

# BOARD GAME STUDIES

JOURNAL ONLINE



Issue 8, 2014



Ludus



CIUHCT

# Board Game Studies Journal

<http://bgsj.ludus-opuscula.org>

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## Published by

Associação Ludus  
R. da Escola Politécnica, 56  
1250-102 Lisboa  
PORTUGAL  
Typeset in L<sup>A</sup>T<sub>E</sub>X

## THE DEVELOPMENT AND REGIONAL VARIATIONS OF LIUBO

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**Abstract:** *This paper clarified the transition of liubo game boards with respect to both chronological order and genealogical relationships based on recent evidence. In spite of the limited direct access to many of the relics due to the organic material used in most of the liubo items, I believe that an overall understanding of liubo was achieved. Each type of liubo board was used concurrently over a long period of time. Despite limited evidence, regional variation in the game boards was identified. However, more new evidence may yield different interpretations and require reexamination in the future.*

*The results indicate that typical board design could be traced back to ancient liubo and the T motif of the TLV pattern could be a relatively newer innovation. Interpreting the typical TLV pattern based on the “circular sky and square earth” cosmology was deemed as inappropriate for this research.*

*This study was conducted mainly based on liubo artifacts, and graphic documents, such as illustrated stones, were taken only into secondary consideration. I hope to conduct further examination and exploration of liubo based on graphic materials in the near future.*

**Keywords:** Liubo, TLV pattern, divination, bronze mirror, sundials

### Introduction

As has been theorized for other ancient board games [23], the origin of the Chinese ancient board game *liubo* (六博) is believed to be related to divination and oracle reading. In fact, archeological evidence and historical documents support liubo’s strong relationship with divination. For example, in Qin’s *Zhanguoce* (Art of War 戰國策), there is a story about one boy who plays liubo by throwing dice in place of the gods. This story indicates that the origin of liubo is strongly associated with divination [35]. Furthermore,

“Hermit’s Liubo,” *Xianrenliubo* (仙人六博) drawn on illustrated stones from the Han Dynasty show its relationship with mountain wizards. The main design of the bronze mirrors during the Han Dynasty (TLV patterns and four sacred animals) is the same as that of the *boju* (博局) game board, and these symbols are also representative of mountain gods. In addition, the *bojuzhanmudu* (博局占木牘) (a wooden board used for divination) excavated from a Han tomb at Yinwan in Lianyungang City, Jiangsu Province (江蘇省連雲港市尹灣漢墓) [19, 20], shows an identical pattern to the *boju* and also reveals its close relationship with divination.

Implementation of *boju* game board designs into Chinese sundials and bronze mirrors with TLV patterns and four sacred animals is believed to represent the ancient philosophy of cosmology; therefore, the designs are often compared with other designs appearing on the back of mirrors (besides those with TLV patterns and four sacred animals). In a recent study, based on historical documents and excavated evidence, Suzuki (2004) concludes that *boju* designs indicate Buddhist emblems (吉祥紋) connected to divination [31, 32].

The purpose of this paper is to categorize and delineate the development of *boju* game boards that have been studied in the past. It is not, however, to analyze the historical idea of cosmology in liubo design because this study would require an extensive amount of historical documentation and evidence. With limited artifacts, this paper will present the geographic distribution of liubo based on game board types and investigate possible regional differences in its spread and development.

## Methods

Komai (1943) initiated a study of liubo based on historical evidence rather than existing literature for the first time [18]. Later, new archeological reports on liubo figurines and game boards deepened archeologists’ understanding. Several researchers studied liubo based on these findings, including Watabe (1982), who reconstructed an outline of liubo and its rules based on archeological research and findings up to 1980<sup>1</sup>. His investigation on rules of liubo includes everything that the literature could reveal, and no study superior to his work has been made to date. However, the fact that a wooden board for divination (博局占木牘) with the same pattern as a game board was excavated from a Han tomb at Yinwan in Lianyungang City, Jiangsu Province (江蘇省連雲港市尹灣漢墓) may lead a new interpretation

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<sup>1</sup>See [35] for the reference. Extensive research review is recorded in [35] and [17]

of the rules of liubo in the future. Koizumi (1991) furthered Watabe's study by reexamining game boards and classifying them into a few patterns and hypothesizing their development [17].

Based on these past studies and newly excavated evidence, this study looks into variations in game board patterns to understand their time frames, and find out if there is any regional variation in their distribution.

Recent excavations have yielded many new pieces of archeological evidence, which urge us to reevaluate past studies. However, these archeological artifacts include not only actual liubo equipment, but also illustrated stones and clay figurines showing liubo boards, which must be analyzed in a different matter. The next section will explain how the evidence was handled in this study.

- Excavated evidence

Liubo equipment including sticks and dice buried with corpses were excavated from a Han tomb at Yanggao, Shanxi Province (山西省陽高漢墓) [2] and a Han tomb at Wanan, Hebei Province (河北省萬安漢墓) [3] in the early 20th century, but it was Komai's 1943 research that first verified these as items of liubo.

Such actual artifacts truly help develop the study of liubo, but as most were made of organic materials such as timber or bone, they are unfortunately not well preserved.

- Other liubo-related relics

Burial goods (明器) and figurines (俑) made as substitutions for actual articles were often buried with corpses. A game board made of bronze unearthed at Tonggu Graves at Putuo, Xilin County, Guangxi Province (廣西壯族自治區西林縣普馱銅鼓墓) [8] may have been designed as a burial good but it might have been actually used as well. A ceramic figure and a wooden figurine were excavated from the Han tombs at Zhangwan, Lingbao County, Henan Province (河南省靈寶縣張灣漢墓) [11] and Mojuzi, Wuwei County, Gansu Province (甘肅省武威縣磨咀子漢墓) [4] respectively. However as they are not for actual use, they may not necessarily reveal details about liubo precisely.

- Illustrated artifacts

Similarly, it is difficult to grasp the whole picture of liubo from illustrations on materials such as stones or bricks. These tend to be exaggerated or simplified and need to be interpreted carefully.

- Inscriptions

Currently, a wooden board for divination from a Han tomb at Yinwan (尹湾汉墓) is an important piece of evidence to understand liubo. It includes zodiac inscriptions as well as a design of a liubo game board.

For the present analysis, actual liubo paraphernalia were considered primary sources and other liubo-related relics secondary sources, with careful attention paid not to place too much importance on the latter. More specifically, for the main purpose of this research (to analyze the development of liubo) actual game boards were mainly used, and illustrations and non-actual materials were only used supplementarily.

