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Board Games Studies

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Board Games

International Journal for the
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Editorial

Board games have played an important role as research objects in the sciences of this century. At first, games and board games were studied from a historical perspective. In 1944, Von Neumann and Morgenstern provided a basis for using games and board games in the computer sciences and in economics, such as in the field of game theory. Research on board games accelerated with research on chess, in particular chess masters, which has proved fundamental in the cognitive sciences since de Groot (1949), followed by Newell & Simon and others. Chess is still dominant in most fields but slowly other championship games enter these fields as examples or tools in research.

Only recently has research on board games other than chess been possible. Since Thomas Hyde (1694) there are historical descriptive works on board games. However, even in 1952 when Murray published *A History of Board Games Other than Chess*, research did not suffice to warrant an important shift in attention in the sciences. These other games had rules, boards, pieces, players and contexts unknown to the academic world. Sometimes parts were known but never studied, as shown by the first Ph.D.-thesis on the subject of draughts (or checkers) only in 1997.

Since 1952, some disciplines of research have started to consider games and board games other than chess. Studies of sculptured game boards in art history (Walker 1990) and a contextual analysis of board games in anthropology (Townshend 1985) are just examples from the field of mancala games. This interest from art history, anthropology and also archaeology (Schädler 1995), psychology (Retschitzki 1990) and linguistics (van der Stoep 1997) has grown rapidly since the 1980s. International colloquia, scholarly books, research centres and a growing number of articles and inventories are being produced for which this annual publication will provide a continuous platform. Board games are a complex form of games. They consist of boards and various kinds of pieces (dice, pawns, counters, etc.), a system of rules, and most importantly players. The context of playing board games includes referees, interfering and non-interfering spectators, rules of ceremonies or rules of etiquette, club houses and societies, boards for special occasions, etc. Playing a board game introduces movement, sound, atmosphere and other elements which are described by poets rather than academics. If we consider a context with players, boards and pieces, and rules, it appears that these elements cannot be separated for a complete understanding of a board game. The rules may influence the board and vice versa. The players may determine the shape and kind of boards and the specificity of the rules. They form a complex 'being' which is a board game.

Board games in their complexity present the researcher with various questions. For instance, the (inter)relationship of the aspects of a board game are little understood. Also, the historical development and distribution of board games has been a point of

discussion which was started in historical works by Murray (1952), Bell (1960), but also by Falkener (1892) and Hyde (1694) to name a few.

Studies of board games collections (Goodfellow 1997 in BGS) are rare and hardly ever coincide with fieldwork on context and rules. The results of fieldwork, collection studies, analyses of rules and the study of players still need to be studied within their interaction, their dependency and their consequences for the development and distribution of board games. The methodology for classification appears fundamental for answering these questions in a systematic way (Eagle 1997 in BGS).

Each article in Board Games Studies makes a rich source of literature available to scholars. This literature makes it possible to study board games with the necessary background knowledge. Area studies appear both in need of this literature and are at the same time instrumental in adding to such literature. This is shown by Depaulis (1997 in BGS) and Verbeeck (1997 in BGS) who contribute considerably to the field of Latin American studies. However, even interdisciplinary area studies are limited in their approach. Most board games appear to be distributed across the continents and rare board games in Asia may only be understood with a thorough understanding of related games in Africa or their relatives in antiquity (Eagle 1997 & Schädler 1997 in BGS). As such, board games studies are interrelated studies separate from but dependent on the known disciplines.

A discipline of research prefers to concentrate on one of the elements of a board game. Archaeologists and art historians tend to study objects, while computer scientists are more interested in rules and their consequences. This results in two general problems for which this journal intends to provide a solution. Firstly, as was stated above, individual disciplines do not give insight in the complexity of board games. Instead, only aspects are discussed without the complexity of their interaction. Secondly, research on board games is presented in many unconnected publications. It is necessary to create a systematic inventory of board games research in order to get insight in the complexity of board games as a whole. Colloquia of the past seven years have already made an attempt in presenting the findings of various disciplines in one publication. This journal is a direct result of the success of and need for these publications.

In line with the particularities mentioned I sense an ambition for board games research. It is my belief that, in the study of board games, the individual disciplines need to be complemented by a perspective which is primarily concerned with the board games themselves. Since academic disciplines cannot provide us with such a viewpoint, it should be the role of this journal to develop and show the importance of such a perspective providing academia with an insight unknown to the practitioners of its established disciplines.

