# THE GAME CHANGER

**The Tsinghua University Bamboo Strip**
***Yijing* Stalk-Divination Manual**

**Restored, Transcribed, and Edited by Li Xueqin, et al.**
**Articles by Jack Nanguozi**
**Translation, Comments, and Articles by Douglass A. White**

## Contents

# Some Protocols for this Book

- All trigrams are in full caps for easy recognition and distinction from hexagrams. Hexagrams are labeled with an initial capital.
- Words transliterated from Chinese are in italics unless they are names of people or places. I use *pinyin* spelling throughout except for a few traditional cases such as Tsinghua.
- My personal comments are inserted within the translated portions using brackets: [ ].
- Translated text unless cited otherwise is from Jack's articles.
- Whenever Jack cites the "organizers of the materials" 文物整理者, I just put "the editor", understanding that Li Xueqin represents the whole study and preservation team at Tsinghua.
- In the text I refer to the bamboo strip document as QHJ except for a few cases when I use GCY (*Guicangyi* 歸藏易) in deference to those who believe that this bamboo strip book on stalk divination belongs to the *Guicang* tradition, a notion that is not yet well defined or documented.
- The technical term "divination number[s]" (*shishu* 筮數) comes up a lot in the document. Rather than write it out each time I often use the abbreviation DN, or DNs for the plural.
- Another technical term that is used throughout the book is 象. Much of the time it refers to the "image", which is the imagery represented by a particular trigram or trigrams in a hexagram. However, at times it seems more appropriate to translate it as "omen" when the text is describing a way of reading (interpreting) a trigram in a hexagram divination context. This is particularly true when the term is used with lines. There is not much imagery in a single line, but it can definitely affect the reading of the hexagram in the context of the divination inquiry.
- Most of the Egyptian paintings were done by Taiwanese artist Amy Hsiao and are drawn from my book **The Senet Tarot of Ancient Egypt** or the deck of cards that goes with it. I have lost track of some of the photographs and drawings that I have culled from the Internet over the years. Let me know if you can identify the source of any that I left out or prefer a different citation. Sometimes I refer by name, sometimes by URL. Unfortunately websites change and links get lost in neverland. Updates are appreciated.
- Watch the version numbers on each edition. They contain the date of the version. This electronic book will be updated to correct errors and introduce new material on this rapidly evolving topic. This is not only a Game Changer, the game itself changes.

# The Game Changer

**This Little Book is Literally and Figuratively a Game Changer.**

For over two thousand years the **Book of Changes** (*Yijing* 易經 also known as the *Zhouyi* 周易) has been the foundation of Chinese civilization. From Han times onward the **Changes** stood at the head of the official literary canon of traditional Chinese classics (*qun jing zhi shou* 群經之首). It was the abstract foundation and fountainhead of Chinese thought, literature, architecture, science, art, medicine, military theory, social intercourse, and government, penetrating all areas of life. Brilliant scholars wrote their interpretations of the **Changes** as expressions of their deepest and most mature grasp of life. Even the illiterate common people were familiar with its simple symbols such as the *Taiji* Diagram (太極圖) and the Eight Trigrams (*bagua* 八卦). A routine part of Chinese life at all levels included turning to the practical advice of the **Changes** to solve life's ever-present challenges, – even if it meant consulting roadside fortune tellers and sorcerers who merely professed to understand its arcane secrets.

*Taiji* symbol and 8 Trigrams

We now find ourselves living in a global information age based on electronic computing engines that are all designed around calculating outcomes with binary numbers – the essence of the **Changes**. Today we consult our binary digital computer before making business decisions, and we use our binary digital computer for entertaining ourselves with games and all sorts of cultural diversions. In a sense we can say that modern global civilization is predominantly based on the technology of the **Changes**.

## Like the Changes: A Patchwork Quilt of Texts

Tradition held that the **Classic of Changes** was written by Fu Xi, Wen Wang, The Duke of Zhou, Confucius, and several anonymous scholars and thinkers. We do not know for sure about the first three people in that list, and even Confucius is questioned. But it is clear that the Ten Wings were by several different contributors. **The Game Changer** is like the **Changes**, in that it is somewhat of a patchwork quilt derived from several authors. The identity of the original author is unknown.

The first and foundational layer of this book is a book about a book – a little manual written in ink on bamboo strips about how to use the **Book of Changes**. Although clearly genuine, this work came from a murky past through the hands of tomb robbers and mysterious middle men, unfortunately obscuring its exact provenance from the careful scrutiny of professional archaeologists. On the other hand, it had the good fortune of encountering a most advanced scientific, patient, and loving disrobing from its ancient coat of earthy black mud and restoration to nearly pristine freshness. Unlike most excavated bamboo strip books whose string binding long ago decayed, this book is not a jumble, since every strip is labeled with a number and almost none are broken.

The second layer of this book is the Internet, an amorphous collection of electronic data, books, videos, and articles available worldwide (almost). Indeed, except for the translator's comments and articles – which still extensively depended on Internet resources, all the materials used in this book were assembled right from the Internet. We shall start the Internet layer of this book right off with the **Wikipedia** article about the finding and publishing of the "Tsinghua Bamboo Slips" (called in the article TBS. However, in this book I will use QHJ for the *pinyin* version of the usual Chinese name for this whole collection of bamboo books: *Qīnghuá jiǎn* 清華簡). Here is the **Wikipedia** contribution:

## Tsinghua Bamboo Slips

https://en.wikipedia.org/wiki/Tsinghua_Bamboo_Slips

The **Tsinghua Bamboo Slips** (simplified Chinese: 清华简; traditional Chinese: 清華簡; pinyin: *Qīnghuá jiǎn*) are a collection of Chinese texts dating to the Warring States period and written in ink on strips of bamboo, that were acquired in 2008 by Tsinghua University, China. The texts originated through illegal excavation, probably of a tomb in the area of Hubei or Hunan province, and were acquired and donated to the university by an alumnus. The very large size of the collection and the significance of the texts for scholarship make it one of the most important discoveries of early Chinese texts ever.[1][2]

On 7 January 2014 the journal *Nature* announced that some Tsinghua Bamboo Slips represent "the world's oldest example" of a decimal multiplication table.[3]