## Developmental Change of Game Board Types

### Explanation of liubo equipment

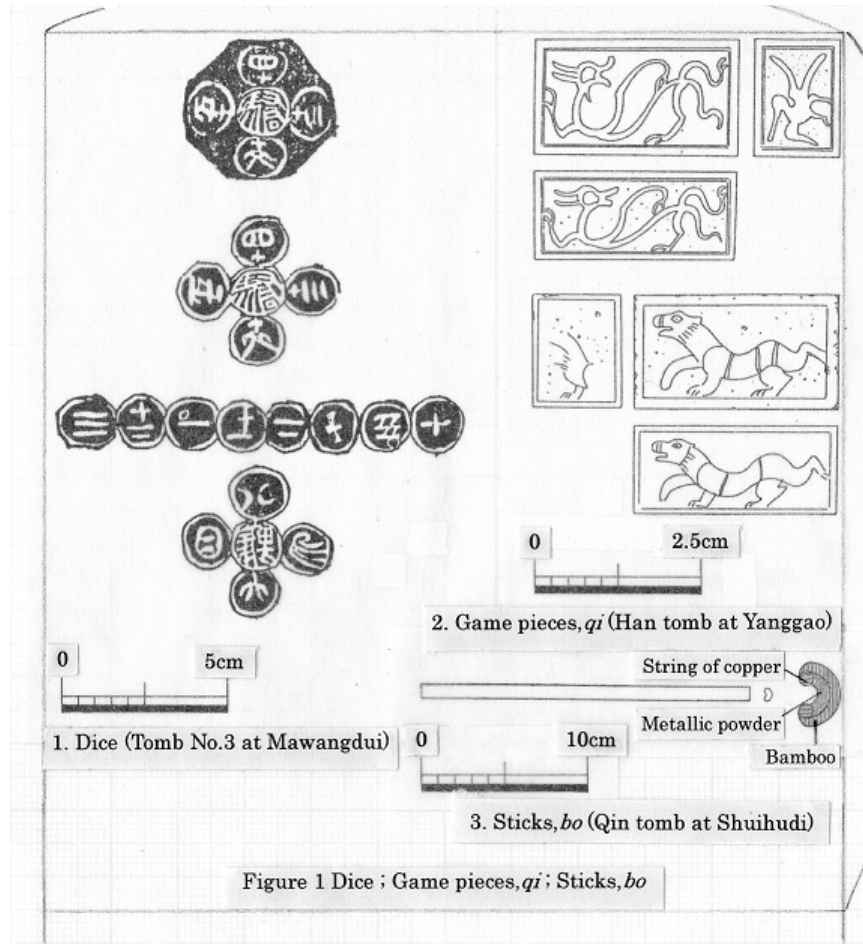
Before examining the development of liubo, liubo playing items are identified borrowing the nomenclature used by Watabe [35] based on past studies and relics from a Han tomb at Mawangdui (马王堆汉墓). Referring to his study, this section introduces liubo game equipment.

Even though the details about rules of Liubo are unknown, they are broadly understood as follows. Two players place 6 game pieces on the L pattern in front of the opponent. They move the pieces to a place called ‘Zhang’ (張) and then back to the original place, using six stick dices or an eighteen-sided dice. It is believed that a player could take the opponent’s pieces or immobilize them.

First, half-arc-shaped bamboo sticks, *bo* (博), from which *liubo* gets its name, are known to have been lined with metal on the inside [38] (Figure 1.3). It is believed that an 18-sided die was used instead of the sticks in some versions of the game, although the fact that no dice (骰子) were found in tomb No. 3 at Mawangdui (马王堆3号墓) casts some slight doubts on this [36] (Figure 1. 1).

The game is played by 2 players. Each player usually uses 6 game pieces, called *qi* (棊), for a total of 12 pieces in the game. Several *qi* were excavated from Han tombs at Dabaotai, Beijing City, (北京市大葆台汉墓) [41] as well as at Yanggao (阳高汉墓) and elsewhere (Figure 1.2). They are rectangular-shaped, and bear illustrations of birds at one end. It is assumed that when a piece advanced to a “water” *shui* (水) position, it was turned upright to promote it into a stronger piece called an owl *jiao* (梟) [35].

Next, there is a wooden strip called *chou* (算) for tallying scores. The



one excavated from a Han tomb at Mawangdui (馬王堆漢墓) is famous, but another was also unearthed at a Han tomb at Yanggao (陽高漢墓).

Although a special piece called *yu* (魚 fish) relating to tallies is thought to have existed, none have actually been discovered yet. However, two round objects on a board shown in a clay figurine from a Han tomb at Zhangwan (張灣漢墓) are considered to be possible fish (魚) [9] (Figure 2), and it is assumed that the capture of this piece by the opponent affected the score of the game.

There is also a weight, *zhen* (鎮), that is placed on the mat on which the dice are thrown [24, 30]. Many weights made of bronze have been excavated.

Finally, the game board, *boju* (博局), is clearly distinguishable from other game boards, but ironically, it is impossible to find any clear differences

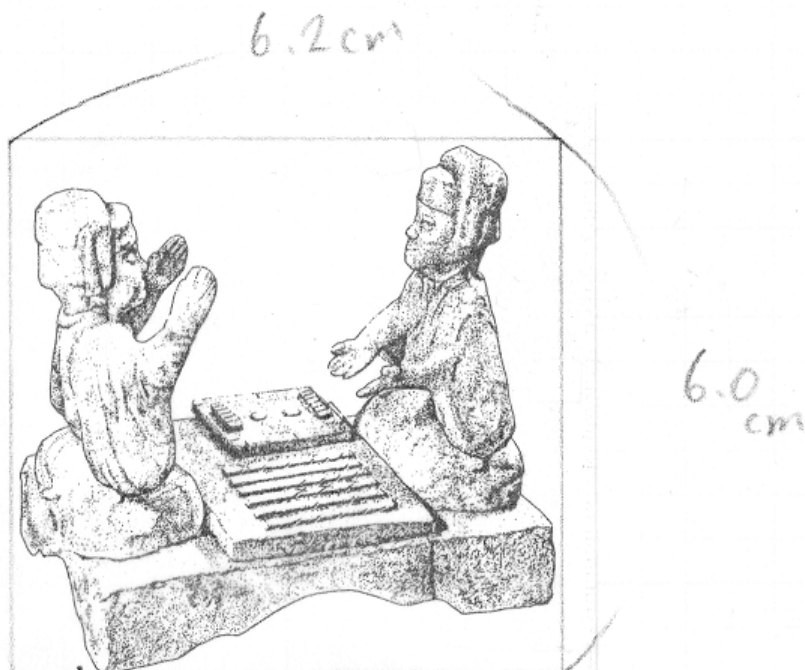


Figure 2 Clay figurines from a Han tomb at Zhangwan

between them and wooden divination boards like the one excavated from the Han tomb at Yinwan (尹湾汉墓). Next, names of each part of the *boju* are identified for convenience of explaining details. Figure 3 shows the names of parts of two types of game boards.

