, it is a letter from two Qin soldiers, to their families, to ask for money and clothing.

Excavated in Hunan province, a Ming Ci is something similar to business cards of the modern days, including name, position, and birth origin of the owner. Ming Ci is often used to exchange information, forward greetings and making friends.
Eighteen Qin Laws

Eighteen Qin Laws, a Qin bamboo scroll discovered in Hunan Province, is a legal document including the excerpts of clauses from the eighteen laws in Qin Dynasty. Qin Shi Huang (259BCE-210BCE), the first Emperor in Chinese history who united the six states from the Spring and Autumn Period and the Warring States Period, which had lasted for over 500 years, and established an united country with diverse ethnicities. He standardized Chinese writing and measurements, built the Great Wall, connected water systems, and constructed transportation network, and thus laying a solid foundation for a centralized government and creating the concept of one united China. His governing deeply influenced the Chinese feudal systems for the next 2,000 years, and has a lasting impact on the history of both China and the world.

Qin legal system is known for its harshness, however the actual “Qin Law” was never seen before. In December of 1975, archeologists excavated over one thousand Qin bamboo/wood scripts from a tomb in Hubei Province, mostly about law and law enforcement of Qin Dynasty. These excavated bamboo scripts are used as critical references to study laws enacted by Qin Shi Huang.

“Eighteen Qin Laws”, a Qin bamboo scroll discovered in Hunan Province, is a legal document including the excerpts of clauses from the eighteen laws in Qin Dynasty.

This Qin wood scroll, discovered in Hunan Province, recorded a report by a lower level officer to his supervisor on catching a criminal for late returning of government rental ships, the late fees, and supervisor’s review note, showcasing the harshness and effectiveness of the Qin Dynasty Law at the time.
Bamboo/Wood Scrolls and Its Influences

Origin of Characters

“Che”, this is a pictographic character of “Che” in oracle and Jin style, column, symbolizing the weaving of individual scroll piece together. In modern Chinese, it still represents “book columns”, or the measurement unit of books.

“Dian”, this is a pictographic character of “Dian”, classics, symbolizing bamboo/wood scripts placed on a study table. In modern Chinese, “Dian” still represents classics, standards, and rules.

成语典故

“Qing Zhu Nan Shu”, literally means even with all bamboos available, one cannot fully record in writing certain facts or stories An ancient proverb exclaiming there are just too much facts that one cannot hope to recount all.

“Wei Bian San Jue”, it was said that Confucius read the scrolls of Book of Changes many times and thus broke the linens weaving the scrolls. The phrase refers to a diligent reader.

“Shou Bu Shi Juan”, “Juan”, volumes, symbolizes the shape of the bamboo/wood scrolls. “Shi”, release, means putting down. The phrase refers to someone who is very diligent in study.

“Bu Kan Zhi Lun”, “Kan”, correcting, means correcting the wrong characters in the bamboo/wood scrolls. “Bu Kan” means uncorrectable. The phrase refers to those thoughts or phrases that hold truth.

东汉时期，蔡伦在前人的基础上改进了造纸术，用树皮、麻头及敝布、鱼网等原料制作的“蔡侯纸”，成本低廉，使用轻便，逐渐取代了简牍，成为主要的书写载体。

简牍虽然消失在人们的日常生活中，却在文化史中留下了永恒的印迹，在现代的汉语词汇和书写制度上，我们仍然能追寻到它存在过的痕迹。
Ancient Characters and Calligraphy on Bamboo and Wood Scrolls

Prior to the Qin Dynasty, each state in China possessed their own characters that have similar structures but different writing styles. After Qin Shi Huang standardized Chinese characters, only the Qin writing system was used and continued. With the large number of bamboo/wood scrolls from pre-Qin states being excavated, we can finally see and study writing systems lost for over two thousand years, which played an important role in studying the evolution of Chinese writing system.

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For the long history of China, Chinese character has been the official written form of the language. Currently, scholars agree that the oracle bone script of 1300 BCE in Shang Dynasty is the origin of Chinese characters and signifies that a completed writing system has been established. As of now, Chinese is the oldest continually functioning language, and it is also the only ancient writing system that is still being used with high effectiveness. It is not only used in China, but also the common language in Southeast Asia for a long period of time, and official written languages in Japan, Korea Peninsular and Vietnam prior to the 20th century.

Chinese calligraphy has a rich history and many styles, evolving from oracle bone script, bronze script, into small seal script, clerical script, further to cursive style, standard script, and running script. Chinese calligraphy is undoubtedly an art form, enjoyed by many. The period of bamboo/wood scripts coincides with the period of Chinese Calligraphy Evolution. From the excavated scrolls, the evolution of calligraphy can be clearly revealed.