Alexander J. de Voogt

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/ 1

Mancala in Roman Asia Minor? / Ulrich Schädler

Merels games, chess, backgammon and mancala are certainly the most widespread classical board games in the world. Our knowledge concerning their origins, both chronologically and geographically, is however remarkably poor. While entire libraries could be filled with theories about the history of chess, the opposite is true of backgammon, its evolution having hardly ever excited any interest⁽¹⁾. The origins of merels are surrounded by the darkness of prehistory and attempts to lighten it up have rarely been made. The situation concerning mancala is not very much better, as shown by Philip Townshend's synopsis of the state of affairs: "The age of mankala is uncertain. It might be as much as 3,000 years or as little as 1,000"⁽²⁾. "Some writers have ascribed to it an Egyptian, Persian, Indian or African origin"⁽³⁾. It must be stressed, however, that anthropology and ethnology have rarely tried to advance theories about the origin and evolution of mancala. Based on observation and literary descriptions not earlier than the 17th century of the rules adopted in different areas of Africa (except northern Africa), the Near-East, Asia and the New World, distributional analyses of variants and different typologies have been applied to gather information about migrations of peoples or cultural inter-relationships⁽⁴⁾. The history of the game in the long term was no primary concern. The Greco-Roman world on the other hand was left to classical archaeology as the traditional field of research. Whether due to the afro-ethnological domination of mancala-related research or to the lack of a sufficient archaeological data-base concerning Greek and Roman board games, mancala has not been regarded as a game played in the Mediterranean during classical antiquity.

This article is a preliminary attempt to contribute to the history of mancala from a classical archaeologist's perspective. A number of methodological problems arise from such a viewpoint. To the archaeologist any board game appears as a tripartite set of data consisting of a gameboard, the material needed for playing and a set of rules. In contrast to the nearly complete knowledge of a game collected by anthropology and ethnology by observation of people playing or explaining the rules adopted, archaeology is more or less limited to the material remains of games. As far as the ancient Greek and Roman culture is concerned finds of complete sets of board games are extremely rare⁽⁵⁾. Generally spoken there are strayfinds of gaming stones, dice and other objects on the one hand and gameboards on the other. In some cases literary sources provide further information as for example names of games and their rules, but more often they are themselves problematic, since many of them consist of concise lexicographic entries, poetical or philosophical allusions to games rather than explanations or are written by late authors, who gained knowledge not from personal experience but from previous literary sources. As a substitute for complete games and the observation of people actually playing representations of board games in progress on wall-paintings or mosaics, in sculpture and other works of art can be helpful, but follow their own laws concerning style, scale and perspective, so that often details of the games depicted are not recognizable.

Left alone with the boards the search for cross-cultural analogies can be applied. The comparative study of board games, however, implies various difficulties. To state that

different games can be played on one and the same board (see for example Alfonso's "Libro de ajedrez" suggesting fifteen rules for games on the backgammon-board) is to repeat a banality. Hitherto less considered, however, was the likewise evident fact that on different gameboards similar games can be played. One should keep in mind that in the first place a gameboard is a particular disposition of places for the counters. These places may be shaped as points, holes, circles, squares, intersecting lines, letters or symbols of all kinds. For the identification of the games played on a given board the particular shape of the places is less important than their disposition. On Roman *XII scripta/alea* boards for example the places exhibit a variety of forms but differ completely from the oblong triangles of backgammon-boards, and yet the games are very similar. *Dara*, an African game where the players try to aline three of their own pieces in order to acquire the right to take one of the opponent's and therefore similar to nine men's morris, is played on a grid of holes instead of concentric squares⁽⁶⁾. In Egypt grids of holes are used for *sigā*, a game very different to *dara*. *Sigā* has certain affinities with the Roman game of *latrunculi*, which was played on a grid of squares⁽⁷⁾. Therefore *latrunculi* has often been compared to chess, although it was a completely different game. What follows is that it is important to be aware of the difference between the structural layout of a gameboard and its formal design. As far as mancala is concerned this distinction has hitherto not been observed. While boards with parallel rows of holes have readily been identified as mancala boards, parallel rows of squares have not been taken into account. From an archaeological and historical point of view, however, the fact that mancala seems to be played exclusively on rows of holes during the last centuries is no proof for the assumption that mancala boards must have had this particular shape from the invention of the game on always and in all cultures. On the contrary it seems more likely to suggest, that this type of board may be the result of improvements in design or that cultures importing the game may have played it on gameboards already existing. That these considerations could of course have consequences for the study of origin, history and distribution of the game is perfectly clear.