## Discovery, conservation and publication [edit]

The Tsinghua Bamboo Slips (TBS) were donated to Tsinghua University in July 2008 by an alumnus of the university. The precise location(s) and date(s) of the illicit excavation that yielded the slips remain unknown. An article in the *Guangming Daily* named the donor as Zhao Weiguo (赵伟国), stating that the texts were bought at "a foreign auction",[4] but without naming either an auction house, a location or a sum. Li Xueqin, the director of the conservation and research project, has stated that the wishes of the alumnus to conceal his identity will be respected.[5]

Similarities with previous discoveries, such as the manuscripts from the Guodian tomb, indicate that the TBS came from a mid-to-late Warring States Period (480–221BC) tomb in the region of China culturally dominated at that time by the Chu state. A single radiocarbon date (305±30BC) and the style of ornament on the accompanying box are in keeping with this conclusion. By the time they had reached the university, the slips were badly afflicted with mold. Conservation work on the slips was carried out, and a Center for Excavated Texts Research and Preservation was established at Tsinghua on April 25, 2009. There are 2388 slips altogether in the collection, including a number of fragments.[6][7]

A series of articles discussing the TBS, intended for an educated but non-specialist Chinese audience, appeared in the Guangming Daily during late 2008 and 2009. The first volume of texts (photographic reproductions, transcriptions, and commentary) was published by the Tsinghua team in 2010.[8]

A 2013 article in *The New York Times* reported on the TBS's importance to understanding the Chinese classics.[9] Sarah Allan, a sinologist at Dartmouth College, stressed the significance of the circa 305 BC date when the bamboo manuscripts were buried, about 100 years before Qin Shi Huang conducted a "literary holocaust" with the (213–210 BC) burning of books and burying of scholars. By predating that textual censorship, Professor Allan said: "These manuscripts speak directly to the core issues of the Chinese intellectual tradition and were recorded at the height of the formative period." "The classics are all political", said Li Xueqin, "It would be like finding the original Bible or the 'original' classics. It enables us to look at the classics before they were turned into 'classics.' The questions now include, what were they in the beginning, and how did they become what they became?"

## The texts [edit]

Several of the TBS texts are similar to the received *Shang Shu*, a miscellany of documents from various dates in the first millennium BC that were transmitted as a canonical collection since the Han dynasty. In some cases a TBS text can be found in the received Shang Shu, with only variations in wording, title or orthography. Such examples include versions of the "Jin Teng" (金滕), "Kang Gao" (康誥) and "Gu Ming" (顧命) chapters of the *Shang Shu*. The majority of *Shang Shu*-style TBS texts, however, are not found in the received *Shang Shu*, either having been "lost" in the process of transmission, or else never having been incorporated into the canonical collection.

An annalistic history (編年體史書) recording events from the beginning of the Western Zhou (mid-11th century BC) through to the early Warring States period (mid-5th century) is said to be similar in form and content to the received *Bamboo Annals*.[10]

Another text running across 14 slips recounts a celebratory gathering of the Zhou elite in the 8th year of the reign of King Wu of Zhou, prior to their conquest of the Shang dynasty. The gathering takes place in the ancestral temple to King Wen of Zhou, King Wu's father, and incorporates beer drinking and the recitation of hymns in the style of the received Shi Jing.[11]

## The Admonition of Protection [edit]

Among the TBS texts in the style of the received *Shang Shu*, is one that has been titled "The Admonition of Protection" ("Bao Xun" 保訓). This was the first text for which anything approaching a complete description and transcription was published. The text purports to be a record of a deathbed admonition by the Zhou king Wen Wang to his son and heir, Wu Wang. Although the team working on the text refers to it as "The Admonition of Protection" (or "Protector's Admonition", 保训), their transcription of the

text refers to a "Precious Admonition" (Bao Xun) and that may be the more appropriate editorial title.[12] The content of the king's speech revolves around a concept of The Middle (Zhong 中) which seems to refer to an avoidance of extremes and an ability to consider diverse points of view. The king narrates a story of the sage-king Shun acquiring The Middle by living a modest, thoughtful life, and a more puzzling second tale which describes the Shang ancestor Wei (微) "borrowing The Middle from the River."[13][14][15]

### Xinian [edit]

"Xinian" 繫年 (系年), probably composed ca. 370 BC, relates about the key events of the Zhou history. It comprises 138 slips of relatively well preserved condition. Among the contained information, an account of the origin of Qin from the supporters of Shang dynasty who opposed to [sic] the Zhou conquest.[16]

### Decimal multiplication table [edit]

Twenty-one bamboo slips of the Tsinghua Bamboo Slips, when assembled in the correct order, represent a decimalmultiplication table for numbers up to 99.5.[3] Joseph Dauben from the City University of New York called it "the earliest artifact of a decimal multiplication table in the world".[3] According to Guo Shuchun, director of the Chinese Society of the History of Mathematics, those slips filled a historical gap for mathematical documents prior to the Qin Dynasty.[17] It is presumed that officials used the multiplication table to calculate land surface area, yields of crops and the amounts of taxes owed.[3]

## Notes[edit]


1. ^ "清华入藏战国竹简典籍--专家称学术价值不可估量". *Tsinghua University News*. 2008-10-23. Retrieved 2009-05-14.
2. ^ "Tsinghua Acquires Warring States Bamboo Strips from Chu". *Tsinghua University News*. 2008-10-24. Retrieved 2009-05-14.
3. ^ : *a* *b* *c* *d* Jane Qiu (7 January 2014). "Ancient times table hidden in Chinese bamboo strips". *Nature*. Retrieved 22 January 2014.
4. ^ "战国竹简重回故土". *Guangming Daily*. 2008-10-30. Retrieved 2009-05-14. 近日，清华大学宣布，2100 枚战国时期的竹简入藏清华，它是由校友赵伟国从境外拍卖会买到后捐赠给清华的。
5. ^ "李学勤谈清华竹简". *Tsinghua University News*. 2008-11-10. Retrieved 2009-05-15. We respect the alumnus's wishes and have not further pursued the question of his identity. Nor do we know how this collection of bamboo slips came to leave the country. The important thing is that they are very well preserved. 我们尊重校友的意愿，没有再去追问其个人身份，我们也不知道这批竹简是怎么流失到国外去的，重要的是这批竹简保存得非常好。
6. ^ "清华大学"出土文献研究与保护中心"成立". *Guangming Daily*. 2009-05-04. Retrieved 2009-05-14.