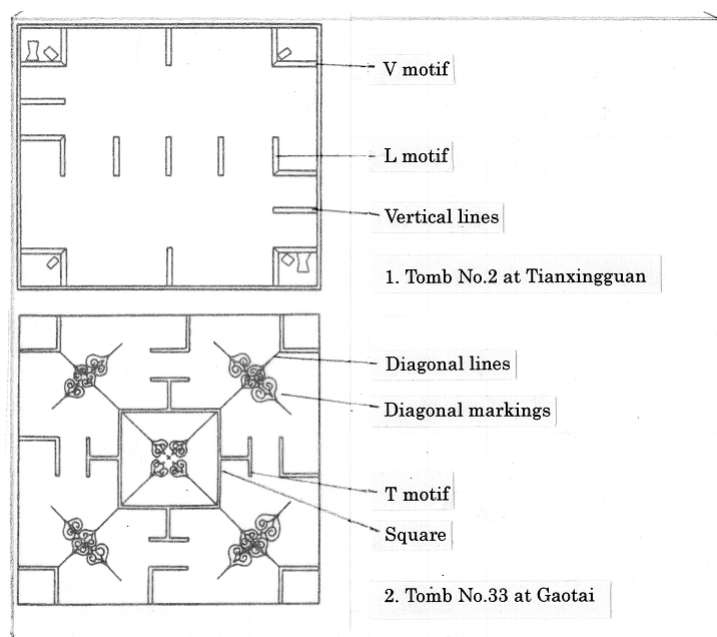
### Types of Game Boards

Game boards with a variety of features and styles that have apparently changed over time are used in this categorization.

- Jicheng Type (Figure 4.1)

The Jicheng board type is unique in that it is rectangular, unlike most of the standard *boju* that are square-shape. Also, the TLV pattern is irregular and the design is identical with that on the opposite side but differs from the adjacent side, while other types of *boju* have identical



Figure 3 Names of each part of the *boju*

designs on all four sides. Three straight lines are found in the center instead of a square. This type of board has either 3 or 4 legs, which are comparatively long.

Although this type had been found at tomb No. 314 at Yutaishan, Hubei Province (湖北省雨台山314号墓) [40] prior to Watabe and Koizumi's studies, it was not included in their analyses.

Other examples have been excavated from tomb No. 1 at Jicheng (纪城1号墓博局) [16], tomb No. 2 at Tianxingguan (天星观2号墓博局) [14] and tomb No. 9 at Jiudian (九店9号墓博局) [15] in Jingsha City, Hubei Province (湖北省荆沙市).

- ZhongshanType (Figure 4.2) The Zhongshantype provides an important key to drawing a connection between the Jicheng type and game boards with complete TLV patterns. Although both Watabe and Koizumi point out that the game played on this board may differ from liubo, we may assume from comparison with the Jicheng type and the Zhongshan II type that it actually was used with liubo. The Zhongshan I type, in contrast to the Jicheng type, is characterized by a square board, but it has the same design as the Jicheng type. A small difference is that the vertical line on each side in the Jicheng

type is horizontal in the Zhongshan I type, which can be considered a developmental change towards the Zhongshan II type. A single game board (stone surface) [10] of this type was discovered at the national tomb M3 at Zhongshan of Pingshan County, Hebei Province (河北省平山縣).

- Zhongshan II Type (Figure 4.3)

The shape of the Zhongshan II type is square. Even though the horizontal and vertical lines of the T motif are separated, the TLV pattern and square drawn in the middle of the board completes the standard liubo board. The designs on each side are identical and have horizontal side-lines instead of diagonal markings. The diagonal lines inside the square were not considered a determining feature of this type.

Like the Zhongshan I type, only a single stone board has been excavated from the national tomb M3 at Zhongshan. It is classified by Watabe as type D and Koizumi as type 1 in terms of liubo design (Figure 10).

- Mawangdui Type (Figure 4.4)

This board is square-shaped and shows a TLV pattern and a square. However, the horizontal and vertical lines of the T motif are separated, similar to the Zhongshan II type. There are markings on the diagonal instead of horizontal side-lines.

Examples of this type were unearthed at tomb No. 3 at Mawangdui, Changsha City, Hunan Province (湖南省長沙市馬王堆3号墓出土博局) [?], Qin tomb at Shuihudi, Yunmeng County, Hubei Province (湖北省雲夢縣睡虎地秦墓出土博局) [38], and tomb No. 31 at Jinqueshan in Linyi City, Shandong Province (山東省臨沂市金雀山31号墓出土博局) [22]. Koizumi has categorized this board as type 2. Some Yaozhuang type boards (see below) with square-shaped diagonal markings are sometimes included in the Mawangdui type.

- Dafentou Type (Figure 4.5)

This board is square-shaped with a complete TLV pattern. In contrast to the Mawangdui type, there is no separation between the horizontal and vertical lines of the T motif. The diagonal lines are represented as circles.

The Dafentou type has a complete TLV patterns similar to mirror designs showing TLV patterns and four sacred animals. An exam-

ple has been unearthed from tomb No. 1 at Dafentou, Yunmeng County, Hubei Province (湖北省雲夢縣大墳頭1号墓出土博局) [12]. Although they cannot be identified as boards for actual use, other examples etched on brick *zhuan* (磚) and unglazed ash ceramics (灰陶), have been discovered in the Jingdi empress tombs at Xianyang City, Shanxi Province (陝西省咸陽市景帝皇后陵園出土博局) [29] and in Changan Castle Yao No. 37 at Xian City, Shanxi Province (陝西省西安市長安城37号窯出土博局) [27]. Watabe categorizes this *liubo* design as type C and Koizumi as type 3.