The difference of structure and form of gameboards and the difference of a game itself and its material remains handed down to us are the subjects treated in this article. It is dedicated to a class of gameboards consisting primarily of two parallel rows of five cells. These gameboards are to be found in Roman cities such as those of Asia minor, where they are frequently found incised in the marble slabs of streets, squares and other public buildings. Their identification as gameboards is suggested by the proximity of many of them to other pavement markings definitely identifiable as boards for merels games or *alea*⁽⁸⁾. I have collected examples at Aphrodisias, Ephesus, Miletus, Cnidus and ancient Izmir, a similar one at Didyma, but I have not seen boards of this class at Pergamon, Teos, Claros, Magnesia, Priene, Olympos, Phaselis, Termessos, Perge, Aspendos or Side. It must be stressed, however, that the list given below is certainly incomplete, various excavated buildings being re-covered with sand or plants or not accessible to the public, as for example the theatres at Side and Perge. As for Aphrodisias I am obliged to Charlotte Roueché for allowing me to make use of her hitherto unpublished catalogue of the pavement markings in the Sebasteion, the temenos of the temple of Aphrodite, the Tetrastoon and the southern agora⁽⁹⁾.

Gameboards with Two Rows of Five Cells in Asia Minor

Six different types of the gameboard in question can be distinguished (fig.1). These types can be described as a combination of essentially two elements, that is a frame on one hand and the filling of the frame on the other. The most elaborate frame (A) is composed of an oblong rectangle divided into two rows of five cells by one central line running parallel to the long sides and four intersecting lines parallel to the short sides. A simpler form of frame (B) omits the short lines and therefore consists of only a rectangle divided into two oblong halves. The simplest frame consists of a rectangle only (C). Finally the frame can be completely absent (D). Whereas the cells of the A-group frames can have no filling at all (1) or can be filled with inscribed circles (2) or cup-like holes (3), these holes appear to represent the cells in groups B, C and D. The following list of boards discussed in this paper contains fifty two examples⁽¹⁰⁾.

Type A1 (BMT R1):

- 1 Ephesus, Hydrekdocheion of Laekanius Bassus,
- 2 Ephesus, Basilike Stoa, stylobate of the eastern inner colonnade opposite the so-called Rhodian peristyle,
- 3 Ephesus, Arkadiané, eastern colonnade between the 23rd and 24th columns north of the four-columned monument, 16x33,5cm (fig.2),
- 4 Ephesus, Arkadiané, in the middle of the street close to a circular and a square merels game, 20x35cm,
- 5 Aphrodisias, theatre, 1st sector [counting the segments of the auditorium from south (1st) to north (11th)], 3rd step from below,
- 6 Aphrodisias, theatre, 8th sector, 12th step from above, near square merels game and incised gladiator's bust,
- 7 Aphrodisias, theatre, northern sector (11th), 3rd step from below,
- 8 Aphrodisias, theatre, northern sector (11th), 6th step from above,
- 9 Izmir, agora, inscribed cup-like depressions in four squares, leaf near the board pointing to the middle square, numerical sign m at one corner, 22x36cm (fig.3),
- 10 Cnidus, propylon to the precinct of Apollo, 9,5x25cm, holes in the first square of both rows.

Type A2:

- 11 Ephesus, Arkadiané, on a threshold in the eastern colonnade. Since in the frames of the A-group the ten cells are sufficiently defined by the squares, the inscribed circles should be interpreted as simplified holes.

Type A3 (BMT R6):

- 12-15 Aphrodisias, theatre, northern sector (11th), 3rd (fig.4), 5th, 6th and 8th steps from below,
- 16-17 Aphrodisias, stadium, 5th sector of north-side (counting from east to west), 4th step from above c. 4m apart,
- 18-20 Aphrodisias, Tetrastoon, stylobate of the west colonnade, between 2nd and 3rd column (counting from north), 15x25cm, between 4th and 5th column, 24x39cm,