7. ^ "Tsinghua University Unveils Its Center for Excavated Texts Research and Preservation". *Tsinghua University News*. 2009-04-26. Retrieved 2009-05-04.
8. ^ Li Xueqin (2010).
9. ^ Didi Kirsten Tatlow (2013-7-10). Rare Record of Chinese Classics Discovered, *The New York Times*.
10. ^ Li Xueqin (2008-12-01). "初识清华简". *Guangming Daily*. Retrieved 2009-05-15.
11. ^ "清华简：让人读起来太激动"". *Guangming Daily*. 2009-04-28. Retrieved 2009-05-15.
12. ^ 姜广辉 (2009-05-04). "《保训》十疑". *Guangming Daily*. Retrieved 2009-05-14.
13. ^ Li Xueqin 李学勤 (2009-04-13). "周文王遗言". *Guangming Daily*. Retrieved 2009-05-15.
14. ^ Zhao Pingan 赵平安 (2009-04-13). "《保训》的性质和结构". *Guangming Daily*. Retrieved 2009-05-14.
15. ^ Li Xueqin. "The Last Will and Testament of Zhou Wen Wang (English translation)". Retrieved 2009-05-14.[*dead link*]
16. ^ Yuri Pines, with Lothar von Falkenhausen, Gideon Shelach and Robin D.S. Yates, "General Introduction: Qin History Revisited," in: Yuri Pines, Lothar von Falkenhausen, Gideon Shelach and Robin D.S. Yates, eds., *Birth of an Empire: The State of Qin revisited*. Berkeley: University of California Press, 2014:12.
17. ^ "Bamboo math documents called China's earliest". Upi.com. Jan 20, 2014. Retrieved 22 January 2014.


# Bibliography[edit]


Li Xueqin (2010). *Qīnghuá Dàxué cáng Zhànguó zhújiǎn* (清華大學藏戰國竹簡). Shanghai: Zhongxi Shuju (中西書局). ISBN 978-7-5475-0178-8.

Li, Xueqin; Liu, Guozhong (2010). "The Tsinghua Bamboo Strips and Ancient Chinese Civilization". *Journal of Chinese Philosophy* **37**: 6–15. doi:10.1111/j.1540-6253.2010.01615.x. ISSN 0301-8121


The above quoted **Wikipedia** article is curious in several respects. First, it uses the traditional transcription of Tsinghua still used by the university instead of the current "standard" transcription Qinghua. I will follow the latter spelling most of the time in this book. Second, it gives the name of the donor just before stating that it will respect the donor's wishes to "conceal his identity". Third, it mentions the mathematical table but fails to mention the game-changing book about the **Changes** that consists of 63 bamboo strips plus another 7 strips (one missing) that contains a chart of the 64 hexagrams according to the system used in the book. Perhaps the significance of this little text in the cultural history of China has not yet sunk in, or perhaps when the article was written, the contents of that work had not been announced.

## A Few Internet Words about the Tsinghua/Qinghua University Project.

The Research and Conservation Center for Excavated Texts at Tsinghua University was co-founded by the Department of History, the University Library and the Department of Chemistry in September, 2008. Reporting directly to the University President, the Director of the Center is Professor Li Xueqin, the foremost historian and paleographer. The Deputy Director is Professor Zhao Ping'an, and the Assistant Director is Professor Liu Guozhong. The objective of the Center is to establish a leading research and conservation center in the world for excavated Chinese texts through conducting cutting-edge research projects in the field and through interdisciplinary studies and collaborations of natural sciences, social sciences, and humanities. Currently the Center is working on conservation and researches on excavated texts, such as oracle bone and bronze inscriptions, with a focus on the conservation, transcription, and editing of the Warring States period (476 - 221 B.C.E.) Tsinghua bamboo slips. It has made considerable achievements since the founding of the Center. Its work in the transcription, research and conservation of the Tsinghua bamboo slips in particular has received extensive national and international attention. . . . Over 10 scholars are on the research team, including influential experts in the field such as professors Li Xueqin, Zhao Ping'an, Li Junming, Liao Mingchun, Peng Lin, Zhao Guifang, Li Shoukui, Shen Jianhua and Liu Guozhong. They bring to the Center decades of experiences in the study and conservation of excavated texts, including, but not limited to, the texts inscribed on oracle bones, bronzes, bamboo and wood slips, and silk.

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The next layer of this book is the formal presentation of the foundation text to society by Tsinghua University's Research and Preservation Center for Excavated Texts under the professional direction of Chief Editor, Li Xueqin 李學勤. This work was officially published by the university on January 7, 2014 as volume 4 in the series of works publishing the preserved, edited, organized, and transcribed texts of the QHJ: 清华简第四辑整理报告《清华大学藏战国竹简（肆）》.

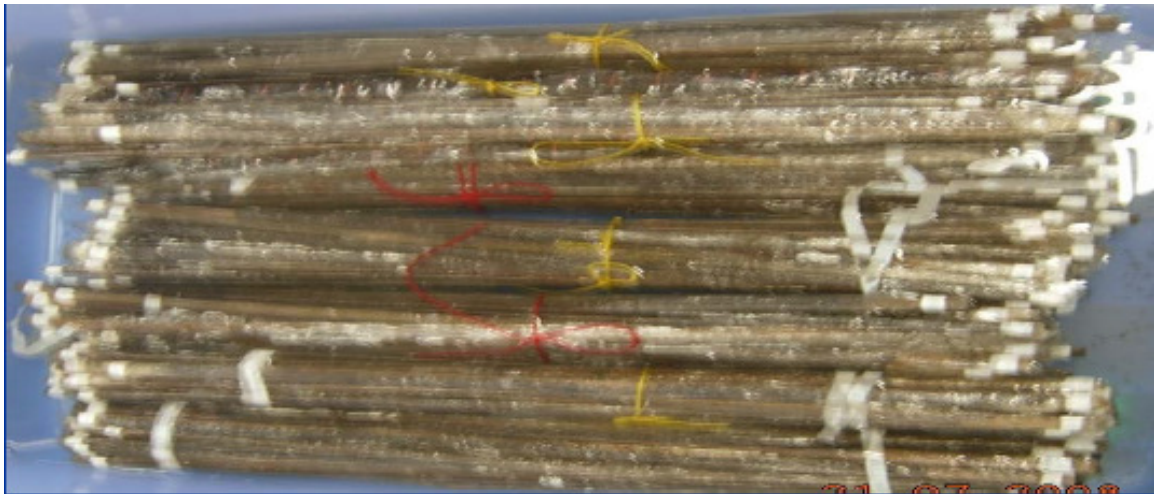
**Qinghua University Collection of Warring States Bamboo Strips (4)**. (Edited by the Tsinghua University Study and Preservation Center for Excavated Texts (SPCET), Li Xue-qin Chief Editor, December, 2013, Published by Zhong-xi Book Store *Qinghua Daxue cang Zhan-guo zhujian* (*Si*)（清華大學出土文獻研究與保護中心編、李學勤主編，2013 年 12 月，中西書局出版）). In addition to using a wide variety of Internet materials I just returned from China with my own beautifully printed (and quite