- Gaotai Type (Figure 4.6)

This board is square-shaped, and shows the same basic design as the Dafentou type, but the existence of markings superimposed on diagonal lines is unique to this type. The markings in the square are not used to determine this type.

Only one example of this type was excavated from tomb No. 33 at Gaotai, Jingzhou City, Hubei Province (湖北省荊州市高台33号墓出土博局) [13].

- Mojuzi Type (Figure 4.7)

This board is square-shaped. There are no diagonal markings but the rest of the design is the same as the Gaotai type. Although no actual Mojuzi type boards have been found, a famous wooden figurine showing this type was excavated from tomb No. 48 at Mojuzi, Wuwei County, Gansu Province (甘肅省武威縣磨咀子48号墓). A similar game board made of clay was excavated at Xiangwu Village, Ku District, Song County, Henan Province (河南省嵩縣庫區鄉吳村)<sup>2</sup>. Several illustrated stones showing this type have also been discovered. The design of a wooden board for divination unearthed from the Han tomb at Yinwan in Lianyungang City, Jiangsu Province (江蘇省連雲港市尹灣漢墓) has been identified as the Mojuzi type. Watabe classifies this *liubo* design as type F and Koizumi as type 5.

- Putuo Type (Figure 5.8)

The square and TLV pattern are present, and it is differentiated from the Dafentou type in that there are no diagonal lines or markings. The L motif on a prototypical Putuo type game board unearthed from a Tonggu Graves at Putuo, Xilin County, Guangxi Province (廣西壯族

<sup>2</sup>From an exhibit at Rakuyo Museum in 1998. Each side measures approximately 27 cm

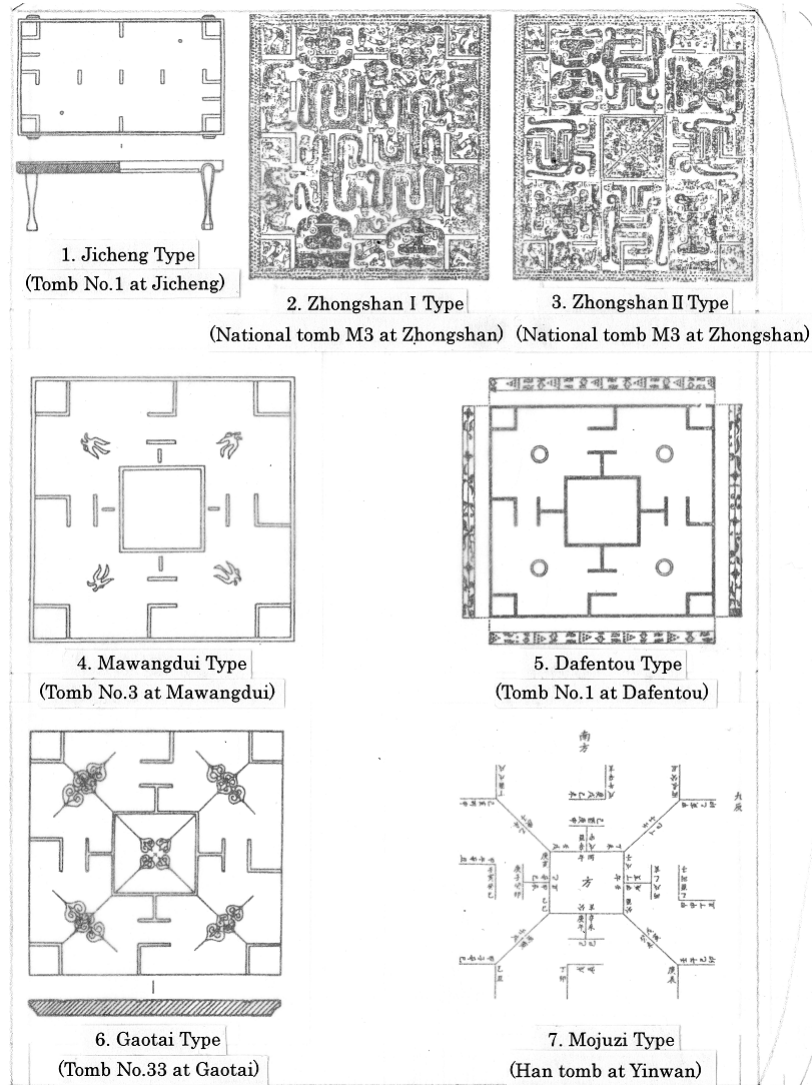


Figure 4 Types of Game Boards (Size=1/10)

自治区西林县普驮铜鼓墓出土博局) [8] faces the opposite direction of the L on a typical game board. As the board is made of bronze, not wood, this may indicate a possible mistake in the process of carving the mold.

Long legs may be another characteristic feature of this type, but game boards without legs have been excavated from tomb No. 2 at Gaotai,

Jingzhou City, Hubei Province (湖北省荆州市高台 2 号墓) [13] and tomb No. 1 at Tuanshan, Jiangsu Province (江蘇省团山 1 号墓) [26]. A game board unearthed from tomb No. 1 at Luobowan, Gui County, Guangxi Province (广西壮族自治区貴县羅泊湾 1 号墓) [7] also belongs to this type, but its possession of legs is not clear due to damage.

Koizumi classifies this board as type 4 in his categorization of liubo design.

- Baozishan Type (Figure 5.9)