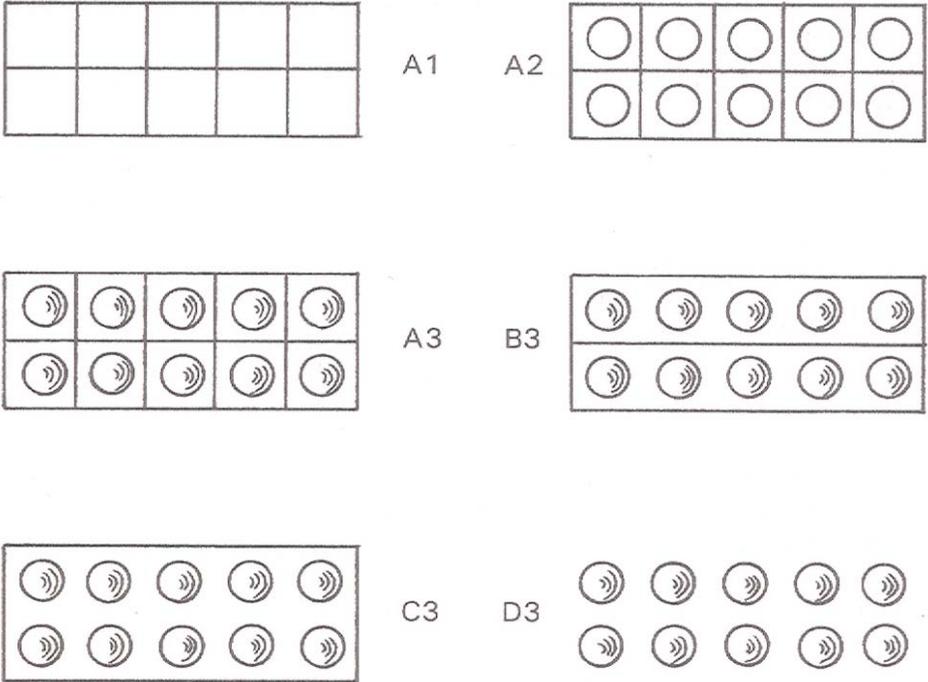


Fig 1: Types of 2x5-class game boards in Asia Minor



Fig 2: Game board at Ephesus, Arkadiané

and between 5th and 6th column, 18x40cm.

Type B3:

21 Aphrodisias, theatre, 9th sector, 5th step from below,

Type C3:

22 Aphrodisias, theatre, 8th sector, 7th step from below (only one row existing).

Type D3 (BMT H4):

23-25 Aphrodisias, theatre baths, western colonnade, beneath column at northern entrance,

26 Aphrodisias, theatre, 9th sector, 5th step from above, close to the stairs between sectors 8 and 9,

27 Aphrodisias, theatre, northern sector (11th), 8th step from above,

28-29 Aphrodisias, Sebasteion, on the steps at the east end, 9x23cm and 11x24cm,

30 Aphrodisias, temple-temenos, on the steps at the east end of the south colonnade, 13x28cm,

31-51 Aphrodisias, southern Agora, northern portico:

31-32 between 27th and 28th column (columns numbered from east to west)
7x15,5cm and 8x24cm,

33 next to 30th column, 17x37cm,

34-35 between 31st and 32nd column, 10x29cm and 15x25cm,

36 next to 33rd column, 7,1x22cm,

37 between 34th and 35th column, 14x29cm,

38 between 36th and 37th column, 10x28cm, next to a xii scripta/alea-board,

39 next to 37th column, 10x33cm and 12x26cm,

40 between 39th and 40th column, 10x19cm,

41-42 next to 40th column, unfinished 9x15cm, and traces of an earlier,

43-44 next to 42nd column, 8x21cm and 6x19cm,

45 next to 45th column, 8,5x16cm, close to a xii scripta/alea-board,

46 next to 46th column, 9x22cm,

47 next to 47th column, 7x20cm,

48 next to 48th column, 9x23cm,

49 next to 49th column, 11x24cm,

50 next to 50th column, 8x23cm,

51 next to 55th column, 9x20cm

52 Miletus, theatre, southernmost sector, 4th step from below, 10x22,5cm.

Thus a survey of the boards of the 2x5-class in the Roman cities of Asia minor shows that out of fifty two examples ten boards have two rows of five squares, while forty one boards – forty four with the one of type A2 from Ephesus – have two rows of five holes.

Mancala or Five Lines?

Two main questions arise: Were all six types of the 2x5-class boards used for one and the same game or were different games played on these boards? And what kind(s) of game(s)? At first sight it might be suggested that at least some of the boards were used