heavy) oversize copy of volume 4 in the Qinghuajian series and look forward to acquiring all the other volumes in this wonderful series. I have included in this long article clear copies of photos of the strips from the book taken by Jack and a transcription of the text somewhat updated as I explain later. As time permits I will update this article with my own further findings and comments from readers.

The next item to share is a collection of photos with a description of the process by which the Tsinghua team recovered the texts from the strips that they received.

## Recovery of the Tsinghua Bamboo Strip Texts

http://textingchina.lib.uchicago.edu/pdf/511_S1_02_LiJunming.pdf



Condition when the strips entered Tsinghua: The surface of the bamboo was dark-brown. Upon investigation, active mold was discovered. Chlorine and phosphoric acid ions were particularly dense, and the absolute moisture was nearly 400%. As an emergency measure the preservation team soaked the strips in distilled water, and ammonium salt fungicides were used to kill the mold. Then they brushed off the easily-removed mud coating with short-haired brushes. The thicker and more firmly attached clay coating could not be removed with one pass, and at first they could only sweep away the top layer. After soaking for a time, they gradually removed the covering layer by layer, with 3 to 4 passes needed to completely remove and clean the material. Brushes were of no use in removing the hard shell-like coating that various sediments had formed over the years. They could only place the brush tops along the edges, and then using a small bamboo knife to press on the hair of the brush, they could peel off this coating. Strips of glass, a bit longer and wider than the bamboo strips were used as supports. With the side of the bamboo containing writing facing downward, they used threads to hold the bamboo strips to the glass. Stainless steel number plates with catalog numbers were also tied to the ends of the glass strips for ease of reference. The bamboo strips were then placed into wide-lipped stainless steel trays.

Removal of surface material from bamboo strips with brush and eyebrow pencil.

The goal was to restore as much clarity as possible to the recto face of the strips. The procedure was to take photographs to record the strips as they underwent the chemical processes.

Under fixed temperature they used a specifically formulated sodium dithionite solution to bleach the color, adding in a specific amount of complexing agent. Then they immersed each strip to be photographed in the solution. The amount of time in the solution depended upon the actual condition of the strip.

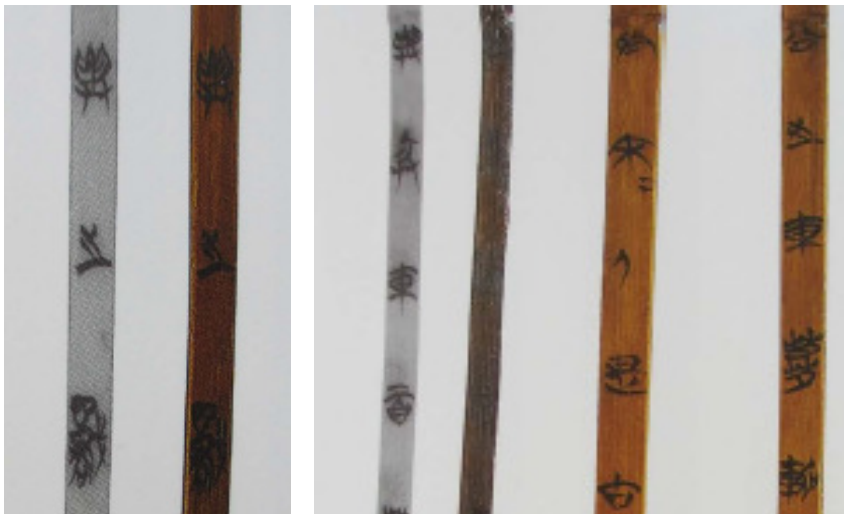
Strips before and after surface material removal.

After this the strips were again soaked in distilled water. Use of this procedure lightened the color of the bamboo, roughly recovering its original appearance, and increased the contrast with the black ink. Thus the traces of the glyphs became more distinct, allowing the strip to be placed on a brace and photographed.

Square, white plexiglass was used as the brace. The surface of the plexiglass was sanded in order to reduce its reflectivity. On the plexiglass were incised print lines and guide lines. Before photographing a fine mist was sprayed upon the recto surface of the strips, completely covering them with a thin layer of water, thereby resulting in an even focal length and no extraneous light reflections. Due to the infiltration of the water, the ink traces also appeared darker.

Comparison of before and after color restoration.

Photographic methods included three types: print film, digital images, and infrared.



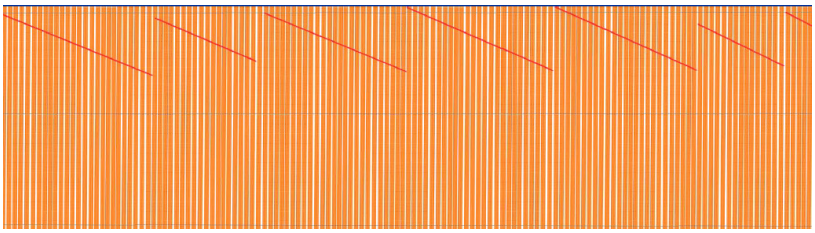
Comparison of the results of digital and infrared photography.