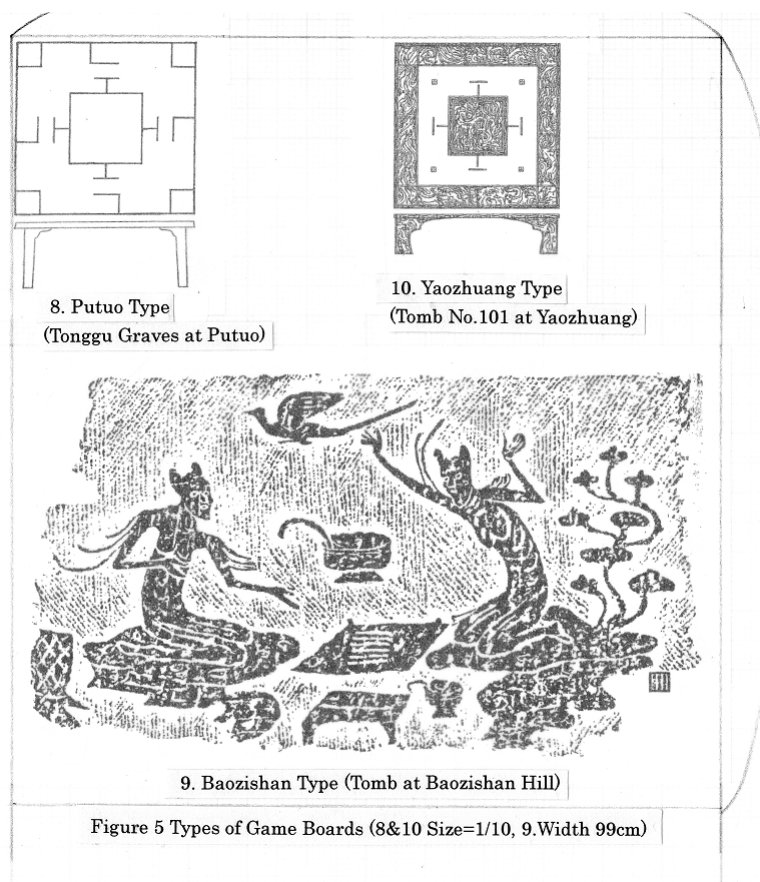
No square or TLV patterns are found, and the surface of the board is partitioned crosswise. A well-known illustration of the Baozishan type board is found in the collection of illustrated stone coffins from a tomb at Baozishan Hill, Xinjin County, Sichuan Province (四川省新津县宝子山崖墓) [39]. Other boards are seen in the collection of unearthed illustrated stone coffins at Xinjin County (新津县) [39] and illustrated stones excavated at Deyang City, Sichuan Province (四川省德阳市) [6]. Short legs are attached to the Baozishan board, but the Deyang board is only seen in illustrations from above so it is unclear whether it has legs or not. Since the designs in the corners of the Baozishan and the Deyang boards are different from each other, it is possible to make further subclassifications. However, since the evidence is only available in illustrations, actual artifacts are needed for further examination.

Watabe classifies this as type A.

- Yaozhuang Type (Figure 5.10)

This board type is square-shaped with a center square and TLV pattern. The horizontal and vertical lines of the T motif are separated. Square-shaped diagonal markings distinguish the Yaozhuang type from the Mawangdui type. Square or other shaped dots are sometimes added in the center square. Short legs also characterize the Yaozhuang type. Examples of this type have been excavated from tomb No. 101 at Yaozhuang, Yangzhou City, Jiangsu Province (江蘇省揚州市姚莊101号墓出土博局) [37], tomb No. 19 at Sanjiaoxu, Tianchang County, Anhui Province (安徽省天長县三角圩19号墓出土博局) [1], and a tomb in Fei County, Shandong Province (山東省費县出土博局) [28, 9]. Diagonal markings of the board from tomb No. 7 at Dongyang, Yixu County, Jiangsu Province (江蘇省盱眙县東陽 7 号墓出土博局) [25] have a four-leaf design and are small and square-shaped. This

board has short legs, and is classified as the Yaozhuang type in this paper.



### Developmental Changes in Game Board Attributes

This section identifies game board attributes that have undergone modifications over time and facilitate understanding of the geneological order of the categorized types.

- Plane shape of the game board  
→ From rectangular to square
- Shape of legs  
→ From long legs to short or no legs

- Square in the board center  
→ From absence to presence
- T motif  
→ From separation of T motif to no separation
- Diagonal markings  
→ From horizontal lines on sides to diagonal markings
- Diagonal lines  
→ From no lines to diagonal lines

These attributes are assumed to represent chronological changes in the game boards. Next I will explain the general pattern of change in game boards.

### Transition of Game Boards

Here, first the aforementioned types are sorted out developmentally, and then a mainstream game board genealogy is proposed.

The Jicheng type can be considered the oldest. Since the Jicheng type board is rectangular without a square in the center, some might regard it as a different board game from liubo. However, it is possible for the Jicheng type to have been modified successively into the Zhongshan I and II Types, thus it is regarded here as an ancient liubo board. The sides of the Jicheng type are not identical and the same designs appear only on the sides facing each other. However, the Jicheng type, which may be considered the prototype of liubo, was unearthed only in Jingzhou City, Hubei Province (湖北省荆州市), and its long legs do not indicate a succession to the Zhongshan I type. Based on these facts, it might suggest a possibility of regional variation in the future. If so, the Jicheng game board may differ only in the possession of long legs and a rectangular-shaped board while otherwise demonstrating common design features.

The Zhongshan I type board is square-shaped, and like the Jicheng type, the four sides are not identical. However, the vertical lines are now horizontal lines, showing a modification in the direction of the Zhongshan II type.

The “standard” liubo game board as acknowledged by Watabe and Koi-zumi is seen in the Zhongshan II type. The designs on the four sides are identical to the Mawangdui type except for the lack of horizontal lines in the former and addition of diagonal markings in the latter.

Thus the horizontal lines in the Zhongshan II type are expressed as diagonal markings in the Mawangdui type. The distances between the horizontal

and vertical lines of the T motif and between the square and T motif are much shorter on the Mawangdui type compared to the Zhongshan II type. The Mawangdui type is followed by the Dafentou type in which no separation between the horizontal and vertical lines of the T motif and between the square and T motif is found. The following form is the Gaotai type which shows additional diagonal lines compared to the Dafentou type. The final transformation can be seen in the Mojuzi type that has lost the diagonal markings of the Gaotai type and kept only the diagonal lines themselves.

This speculated genealogy can be derived logically and without contradictions from the aforementioned changes in game board attributes, thus the development of boju in this manner can be acknowledged as correct.