- Chu State scroll, its character style resembles closely to ancient clerical script. It may be the original look of Confucius classics during the Warring States.
- Qin scroll, the characters are rectangular and strokes are more standardized and straight, exhibiting the calligraphy style evolution from small seal script to clerical script.
- Han scroll, the characters are in standardized clerical script style.
- Han scroll, this handwriting is casual and bold, exhibiting signs of modern day cursive style.
- Jin Dynasty scroll, the handwriting on this scroll exhibits strictness, and it is already the standard script style.
- Wu scroll, the handwriting is in natural and flowing style. With standardization and careful treatments, it can be seen as the style of official script.
Burial of Bamboo and Wood Scrolls

Bamboo/wood scrolls are often excavated from tombs, ruins or wells. Newly excavated scrolls are often in two conditions, watery or dry.

These scrolls mostly come from southern region of China. Scholars believe the water keeps the scrolls sealed and airproof as a whole and the stability of the environment and temperature helps to preserve the bamboo/wood material.

Watery scrolls are those that had been in water or humid environment for a long period of time.

Dry scrolls are usually wooden scrolls, mostly found in the northern and dry regions of China. These wood scrolls had been in a dry environment with stable temperature, and the water content of these scrolls is low and stable.

Bamboo/wood scrolls has no longer been commonly used since Sui and Tang dynasty, which means most of the scrolls found are over 1,000 years old. How can these bamboo/wood scrolls survive?

Excavated scrolls from ancient tombs:
These scrolls are registration and legal documents.

Excavated scrolls from dry wells: dry wells are used to store items at the time. Many of the Wu scrolls from Hunan province are excavated from dry wells, and most of these are stored or expired government documents.

Usually military forts and facilities ruins are where most the scrolls were excavated in northwest region of China. They recorded battles and defense information of the facilities.

Excavated scrolls from ancient tombs:
These scrolls are registration and legal documents.
Modern Preservation for Bamboo and Wood Scrolls

Repairing and preservation process for watery scrolls

- Excavation emergency preservation
- on-site package and transportation
- separate and rinse
- De-color
- archive and display
- repair and reconnect
- dehydrate and reinforce
- photograph

Separating Scrolls: waterlogged bamboo scrolls are stored in bulks and may have been stuck together. This process of separation is to identify and separate each piece of the scroll.

Waterlog and preservation: A small amount of antiseptics is added to distilled water for the preservation process. Then the scrolls are sealed into plastic bags to prevent contamination and enhance the durability.
Modern Preservation for Bamboo and Wood Scrolls (Cont.)

The core processes to preserve evacuated scrolls are decoloring and dehydration.

After thousands of years buried in the ground, many of the chemical components of the bamboo/wood scrolls have been seriously decomposed. After excavation, the rather stabilized environment in which scrolls had been is broken, as oxygen, water and other bacteria act as catalysts to the decomposition of the wood and the fiber. If allowed to dry naturally, the process will cause major shrinkage of the scroll, and deformation. Therefore, the dehydration process is a major preservation step.

The British Museum employs the dehydration method to preserve the scrolls from Roman era discovered near the Vindolanda region.

The focuses of preserving excavated scrolls are decoloring and dehydration.

In China, early methods of de-coloring often cause shrinkage of the words, or increased fragility of the bamboo or wood. However, the modern de-coloring methods reduces the shrinkage of the word, while keeping the bamboo/wood strong and in shape, and offering a clear and natural view to the contents. This modern method has been widely accepted by majority countries in the world.

The freshly excavated scrolls are vividly colored, but once exposed to air and light, in minutes they turn from light yellow to dark brown, causing many of the words illegible. In order to understand and study the content, excavated scrolls have to go through a de-coloring process, to reveal the characters on the scrolls.

Image comparison of Wu scrolls before and after de-coloring

Image comparison of waterlogged Han scripts before and after de-coloring

Image comparison of Wu scrolls before and after de-coloring

Dehydration process of the Wu scrolls
Modern Preservation for Bamboo/Wood Scrolls (Cont.)

For broken pieces, the section will have to go through repairing and reconnection process, which requires the use of small amount of epoxide resin.

To ensure the bamboo doesn’t not get damaged or deformed, synthetic glasses are often used as casings to store repaired scrolls. After a section encased, the researchers cannot touch the scrolls by hand during later retrieval, use or study.

Cased scrolls are documented and placed into specific cabins, and get antiseptic and pesticide treatments periodically.
Excavation and Study of Bamboo and Wood Scrolls

Modern day excavation of bamboo/wood scrolls started at the end of 19th century and early 20th century. Exploration groups from Sweden, Hungary and Japan visited ruins in Xinjiang region such as Ancient Lou Lan and Ni Ya. During the exploration, many of the bamboo and wood scrolls were discovered. At the time, China was in turmoil and had neither time nor resources to deal with these discoveries, thus resulting in many valuable pieces being taken abroad.