The bamboo strips originally were bound with strings, but the strings had long rotted away, so the strips were in a jumble, and the first step toward organizing them was to separate them on the basis of length. The Tsinghua strips range from 10 to 47.9 cm long and 0.4 to 1 cm wide. Strips of the same length might also vary in width. Strips with approximately the same length and width were placed together and further divided into subgroups on the basis of differences in width.

Strips of identical length and width also showed differences in spacing between glyphs. For example, among the texts in Volume 1, glyphs in the "Huang men" (皇門) text were relatively small and densely spaced, while the "Chronicles" (係年) is less densely spaced. In this way different texts could be identified.

Because the scribal techniques or textual sources varied, graphic structure and calligraphy in each text also displayed stylistic differences, some of the characteristics being quite striking. For example, in Vol. 1 the character ming 命 is usually written  . In the *Bao xun* 保訓 text it was written  , and in the *Zhai gong* 祭公 text it was  . Some texts had lots of uncommon forms. These glyphs showed the influence of Qin and Jin 秦晉 forms. Thus division of the texts could also be based on graphic form.

Next the texts could be distinguished by content such as chronological information, main topic, and important persons mentioned in the texts. Next came rejoining of broken strips and sequencing the strips. Some of the strips, fortunately including the strips for the book we are discussing in this monograph, came with strip numbers at the bottom. However, in some cases the scribes made errors in "strip pagination". In other cases the sequence had to be determined by in-text references.



A few texts have slanted lines on the verso to facilitate sequencing.

Broken characters and binding marks were also helpful in rejoining fragments.

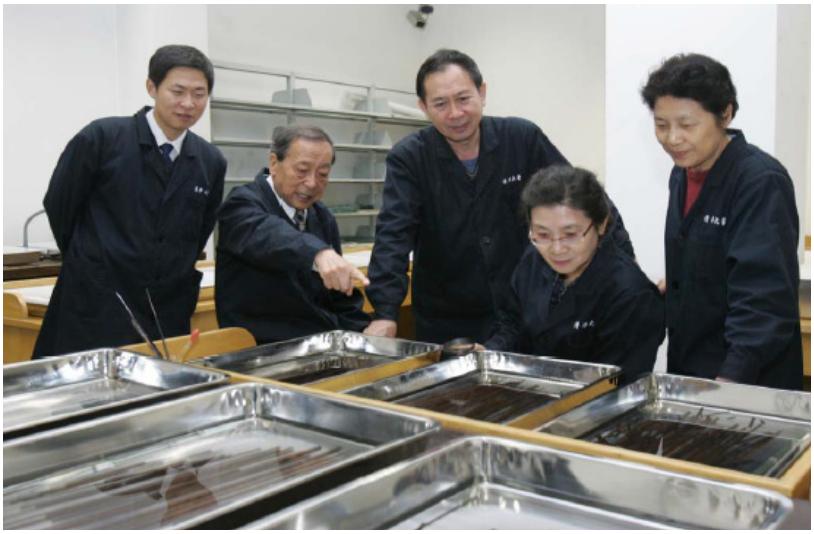
Finally the texts could be deciphered and transcribed. If the text already existed in some form comparison could be made to assist in identifying unusual or unknown characters. The transcription was then made into modern characters for ease of reading.

[Translator's note: It is important to refer to the photographs of the original text, because confusion may arise due to modern simplified characters or misidentification of the original character on the bamboo strip by the deciphering scholar.]

The transcriptions include reduplication marks and ligature marks indicated in parentheses. For further readability punctuation marks and editorial marks are added. The original strips have duplication mark, reading mark or section mark conventions.

If the original text bears a title, the title is preserved. For texts without titles (such as the one we are discussing) the editors made one. For long titles a brief form was created.

The university's official publications have an appendix that includes a character shape table including every character and its variant forms, with stroke number and *pinyin* indexes to facilitate looking up characters. There are also notes on the conditions of the strips.



Li Xueqin and members of the Center for the Study and Preservation of Excavated Manuscripts discuss trays of strips undergoing the preservation process.

## Jack's Contributions

The next book within this game-changing patchwork quilt is a detailed study of the QHJ text by Jack 南郭子 of Taiwan. Jack is a very knowledgeable expert on the **Changes** and has created a very large and detailed website dedicated to study of the **Changes** (http://www.eee-learning.com). Included on his site are his analysis of the QHJ text (http://www.eee-learning.com/article/3629), a very perceptive article about the divination method used by the author of the bamboo book (http://www.eee-learning.com/article/3650), plus a vast collection of related classics and articles about the **Changes**. Jack is definitely on the forefront of research into the **Changes** and has recognized the significance of the QHJ book concerning the study and use of the **Changes** during the Warring States period and for Chinese culture in general. For the portions of this book dealing with Jack's material I simply translate what Jack has provided, adding my own comments and occasional corrections or suggestions.

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## My Contributions

The final layer (thus far) of this book includes my own contributions that really constitute four more sublayers. The first sublayer is that I have collected the material produced by others, translated, and edited it, providing insights into the interpretations of the text in several places.

The second sublayer is that I have expanded Jack's theory of how the hexagrams were generated that he presents in his article on that subject that I have translated most of as part of this book.

The third sublayer is my presentation of a theory that the tradition of the **Changes** in ancient Egypt may well have influenced the development of the **Changes** in China. Of course it is possible that the two traditions developed independently and arrived at similar conclusions. However, I adduce some evidence that there are philosophical, linguistic, and artistic connections that strengthen the case for direct exchange. Also there is historical evidence that the beginnings of a binary counting system in Egypt began at a time that roughly corresponds to or predates the Xia period in China. By the New Kingdom the Egyptian system was quite mature, and it would dovetail nicely to a new beginning in early to middle [Spring and Autumn] Zhou China.