Fig 3: Game board at Izmir, Roman agora

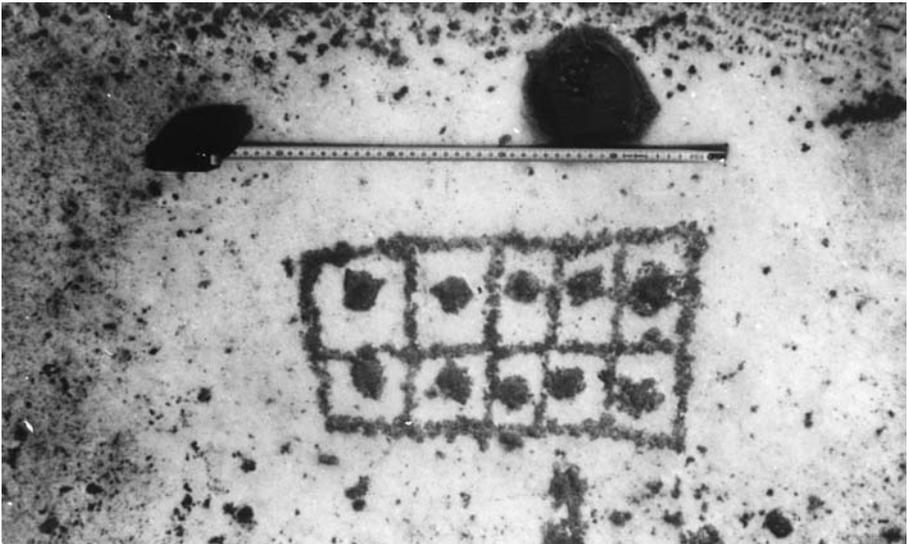


Fig 4: Game board at Aphrodisias, theatre

for some kind of mancala, judging from the striking formal analogy and in particular from the fact that four, if not five of the six types have holes as cells as is typical for mancala boards. To support this hypothesis one could add two further arguments. From a functional point of view cup-shaped troughs are very suitable to grasp a certain number of pieces at a time with one hand as in mancala, but less suitable to move single pieces from one place to another. From a practical point of view it would be quite astonishing, that anyone should take pains over chiselling holes into marble, if he did not believe them to be appropriate or in fact necessary for the game. But the case is not as easy as it seems to be. It must be observed that some of the holes of the boards described are reduced to points rather than holes and that all two-row boards with holes consist of exactly five cells in each row, a peculiarity they share on a structural level with boards of a Greek game conventionally named as *five lines*. The existing literary and archaeological evidence enables us to create a fairly good picture of that game⁽¹¹⁾.

Referring to *five lines* Pollux states (IX 97) that “each of the players had five pieces on five lines” adding that “on either side there was a middle line called the sacred line. And moving a piece from it gave rise to the proverb ‘He moves the piece from the sacred line’”. In another instance (VII 206) Pollux includes *five lines* in a list of dice games. Eusthatus in his commentary to Homer’s *Odyssey* (Od. 1397,28), probably relying on Suetonius’ lost book about Greek games, says that both players had their own five lines and that the line between these was the sacred line. Its significance he explains by adding that “the beaten player goes to it last”, *i.e.* the player who first manages to place his pieces on the sacred line is the winner. The earliest reference is a verse by Alcaeus⁽¹²⁾, implying that moving a piece from the sacred line can lead to final victory – in a sense similar to “playing the trump card” nowadays.

Archaeological finds that can convincingly be connected with these references, totally ignored by Austin⁽¹³⁾, add much to their understanding. W. Kendrick Pritchett catalogued the material hitherto known from mainland Greece, Delos and Cyprus⁽¹⁴⁾. I do not want to leave the fact unmentioned, that the numerals on some of these boards induced some scholars to speak of abaci. Although it cannot entirely be ruled out that the boards may at times have served for calculations, I follow the opinion that they were primarily designed as gaming boards⁽¹⁵⁾. The earliest example is a painted terracotta gaming table found together with a cubic die in a grave at Vari in Attika, dating to the middle of the 7th century BC⁽¹⁶⁾. The board measures 18,3x24,8cm and has on its surface five incised parallel lines ending in a circular cavity on both sides, thus forming two rows of five holes along the longer edges of the board. Two distinct groups of five parallel lines widening at both ends are incised on the surfaces of two stone gaming tables dedicated possibly during the fourth century BC in the sanctuary of Asclepius at Epidaurus⁽¹⁷⁾. On one of these tables six shallow lines have been added clearly at a later date in order to create a gaming area with eleven lines next to one with five. Boards with eleven lines have been found at several places, often with the third, sixth and ninth line marked by a special sign, pointing to a special significance of these lines. Thus the boards with eleven lines appear to be boards where two groups of five lines with their sacred lines in the middle have been joined by adding a line between the two groups. This

5+1+5-layout corresponds to Pollux' (IX 98) and Eusthatus' (Il. 633,58) peculiar expression Lamer⁽¹⁸⁾ came across, that "a line in the middle was called the sacred line" instead of "the line in the middle". From the extant gaming boards this expression seems to correspond to both possibilities, *i.e.* the sacred line as the middle line of five on the one hand and of eleven on the other hand.