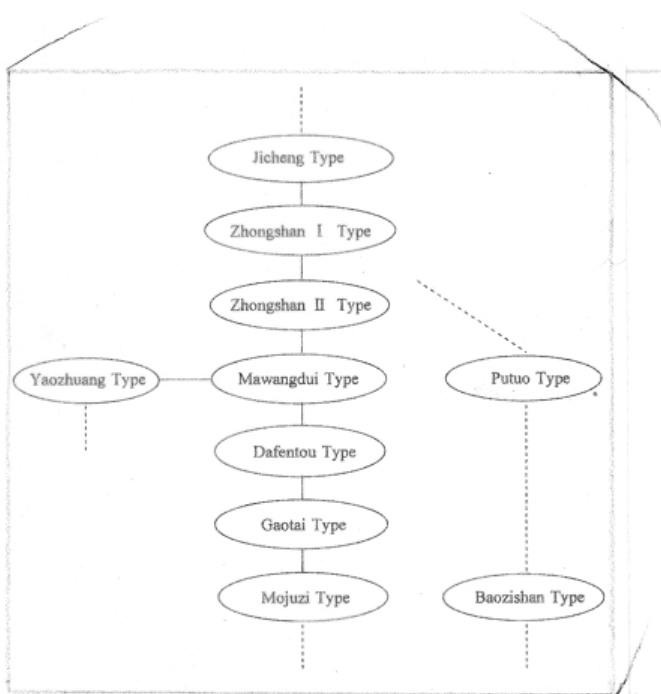


Figure 6 Transition of Game Boards

### Distribution and Regional Variation of Game Boards

The previous section discussed the main liubo board development. In this section, other board types that are excluded from the mainstream—the Putuo, the Baozishan, and the Yaozhuang types—are examined.



The Putuo type could not be analyzed as chronologically arriving after the Mawangdui type due to its lack of possession of diagonal markings. However, the game board unearthed from Tonggu Graves at Putuo was made of copper, which indicates that it was probably a burial good. Diagonal markings on an actual game board could easily have been omitted on grave replica. Since no long legs were found in any other boards except in the Jicheng type, I would like to propose a meaningful relationship between the Jicheng type and the Putuo type, which also has long legs. Nonetheless, it is difficult to establish this relationship because boards from tomb No. 2 at Gaotai (高台 2 号墓博局) and tomb No. 1 at Tuanshan (团山 1 号墓) have no legs. It is unclear if the board from tomb No. 1 at Luobowan (罗泊湾 1 号墓) has legs, but the fact that it was excavated from Guangxi implies a spread of distribution and a possibility of regional variation apart from the mainstream board development. Game pieces might have moved diagonally since the Gaotai and Mojuzi types, and the Putuo type can be considered as a variation of liubo in which the pieces do not move on diagonal lines. The features of the Putuo board with long legs and supposedly lack of diagonal movement of the pieces are speculated to be related to the Jicheng type which also has no diagonal movement, and may have branched off from the mainstream board development before the Zhongshan II type appeared.

The Baozishan type becomes the next candidate to continue the genealogy of the Putuo type. Illustrated artifacts enable the Baozishan type to be clarified to some extent, but classification is not attempted in this paper since no relics have been discovered yet. The crosswise-partitioned Baozishan type board does not fit into the mainstream board development, and its pictorial evidence has been excavated only in Sichuan Province. Discovery of relics is expected in the future. Illustrations indicate that the Baozishan type possesses short legs and its crosswise partition on the board possibly reveals no diagonal movement, implying a relationship with the Putuo type. However, considering the geographical distance between these two types, it is difficult to postulate a family relationship between them. It is possible that the board found in tomb No. 2 at Gaotai ties the two types geographically, but I refrain from making a definite judgment here because the excavated artifact shows no legs.

Next, the Yaozhuang type belongs to the Mawangdui type in a broad sense. They have the same T motif and they are identical except that the Yaozhuang type has square-shaped diagonal markings and markings in the square. This type of game board was unearthed in areas adjacent to Jiangsu, Anhui, and Shandong Provinces. Therefore, although the rules may have been no different from the mainstream board game, the distribution of this

board type is probably limited mainly to these three provinces.

To sum up what we have discussed so far, the *boju* design before the Jicheng type is currently unknown and more evidence is needed for analysis. Seven types from the Jicheng type to the Mojuzi type represent the main development of liubo and transitions of the types can be recognized without contradiction. On the other hand, the Putuo type is likely to have developed mainly in the area south of the Changjiang Basin. Judging from the board design, the Putuo type is postulated to branch off from the mainstream before the Zhongshan II type. It is also possible that the diagonal markings were simply omitted from the Dafentou type. Thus, the chronological and genealogical issues need to be reexamined when new evidence is found.

Even though a genealogical relationship between the Putuo and the Baozishan types is suggested in this paper, more examination will be required for verification in the future. Clear characteristics are seen for the Yaozhuang type and although evidence is scant, the distribution of this type seems to be regionally concentrated.

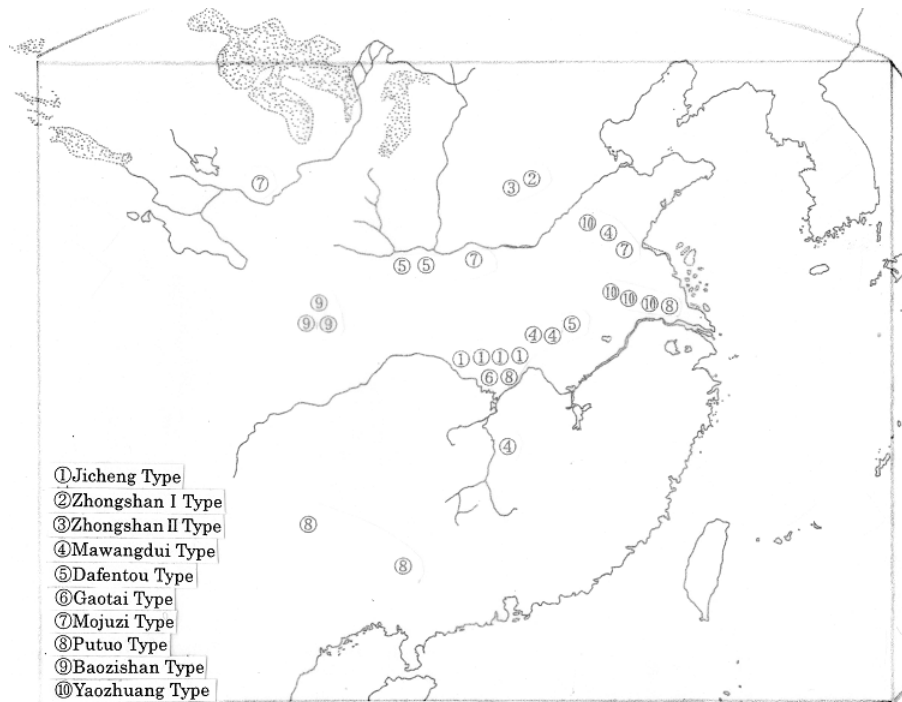


Figure 7 Distribution of Each Game Board

## Chronology of Game Boards

This section outlines the estimated time periods for each type of game board.