The fourth sublayer is another of my pet interests: the ancient Chinese game of *Liubo* 六博 that arose probably in the state of Chu 楚 during the Warring States period. The game is mentioned in the *Chuci* Zhaohun 楚辭 招魂 as having an important ritual connection to funerary wakes. The bamboo book about the **Changes** that is the main topic of this book also comes from somewhere in the ancient region of Chu around the same historical Warring States era as the earliest mentions of *Liubo* attest. The game was played on a 64-square game board that abstractly represented the 64 hexagrams and could be used for divination purposes as well as for gambling and entertainment. At least one board exists with the *ganzhi* 干支 symbols on it. The *ganzhi* play an important role in the QHJ book's interpretation of trigrams. Moreover, the ancient Egyptians also used a gambling and

entertainment game called Senet with a game board, pawns, and throwing sticks in their funerary rites and often featured the board and implements in tomb art, even including the physical game implements as part of the tomb furnishings. It is clear that for both the Egyptians and the Chnese these games were not only a contest of moving pawns about on a game board, but also became a very sophisticated way of divination and spiritual development. The mythological Egyptian figures associated with the spaces on the Senet board correspond to the hexagrams of the *Zhouyi* and the *ganzhi* on the *Liubo* board as psychological and life experience archetypes.

To summarize the layered elements of the book we have:

- The original document written on bamboo strips (which itself was referring to contemporary versions of the *Zhouyi*, and/or, as some suspect the *Guicang*, or even the *Lianshan* versions of the **Changes**.)
- Volume 4 in the series of materials published by Tsinghua University's Study and Preservation of Excavated Texts working group and editors led by Li Xueqin.
- Two long articles by Jack Nanguozi posted on his website eee-Learning.com (易學網) and other useful materials from his website. The first article is Jack's detailed analysis of the QHJ Volume 4 publication, leaving out the mathematical text included in that work. My second translation from Jack's website is his article in which he "reverse engineers" the method of hexagram generation used by the writers of the QHJ book's author and colleagues. The third material drawn from his site comes from various useful charts and other Chinese classics that he posts online for easy access.
- Finally there are my own original contributions that include comments on the work by Jack and the QHJ preservation group – which is mostly unbridled praise for what they (and the generous "anonymous" donor) have done in making the QHJ available to the world, plus adding a few suggestions for improving the transcription, interpretation, and understanding of the material. Beyond that I have included my ideas about the divination method that extend Jack's excellent reverse engineering, presented my theory of Egyptian influence on the Chinese **Changes**, and tied in the contemporary development of *Liubo* as a game and a divination accessory very suited to the method of divination described in the QHJ book.

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The QHJ divination technology is a very different system from any of the methods that survive today. We are now beginning to be able to reconstruct the history of the development of the **Changes** from a system of numerical manipulation and notation to the modern system of generating and recording trigrams and hexagrams. Many questions still remain, but answers to many of the big questions are starting to emerge. We still do not know the date when the system of the **Changes** was invented in China or brought into China from abroad. However, we can be pretty sure that it did not go back to the early Zhou, much less to the Shang, the Xia, or the times of legendary cultural heroes like Fu Xi 伏羲 (or Bao Xi 包犧 as he is called in the received text of the **Changes**), Wen Wang,

and the Duke of Zhou. Confucius, on the other hand, may have had some acquaintance with the materials. Plausible records of stalk divination of hexagrams occur in Zuo's Chronicle (左傳) and the Discussions of the States (國語).

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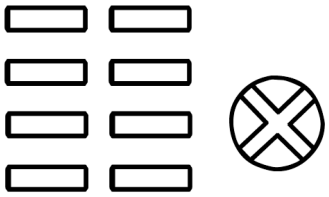
## Egyptian Changes and Chinese Changes

One of the main theories that I derived from my research into the **Changes** (expressed in print since at least 2008) has been that the prehistoric figure Bao Xi was not Chinese. I believe it is very likely that he was a mythical figure from the very early civilization of ancient Egypt who was known by a number of names and epithets, a common one being Baba. I base this theory on a variety of evidence.

My first evidence is that Ancient Egypt is the only early civilization other than China (so far as I currently am aware of) that independently developed a base two number system that they used together with a base ten number system. The dating of the QHJ (305 ±30 BC, Warring States period) matches the era of Alexander the Great (356 BC – 323 BC) and the early years of the Ptolemaic dynasty in Egypt. This was a time when Egypt's classical era was coming to a close and her occupation by the Greeks (and later the Romans) was linking her to trade and cultural contacts throughout the known world. The remnants of her classical glory spread, perhaps even deliberately, beyond the borders of Egypt. Probably this contact went back much earlier to the Spring and Autumn period or even the beginning of the Zhou. In any case there is (thus far) no hard evidence of the **Changes** in China going back into the Shang or Xia eras. However, there is plenty of hard evidence for the **Changes** in Egypt going back to the Old Kingdom (4500 years ago) or earlier, since the system is amply recorded in the Pyramid Texts that were already old and established by that time, and evidence of Senet game boards goes back to predynastic times. The mythical figures primarily associated with the Egyptian **Changes** were Thoth (Jehuty), Baba (Babi), Horus, Amen, and Ra – all of whom figure in the Pyramid Texts. The Eye of Horus (Ra) was a mathematical symbol for binary notation, and is a main theme of the Pyramid Texts. Perhaps the most common nickname of ibis-headed Thoth was Tekhy, an ancient technical term for the Egyptian *Taiji*, and very possibly a loan word borrowed by the Chinese.

Thoth's main temple in Egypt was located along the Nile between North and South Egypt and was called the City of the Eight.



Symbol for the City of the Eight (*Khemenu*)
Look familiar?

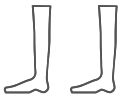
The Ogdoad of Primordials
The 8 Divine Followers of Tekhy

The Ogdoad (Group of Eight) was a group of four primordial divine couples. The heads of the males looked like turtle or frog heads, and the heads of the females looked like snakes. The combination suggests the *xuanwu* 玄武 symbol that is probably a variant of the word *shenwu* 神武 in the *Xici* (A11, and see also B5) of the *Changes* and represents deep inner personal cultivation in China (meditation and deep breathing similar to winter hibernation of reptiles). Thoth's playful transformation was as the baboon Baba. A huge stone statue of him in that form can still be seen at the ruins of the great temple in the City of Eight (Khemenu, modern El Ashmunein).