As far as the modes of playing on these boards are concerned, those points, grooves or holes at the ends of the lines in some of the boards seem to demonstrate that the gaming pieces were placed at the ends of the lines. This arrangement is represented on a terracotta model of a gaming table from Athens, dating about 600 BC, the lifetime of Alcaeus⁽¹⁹⁾. On its surface measuring 37x12cm are engraved nine parallel lines occupied by oval knobs at each end, probably representing the gaming stones. Although the number of nine instead of eleven lines differs from the stone boards, there can be little doubt that essentially the same game is meant, the reduced number of lines probably due to the miniature scale and the overall inaccurate design of the model. At both ends of the board two dice with their upper face showing 6 are preserved and perhaps traces of a third die in the center. It has been argued that a winning move is represented with all eighteen points occupied by one player's counters after the highest possible throw of three dice⁽²⁰⁾.

There are several reasons for not accepting this hypothesis. Apart from the fact that the important role of the "sacred line" is not taken into consideration, having seen the board in Copenhagen I wonder if there really are traces of a third die. Moreover the corresponding numbers of eighteen points on nine lines and on three cubic dice are merely coincidental, since the normal number of lines is five or eleven with ten or twenty two points respectively. Finally the underlying hypothetical rule that the players had to place a number of pieces on the points according to the result of the throw of dice, simply does not correspond to the fact that the pieces were moved from one line to the other. That this was the case is not only clearly indicated by the proverb "moving the piece from the sacred line" to which the literary sources refer. This way of playing is also represented on an Etruscan mirror depicting Achilles and a companion (probably Ajax) playing on a board with seven parallel lines kept on their knees⁽²¹⁾. The circles at the ends of the lines are generally held to be gaming stones⁽²²⁾. Again the reduced number of lines can be explained by the general tendency of small scale reproductions to a certain inaccuracy as to the details. Therefore a Praenestine mirror in the British Museum⁽²³⁾, dating to the 3rd century BC⁽²⁴⁾, should also be added to the representations of the game. Although the gaming table used by the couple shows twelve or thirteen lines, the overall design of the board differs considerably from boards for *XII scripta* to which the mirror has hitherto been attributed⁽²⁵⁾. Moreover the name of *XII scripta*, a game similar to alea with close affinities to backgammon⁽²⁶⁾, does probably not refer to twelve lines on the board, but to the use of two dice with twelve spots as the highest result, as already stated by Nonius (170,22)⁽²⁷⁾ and confirmed by a board with two dice on it depicted on a mosaic from Ostia (*CIL XIV 607*)⁽²⁸⁾.

We may therefore conclude that *five lines* was played on a board with normally two rows of five or eleven points, the opposite points connected by a line and often in the

shape of small troughs. Two players played either on five or eleven lines or on separate groups of five lines. The use of dice in *five lines* is attested by both the literary and archaeological sources. Judging from the find from Vari, one die was used when playing on five lines, whereas two dice belonged to the larger boards. Not only are two dice placed on the board from Athens in Copenhagen, but also on the Etruscan mirror two rectangular objects are depicted between the lines that can be taken as dice. The number of gaming stones obviously corresponded to the number of lines, each player having as many counters as lines on the board. Five stones for five lines are mentioned in the literary sources, while on the clay gaming table in Copenhagen and on Achilles' board all points are occupied by one counter. The pieces moved from line to line according to the spots on the dice. If the interpretation of the sources is correct, that the aim of the game was to place all or as many pieces as possible on the "sacred line(s)", then probably the pieces had to move around the board several times, for just one turn was surely not sufficient. Presumably a counter having reached the last line on one side of the board was shifted along the line to its other end, where it moved in the opposite direction along the other side back to the first line, where the same manoeuvre was repeated and so forth. It is this presumed circular movement around a board with two rows of points in the shape of holes that reminds one of mancala games, hence the somewhat detailed analysis of the evidence concerning five lines.

There are also other aspects pointing to a possible use for five lines of the two-row boards in Asia minor. One is the fact that by far the largest number of two-row boards have exactly 2x5 cells. As exceptions I noticed one board with 2x4 squares on the upper step of the western curve in the stadium and one of 2x6 squares next to the 50th column of the northern portico of the agora at Aphrodisias (15x32cm) as well as another next to the north-eastern anta of the temple of Apollo at Didyma (8,5x30cm). On the other hand several boards with precisely 2x11 squares exist, one on the stylobate of the temple of Apollo at Didyma, three boards at Ephesus in the so-called Curetes Street opposite the monument for Androclus⁽²⁹⁾, four boards dating to the Byzantine period have been found at Salamis (Cyprus)⁽³⁰⁾ and one board has been reported from Petra (Jordan)⁽³¹⁾. This striking correspondence between the number of cells of these boards and the number of points in *five lines* boards can hardly be explained as mere coincidence. The second reason is that neither Pritchett's catalogue of lined boards contains a single example from Asia minor, nor did I ever find one in the ruins of the cities mentioned above. There may be geographical and chronological explanations for this last observation, as the boards with lines from mainland Greece, Delos and Cyprus as well as their reproductions on the bronze mirrors all predate the Roman imperial era, whereas none of the boards with cells in Asia minor and Cyprus is earlier than the 2nd century AD. Since a board of type A1 is also known from the Roman theatre at Leptis Magna in Libya⁽³²⁾, the boards of the 2x5-class seem to represent a later type of *five lines* board, although we must keep in mind that the data-base at present is relatively sparse.