The board in tomb No. 1 at Jicheng is dated to the early stage of the middle Warring States Period (B.C.403B.C.221) and it is considered the oldest example of the Jicheng type. The newer Jicheng board found in tomb No. 2 at Tianxingguan dates to the late period of the middle Warring States Period. The Zhongshan I and II types boards unearthed in the national tomb M3 at Zhongshan both date to the early period of the Later Warring States Era. No evidence of *boju* has been found between the Later Warring States Period and the Qin Dynasty (B.C.221B.C.207). The Mawangdui type game boards from tombs No. 11 and 13 at Shuihudi date to the Qin Dynasty. As the game board from tomb No. 3 at Mawangdui indicates, the Mawangdui type was in use in the early stage of the Former Han Dynasty (B.C.206A.D.23). The Yaozhuang type, sometimes included in the Mawangdui type, existed in the latter stage of the Former Han Dynasty. The Dafentou and Gaotai types were seen in evidence from the early Former Han Dynasty, demonstrating fast-changing board game styles in this period. An illustration of a liubo board on a wood block unearthed from tomb No. 14 at Fangmatan (放馬灘) [5] shows no separation between the horizontal and vertical lines of the T motif. Chronologically, the Dafentou and Gaotai types existed during the late Warring States Period, before the unification of China by the Qin Dynasty (B.C.221), preceding the Mawangdui type. Illustrated evidence may not reveal everything, but a few artifacts in the Later Warring States Period and the arrival of all types up to the Mojuzi by this time imply that the Mawangdui type must have developed before the Later Warring States period at the latest.

Even though no actual relics have been found for the Mojuzi type, a stone coffin board excavated from tomb No. 2 at Qingyunshan, Linyi City, Shandong Province (山東省臨沂市慶雲山 2 号墓出土石棺博局) [21] is dated to the middle period of the Former Han, so the time interval between it and the Gaotai type is fairly consistent.

The Putuo type boards found in a Tonggu Graves at Putuo (普馱銅鼓墓博局), tomb No. 1 at Luobowan (羅泊灣 1 号墓博局), and tomb No. 2 at Gaotai (高台 2 号墓博局) are estimated to be from the first half of the Former Han Dynasty. This suggests that the Putuo type did not branch off from the Mawangdui and the Dafentou types, but that it had a different genealogy apart from the mainstream since long before.

Although artifacts have not been found for the Baozishan type, multiple illustrative materials indicate its existence. The type belongs to the Latter

Han era (A.D.25A.D.220), but details about the dates are unknown. Since there is a long interval between the Putuo type and the Baozishan type, further examination is required when new evidence is discovered.

Judging from the chronology of unearthed relics, different liubo board types have overlapped for relatively long periods of time. This implies that older and newer game boards were in use at the same time.

## Miscellaneous Issues about Liubo

This section discusses some issues about liubo genealogy and regional variation as identified above based on changes in the game board types.

In the past, only the Zhongshan II type was considered as the origin of the ancient liubo. Usually, the Jicheng and Zhongshan I types were either ignored or understood as boards for a different kind of game. However, this study shows that the Jicheng and Zhongshan I types are clearly related to liubo and they should not be excluded but rather recognized as important material about its origin. If ancient cosmology is reflected in the TLV pattern, we need to examine whether it is present in the Jicheng type liubo design as liubo game boards without TLV patterning have now been clarified. However, a different conclusion can be drawn if we consider that the typical TLV pattern was established as a reflection of the old Chinese cosmological idea of “circular sky and square earth” (天円地方) at the time of transition from the Zhongshan I type to the Zhongshan II type. Therefore, we speculate that there was no influence of Chinese cosmology the design until to the Zhongshan I type.

However, it is unclear if this cosmological thinking influenced the transition from the Zhongshan I to II types and TLV patterning was created as a result. Considering the sequential change from the Jicheng to Zhongshan II types, we should rather presume that the typical TLV pattern developed from the liubo transition. The fact that the spherical pattern is used only in bronze mirrors and sundials means that the “circular sky and square earth” cosmology in which the sphere is regarded as heaven had not yet been adopted. Next, I will examine another possibility besides the “circular sky and square earth” cosmology on the development of the T motif in the TLV pattern.

The LV motif of TLV pattern was already established with the Jicheng type, but the origin of its design has not been established yet. The meaning of these motifs could have differed considering the time gap between the LV and T motif development.

Suzuki maintains that as the board design is used in mirrors with the four sacred animals, it is related to the Xi-wang-mu religion (西王母信仰) and divination [31]. If there is a close relationship between the game board design and divination, may we not assume that the development of the T motif was derived from the letter ( ) indicating a shaman which, as Terasawa [33, 34] maintains, crossed over to Japan as well.

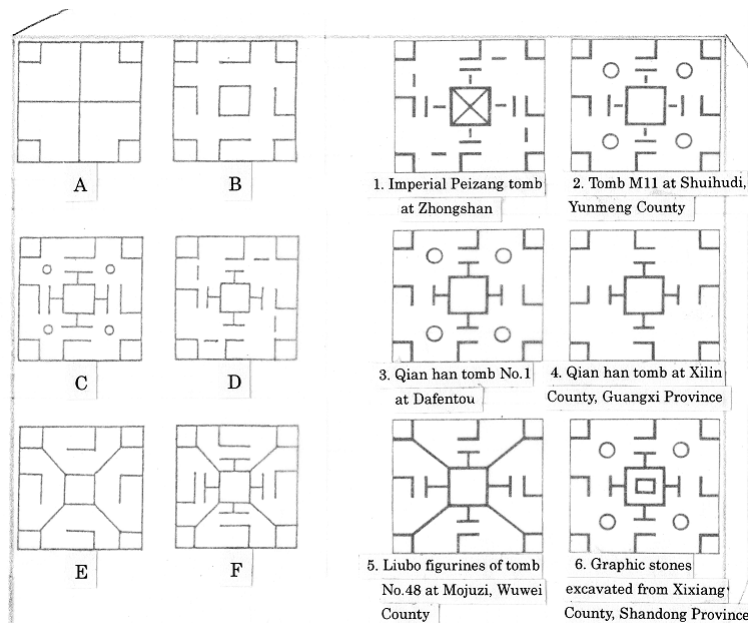
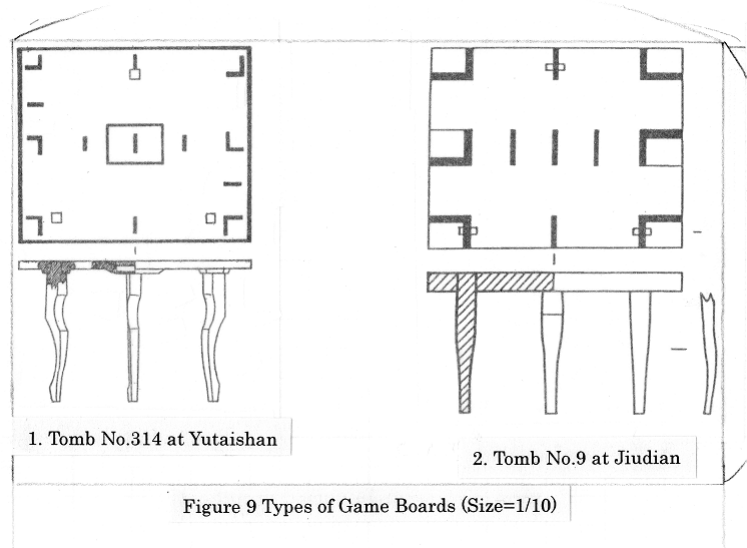