Baba Thoth

Baba Meditating in his Cave

Underground nearby (Tuna el Gebel) are catacombs that once held thousands of ibis and baboon mummies and still have a chapel with a monk-like baboon sitting in meditation posture with his name “Baba” spelled out in carved stone. Baba’s name, oddly enough is found phonetically in the Chinese expression for the hexagrams: Baba liushisi gua (八八六十四卦). That could not possibly be “Baba’s 64 hexagrams”!

Baba’s name is spelled most simply as "bb"  Stand in front of him in the cave chapel and put your feet into the two sockets. The two pillars give you a hint what to do. Tibetan masters often leave footprints in stone so that others may follow in their footsteps.

Pictures of Baba as the baboon form of Thoth frequently represent him as a scribe. Thoth invented writing, and Baba practiced writing. Scribes in both Egypt and China were constantly challenged by the complexity of the writing systems they used. In other words, the creation of symbols begins with the *Taiji* (a unified creative source) and evolves into the variety of the 64 hexagrams -- and beyond. From these simple mathematical symbols used to record data a vast variety of symbols for objects and actions soon evolved.

The Egyptian baboon worshiped the sun and lived a primitive life in a cave (baba means cave in Egyptian). He often was depicted wearing a cloak made of green leaves to indicate his primitive but still civilized lifestyle.

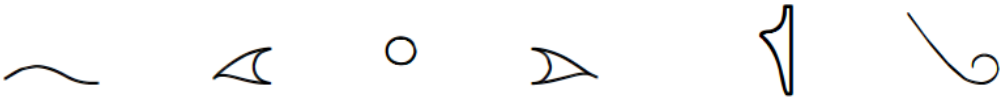
The Baboon offers the Egyptian **Changes** to Thoth in the form of Horus’s Eye of Wisdom. The 6 components of the Eye represent the fractions ½, ¼, 1/8, 1/16, 1/32, and 1/64. The sum of all these plus the *Taiji* in the form of all possible continuing

bifurcations (1/128, 1/256, 1/512 . . . . ) equals 1, the unity of the *Taiji*. The Eye is a complete **Book of Changes** drawn in a single symbol of the eye of a leopard.

http://lostinasupermarket.com/2011/05/to-skin-a-cat-documentary-saving-the-african-leopard-from-extinction/ (detail)

For Egyptians the leopard was a special symbol of a Wizard or yogic adept just as a tiger was in India, perhaps even more so because of its remarkable lineaments. When initiating or doing special rituals, the adept wore a leopard skin over one shoulder so that he became a leopard, owner of the Eye. Thoth records the **Changes** and stores the records in the hidden Sun of Amen Ra.

An Egyptian yogic shaman priest wearing a leopard skin robe



The components of the Eye of Wisdom

Again Baba the baboon hands the Eye of the **Book of Changes** to Thoth, the ibis who here wears the crown of the sun and moon combined as *Taiji.* The papyrus boat sails over the glyph for the sky of heaven. The Eye of the **Changes** is the ever-changing moon. The Eye at the front of the boat is the never-changing Eye of the Sun.

The *Tekhy* was a little heart-shaped plumb bob used to adjust the Scales of Justice at its center. Lead metal in Egyptian was called *tekhy*, as was the ibis. The scale balanced a heart (honesty) and a feather (truth). The scale is always depicted in equilibrium. Baba as a playful golden baboon usually sits on top of the scale in the middle where he can manipulate the whole apparatus independent of Anpu, the Lord of Death who was in charge of adjusting the *tekhy* for accuracy.

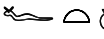
Here we see a detail from the *Amduat,* Hour 6. Baba, the Transcendental Empty Fool (*Wuji* 無極) holds the ibis of Tekhy Thoth (*Taiji* 太極) facing a goddess who holds the Two Eyes of the Sun and Moon (*yin* and *yang*). Behind her are divine embodiments of the 4 Phases (earth air, fire, water), the 8 primordials, and 64 “hexagrams” arranged neatly in groups.

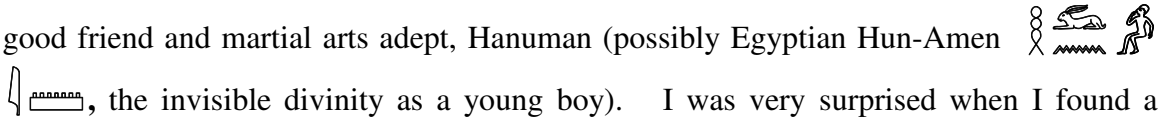
Returning to China we find that imaginative traditional drawings of Bao Xi often show him wearing a cloak of leaves and offering the *Taiji* with 8 Trigrams to the world. Sometimes he holds a writing brush, just like Thoth.