Perhaps the most important testimony in favour of *five lines* being played on the two-row boards discussed in the present article is a board (fig.3) engraved in the pavement of the State Agora at Izmir, erected in the 2nd century AD⁽³³⁾. As already

mentioned the board preserves the normal design of the A1 type with two rows of five squares. Next to one corner of the board a sign can be seen, possibly a cursive μ standing for 1000, while a circle with four spokes near the diagonally opposite corner seems not to have anything to do with the board. Most interesting is a leaf engraved close to the board with its base touching the middle square, thus indicating its importance. Similar leaves appear frequently in connection with late antique representations of games, races and athletic contests, but also on gravestones, obviously as a symbol for good luck or victory. As an illuminating example the gladiators holding a leaf in their raised right hand engraved in the pavement of a public street in Rome together with different types of gaming boards may be cited⁽³⁴⁾. It seems therefore not too far-fetched to suppose that the leaf indicates the “sacred squares” in the middle of both the two rows of squares, where the counters had to be placed to win the game. One of the Salaminian boards cited above points to the same direction: It consists of two parallel groups of eleven cells, the middle cell being larger and marked by an x35.

Mancala in Roman Times?

However, at some time somebody started to grind depressions into the board on the Roman Agora at Izmir. Compared to the three holes in the squares of the opposite row, the hole in the square next to the μ is relatively shallow. It seems therefore as if the original intention was to supply all the cells with holes, but work has been interrupted. Since *five lines*, like all other Greek or Roman board games hitherto known, was played moving single counters from one place to another, there was surely no need whatsoever for holes like this on a *five lines* board. Although many *five lines* boards of the group with lines have grooves or holes at the ends of the lines, these grooves or holes are relatively small and could have served only to hold single counters, judging from the representations of the game described above as well as from the average dimensions of ancient gaming pieces. The same is true for the small examples of 2x5-boards of types A3, B3, C3 and D3. On the other hand many of these boards including the board at Izmir have holes large enough to contain more counters, pebbles, seeds or whatever might have been used as gaming stones. As already stated above, such depressions make a game like mancala more comfortable to play.

Can we assume then that a board for *five lines* or another game was intended to be transformed into a mancala-board? And may all the boards with large cup-like holes (types A3, B3, C3 and D3) have served that purpose? Two arguments may support this suggestion. Not only the formal similarity in design, which would probably induce most Africans to play mancala on such boards, may be mentioned. Those boards at Didyma and Aphrodisias with 2x6 and 2x4 squares mentioned above should not be forgotten. With their equal number of cells these boards cannot have served for *five lines*, which required an odd number of lines or cells.

It seems therefore, judging from the evidence presently available, that the two-row boards presented here, have been used for both a variant of *five lines* played on squares instead of lines and a mancala-like game as well, not necessarily played on rows of holes but also on rows of squares. Concluding from the history of the cities in Asia minor,

where buildings and streets were still repaired in the 6th century, before the Arabian invasions during the 7th and 8th centuries accelerated their decline, the gameboards engraved in the pavements should be dated not earlier than the 2nd and hardly later than the 8th century AD. Thus they are not later in date than the earliest examples from Africa that have been taken as mancala boards. The boards excavated at Matara and Yeha in north-western Ethiopia have been dated between the 6th and 8th centuries AD⁽³⁶⁾.

We have come to touch the question of the origins of mancala. On this subject modern authors use to refer to Egypt, relying faithfully on Parker's observations from the beginning of the century quoted at length by Murray⁽³⁷⁾. Boards with two rows of holes have been met with at the pyramid of Menkura (middle of the 3rd millennium BC), at the temples of Kurna and Luxor (middle of the 2nd millennium BC) and at the entrance to the Ptolemaic temple at Karnak⁽³⁸⁾. It has been taken for granted that the boards date from the time of the erection of the buildings, an assumption not at all confirmed by modern egyptology⁽³⁹⁾. On the other hand a board with 3x14 small holes, associated by Flinders Petrie with *senet*, has not unreservedly been claimed for mancala⁽⁴⁰⁾. Moreover, if two-row mancala was really known in Ptolemaic Egypt, we should expect it to spread to other parts of the Hellenistic world more rapidly than in a period of several hundred years. And if it was not, the time gap of two thousand years between the boards at Kurna and the earliest examples a little further south in Ethiopia remains without satisfactory explanation. What is needed is a thorough re-examination of these boards regarding their chronology, a task that is beyond the scope of the present article. On the other hand the neolithic board found in Jordan at 'Ain Ghazal (6th mill. BC) with its diverging rows of holes⁽⁴¹⁾ as well as the boards from Beidha (7th mill. BC) with grooves running through the depressions and off the slab at one end are unlikely to be gameboards⁽⁴²⁾.