Figure 8 Classifications by Watabe(left)and Koizumi(right) (See Note 2&7 for reference)

## Summary

This paper clarified the transition of liubo game boards with respect to both chronological order and genealogical relationships based on recent evidence. In spite of the limited direct access to many of the relics due to the organic material used in most of the liubo items, I believe that an overall understanding of liubo was achieved. Each type of liubo board was used concurrently over a long period of time. Despite limited evidence, regional variation in the game boards was identified. However, more new evidence may yield different interpretations and require reexamination in the future.

The results indicate that typical board design could be traced back to ancient liubo and the T motif of the TLV pattern could be a relatively newer



innovation. Interpreting the typical TLV pattern based on the “circular sky and square earth” cosmology was deemed as inappropriate for this research.

This study was conducted mainly based on liubo artifacts, and graphic documents, such as illustrated stones, were taken only into secondary consideration. I hope to conduct further examination and exploration of liubo based on graphic materials in the near future.

## Acknowledgements

I would like to thank Hiromi Kuma, Xin Zhonghua, Fuminori Sugaya, Naomi Suzuki, and Koichi Masukawa for their support and suggestions.

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#### References for Illustrations

Figure 2 is from Hayashi (cited in [9]) and others are cited from the reports of the excavations.

Board Games Studies was first published in 1998, an initiative inspired by the colloquia on board games held at Leiden University, the Netherlands, in 1995 and 1997. Five institutions affiliated themselves with the journal: the Institut für Spielforschung und Spielpädagogik in Salzburg, the International Institute for Asian Studies in Leiden, the Russian Chess Museum in Moscow, the British Museum in London, and the Department of Computer Science at the University of Maastricht. The journal, which was published by CNWS Publications in Leiden on a yearly basis, was partially funded through the assistance of patrons and boasted a modern layout, trilingual summaries and color plates. The broad ambition of this journal required a continuous commitment from the editors, who reviewed contributions in German, French and English, provided translations of summaries for each article and, in several cases, collaborated extensively with authors to develop manuscripts that were to the academic standards of the publication. The journal had a trial run of three years, after which the format, content and review process was evaluated. The authors of the articles integrated wide-ranging literature necessary for a comprehensive understanding of particular games. Contributions from different disciplines — including psychology, computer science, philology, classical archaeology and history — allowed for a better historical and systematic understanding of board games to emerge. Starting in 2000, a section with a translation of primary sources was added. Book reviews and research notes further complemented the multi-faceted contents. Its first ambition, to serve as a platform for the publication of board games research, was met quickly, while gradually the journal gained prominence among researchers by publishing seminal historical overviews. The colloquia continued from 1995 onwards, moving from a biennial to a yearly schedule. The host institution was expanded beyond Leiden to universities and museums throughout Europe as well as Jerusalem, Philadelphia and, in 2013, the Azores. The colloquia continue to gather an enthusiastic group of scholars, players and collectors. Despite the institutional affiliations and a group of patrons, the production of the journal became financially and logistically problematic with CNWS no longer able to serve as a publisher. Reluctantly, the paper version of the journal was discontinued after volume 7 was published in 2004. The possibility of an online version of the journal had been explored with the online publication of the first issues, a decision that greatly assisted the dissemination of knowledge accumulated in those early volumes. The next step, an online journal that operates again as a platform for recent board games research, was not far away but required the skills and enthusiasm of previous and new editors to materialize. In these last fifteen years, the study of board games has gained momentum and this journal will not only showcase new results but, most of all, will encourage and publicize the work of the dedicated researchers in this field.

Alex de Voogt



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Board Game Studies is an academic journal for historical and systematic research on board games. Its object is to provide a forum for board games research from all academic disciplines in order to further our understanding of the development and distribution of board games within an interdisciplinary academic context. Articles are accepted in English, French, and German and will be refereed by at least two editors under the final responsibility of the Editorial Board. Please send your contributions in any editable format (Word, L<sup>A</sup>T<sub>E</sub>X, rtf, ...) with a matching PDF file. Please send all the illustrations in separate files.

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## TABLE OF CONTENTS

<b>Evolution for games</b>	<b>1</b>
<i>Cosimo Cardellicchio</i>	
<b>On game psychology...</b>	<b>13</b>
<i>Emanuel Gluskin</i>	
<b>Présentation d'informations...</b>	<b>35</b>
<i>Stéphane Goria</i>	
<b>The loop within circular three mens morris</b>	<b>51</b>
<i>Florian Ulrich Maximilian Heimann</i>	
<b>A pictish origin for Hnefatafl?</b>	<b>63</b>
<i>David Lawrence</i>	
<b>The Development and Regional Variations of Liubo</b>	<b>81</b>
<i>Yasuji Shimizu</i>	
<b>A Chess Legend</b>	<b>107</b>
<i>Arie van der Stoep</i>	
<b>New problems on old solitaire boards</b>	<b>123</b>
<i>George I. Bell and John D. Beasley</i>	
<b>Der Kreislauf der Rundmühle</b>	<b>147</b>
<i>Florian Heimann</i>	
<b>Makonn and the Indian Ocean...</b>	<b>159</b>
<i>Alex de Voogt</i>	
<b>Birth of the Chess Queen</b>	<b>165</b>
<i>Arie van der Stoep</i>	