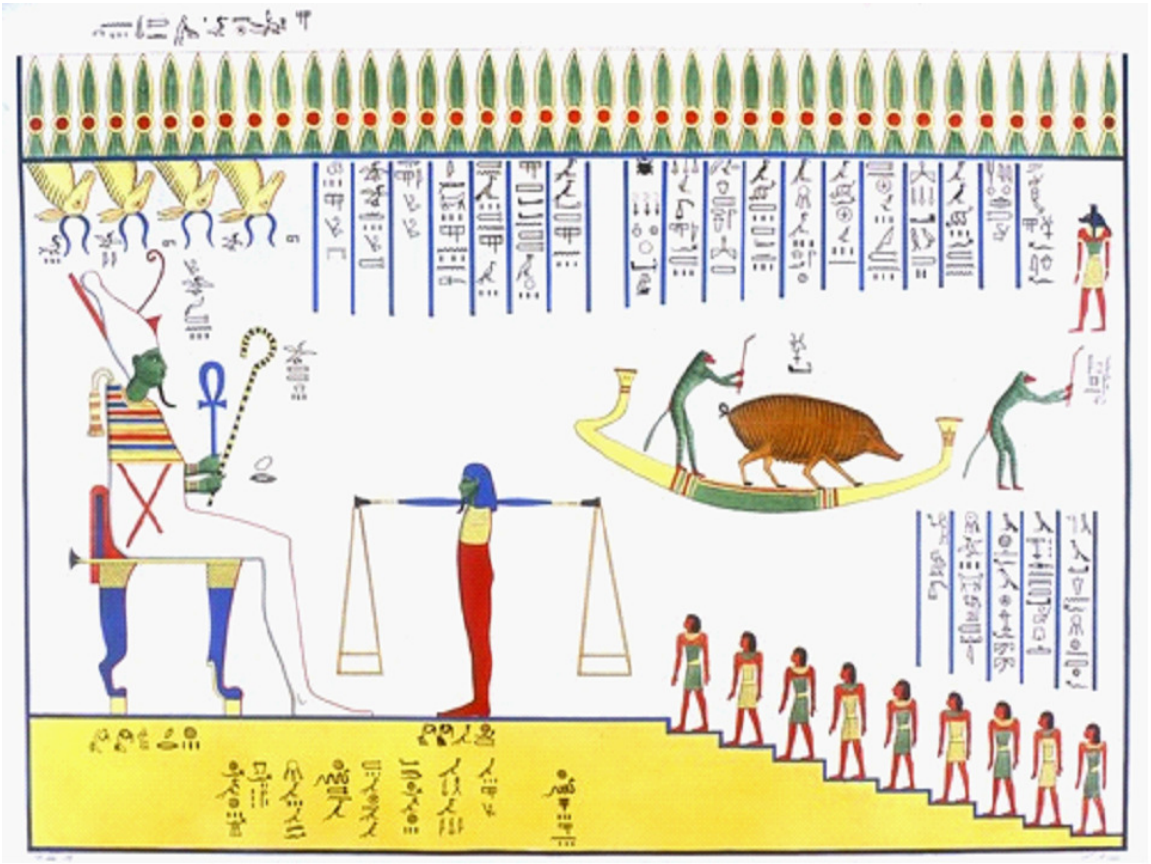




So it occurred to me that the baboon Baba as the primitive precursor form of Thoth (and later an avatar in the form of the strange first son of Osiris who became a reclusive yogic adept living in caves -- each organ of perception was also called a baba "cave"), might be the origin of the legend of Bao-Xi in China. Since China did not have baboons, this mythical culture hero would have to show up either as humanoid or as a monkey.

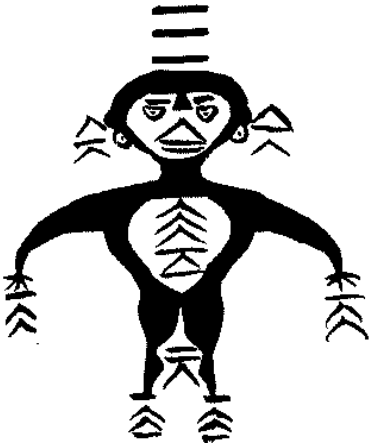
Of course we know about the story of the magic monkey Sun Wu-kong (孫悟空) who was born from a stone and became an immortal adept specializing in 72 somersaults (64 hexagrams and 8 trigrams) plus the ability to multiply himself like the *Taiji* does when it generates hexagrams. In the Ming dynasty story *Xiyouji* (西遊記) Monkey accompanies the Tang monk Xuan-zang (玄奘) on a journey to India to fetch Buddhist sutras to translate into Chinese. Of course even in the Vedas there is a mischievous magic monkey named Vrisha-Kapi (mischievous monkey; *qef* is Egyptian for monkey, and Qeftenu [  ], the epithet on the image of Baba above means Honorable

Monkey or Uplifted Monkey). While we are in India, we must not leave out Rama's good friend and martial arts adept, Hanuman (possibly Egyptian Hun-Amen  , the invisible divinity as a young boy). I was very surprised when I found a tableau that looked remarkably like the main characters from *Xiyouji* for some reason drawn on the wall of a New Kingdom tomb more than 2000 years before the story was written in China, and also well before Buddha was even born to inspire the sutras that Xuan-zang went to fetch.



Osiris as Tripitaka has an entourage that includes a follower carrying the scales of justice the way Sandy carries the sutras, and Monkey uses his dragon-king staff to urge the lazy Pigsy forward, ironically while they are both riding in a boat to cross the river of suffering to enlightenment. Even funnier, Monkey has already projected a copy of himself ahead of the boat to enlightened immortality and waves his magic wand at Anpu, the Lord of Death. Osiris-Tripitaka sits with Sandy and the sutras on the tenth stair above 3x3 followers on the path of ten stages (Dasabhumi).

Then to my complete surprise, when the batch of QHJ bamboo strips related to the **Changes** finally was published at the beginning of 2014, lo and behold out of the ground had come a mischievous monkey with the 8 Trigrams dangling from his appendages in a vague approximation of the Bao Xi arrangement and within a "square" box surrounded by another set of 8 trigrams vaguely in the "King Wen" arrangement.



Baba the primitive monkey man with 8 times 8 trigrams.

In the strips the symbol **—** stands for *yang* and is the same as we currently use. The symbol **Λ** stands for *yin* and is what we now write as **- -.** Using the modern symbols we can study the arrangement of the trigrams on the monkey.

We find that the *yang* trigrams are arranged around the limbs of the monkey surrounding the *yin* trigrams.

Head ☰

Ears ☲ ☲

Hands ☳ ☳

Feet ☲ ☲

The *yin* trigrams form a column along the inner central part of the monkey.

Mouth ☱

Chest ☷

Heart/Belly ☵

Buttocks/Anus/ Genitals ☶

The placement of the trigrams resembles the traditional Bao Xi arrangement, but has some differences.

The cycle of trigrams outside of the monkey's box is just like the King Wen arrangement except that KAN and LI have switched places.

In the appropriate section of my translation of Jack's long article about the bamboo document about the **Changes** we shall get into the details of what goes on here.

(Note: the drawings the Fu Xi (Bao Xi) were collected from various sites areound the Internet and can be found reproduced in many places. The black ink drawing of Fu Xi holding a writing brush comes from Legge's edition of the Changes and is also in numerous locations on the web. I have lost the source of the Egyptian wall painting of the Osiris/Xuanzang tableau, but a black and white version can be found in Budge's **Gods of the Egyptians**, Volume 1. The black and white drawings are by me, and some are derived from Egyptian fonts I have collected and customized. The photo of the subterranean chapel at Tuna el Gebel is available on a number of websites. I do not know the original source. I lost the source of the el Ashmunein (Khemenu) particular photo of the huge Baba Thoth statue. Many views of it can be found in articles about the site.)