Since the establishment of the People’s Republic of China, there have been two peaks in excavation of bamboo/wood scrolls. One was during the 70’s and the other was during the 90’s to now. In terms of time span, these scrolls dated from Warring states to the Jin Dynasty. The contents on these scrolls included many subjects such as ancient philosophy, literature, history, mathematics, astrology, calendar, documents, wills, and letters etc. The study of bamboo/wood scrolls became a famous school in Chinese history, and has drawn attentions of scholars worldwide.
Bamboo and Wood Scrolls in Hunan

Hunan province is located in the center area of China, midway into Yangtze River, with humid environment. This unique geographic location and weather condition favors the survival of the bamboo/wood scrolls underground. With the continuous discoveries, Hunan has become major excavation site for bamboo/wood scrolls. Not only does Hunan have the largest collection of bamboo/wood scrolls in China, with almost 2/3 of the national excavations, but also the most complete selections of scrolls in time serial from pre-Qin Dynasty all the way to Jin Dynasty.

Time table for bamboo/wood script discovery:

In 2013, 5,000 pieces of scrolls were discovered in Hunan, with time period from Warring States, Qin, Han to Wu Dynasty of the Three Kingdom. “It is an extremely rare national discovery in terms of the large amount and the wide time period spanned”

In 2004, 140 pieces of scrolls were excavated in Hunan. They are governmental documents and some of the contents are not seen elsewhere.

In 2010, over 10,000 Han Scrolls were discovered in an ancient well in Changsha, Hunan.

In 2002, over 36,000 pieces of Qin scrolls were discovered in Hunan province. Scholars recognize this excavation as a major discovery only second to the one of the Terracotta Warriors, as its research findings fill in a large blank portion of the Qin Dynasty history unknown to scholars at the time.

In 1996, over 140,000 pieces were discovered in an ancient well in Hunan. This amount is larger than the overall amount excavated in other parts of China combined.

In 1973, a set of scrolls and silk books with high historical value were discovered in Changsha, Hunan, and thus exciting the scholars worldwide in the field.

In 1953, 43 pieces of Chu scrolls were discovered from the Chu tomb in Long County, Hunan, the earliest of the Warring States scrolls excavated.
Changsha Zhouma Tower Bamboo Scrolls from the Wu State in Three Kingdoms

July to December in 1996, Changsha archeological teams excavated 3,000 sets of relics, from 57 ancient wells, from the Warring States all the way to Min and Qing Dynasty, such as bronze, iron, clay and wooden items. In the well Number 22, there were 14,000 pieces scrolls of Wu State in Three Kingdom Period discovered.

State of Wu (229-280) is established by Sun Quan during the Three Kingdom Period, also known as Sun Wu, or Dong Wu. Scrolls from Changsha mostly deal with taxes, household registration, bookkeeping, and legal documents. It is the most important documents to study the history of the Three Kingdom Period, especially for the State of Wu.

Taxes from Wu scrolls are the most important information in all scrolls. Taxes collected at the time included money, fabrics, rice, grains, and leathers et cetera. There are many types of taxes, which are carefully divided into different categories based on tax type, quality and production origin. Getting a hold of these scrolls provides further information on taxation in the State of Wu.

Wu scroll carved on both sides, this is used as a tag, and as a reminder or notice of what is in the seal or document. The two indents are used to tie ropes around to secure the tag to the actual item.

Wood scrolls from State of Wu. This is a dividable form of contract. The list of taxes collected from a farm is written on a whole wood board. Once verifying the accuracy, a large character of “同 (Tong)” is marked on top of the scroll. Then the board is split in middle into two equal parts, each is given to one party involved. This is where the Chinese phrase “He Tong” (合同), contract, comes from.

This scroll recorded a minor case of corruption. A low level inventory guard official was given the death penalty as he embezzled grains from the governmental barn. As a result, his wife and brother became slaves for the government. The value of the grain embezzled is equivalent of 10,344 Yuan ($1,700 USD) today.
Changsha Bamboo and Wood Scroll Museum

Changsha Bamboo/Wood Scroll Museum is established for the purpose of studying and preserving bamboo/wood scrolls of State of Wu in Three Kingdoms. It is also the first Chinese museum dedicated specifically to bamboo/wood scrolls. The building itself resembles closely with the style of modern Chinese gardens.

Majority of the items in exhibition include over 140,000 pieces of Wu scrolls discovered in 1996, 2,000 pieces of Han scrolls discovered in 2003, and 3,500 items excavated from Han Empress Tomb in 1993 which contains bamboo/wood scrolls, lacquer wood, bronze, gold and jade pieces.

Changsha Bamboo/Wood Scroll Museum’s key theme is “Road to Civilization”, consisting of four segments, “Bamboo/Wood Scroll of Three Kingdoms”, “Chinese Bamboo/Wood Scrolls”, “Ancient Writing Material”, and “Chinese Calligraphy on Bamboo/Wood Scrolls”. These exhibitions systematically introduce the evolution of Chinese bamboo history and the important information on Wu scrolls from the Three Kingdoms era, a gateway to understand and study Chinese bamboo/wood scrolls.

“The Highlights from Changsha Excavations” is the supplement exhibit, showcasing those important archeological relics found in Changsha, including bronze, porcelain, jade, and lacquer wood items from historical dynasties.