Leaving aside the doubtful old-Egyptian and neolithic evidence, both the archaeological finds from Asia minor and Ethiopia as well as the silence of the literary sources until the first mentioning of mancala in Arabian literature in the 10th century AD correspond surprisingly well in pointing to a possible birth of two-row mancala between the 6th and 8th centuries AD, or even a little earlier. Judging from the attested age of *five lines* and its not having survived classical antiquity, two-row mancala seems to have replaced the older game. The question therefore arises, whether in fact the context of the late antique and early Byzantine cultures, in particular some special attitude of early Christian (or even early Muslim) society towards games might have supported the dismissal of *five lines* and the distribution (if not the birth) of mancala in the eastern mediterranean? In the new light of the evidence and considerations presented here I would finally like to compare two well attested characteristics of both games. One peculiarity of mancala is the way of moving by spreading the pieces. In contrast to a dice-game like *five lines*, in mancala the reach of a player's turn is determined by the number of seeds in a given hole, the spreading of pieces being the easiest way to find out where the turn ends even without counting. The choice of the hole to be emptied enables the player to change deliberately the values, *i.e.* the possible reach of a turn starting from that point, of the following holes. Thus the function of the die as the oldest principle of

movement in board games has been integrated into the counters.

Peculiar to *five lines* was the function of the “sacred line” as the predetermined goal where the pieces had to move to. Thus, in the course of the game the sacred line or squares accumulated the counters. From Ethiopia, eastern Anatolia and elsewhere variants of mancala have been reported where holes serve a similar function. The important difference lying in the fact that these holes have to be captured first⁽⁴³⁾. They are not predetermined goals that could be called “sacred” as in *five lines*. Could both this difference as well as the particular way of moving in mancala by spreading pieces instead of rolling dice perhaps trace back to the demands of early Christian society, where a line or square in a game called “sacred” must have been taken as blasphemy and games of hazard were generally ill-reputed?

However this may be, the possibility that mancala was known to the Graeco-Roman world in late antiquity changes considerably the perspective towards the origin and history of the game. This would provide a context for the otherwise isolated evidence for the game being played in Greece, attested by Galt’s observation of people playing Mancala on the island of Hydra in 1810⁽⁴⁴⁾ and a rock-cut mancala-board in Athens reported by Townshend but without details as to its location, date or source⁽⁴⁵⁾. Moreover, if the late antique boards in Asia minor predate the Arabian invasions, the existence of mancala in Syria, the Levant and Anatolia might date back to Late-Roman times instead of being due to Islamic influence.

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Notes

1. See Schädler 1995.
2. Townshend 1979: 794.
3. Townshend 1977: 51.
4. See a.e. Pankhurst 1971 and 1982, Townshend 1979b; critical Eagle 1995: 51-52.
5. I know of only two exceptions. One is a complete set of *XII scriptalalea* found in a grave Qustul, Nubia (Schädler 1995: 80). Recently in a British grave at Stanway, Colchester, the remains of a wooden board of presumably 12x8 squares with thirteen white counters, one of which was smaller in size, and thirteen black counters, one of which was used upside down, still in place have been found (Crummy 1997a: 68-70, Crummy 1997b: 1-9). The game played on the

- board is probably not the Roman *Latrunculi* game, mostly because of the following reasons (compare Schädler 1994): 1) in the written sources about *Latrunculi* no extra piece is mentioned; 2) the ratio of *Latrunculi* boards is more or less square, the boards having normally nearly the same number of squares horizontally and vertically; 3) 12 pieces for each player seems too small a number in a game where an enemy piece must be captured by enclosing it from two sides; 4) in *Latrunculi* probably there was no initial position, if the position of the pieces on the Stanway board indeed reflects the beginning of the game.
6. See Murray 1952: 48-50; Townshend 1980: 218.
 7. For *sga* see Petrie 1927: 56-57, Murray 1952: 54-55, 82; for *latrunculi* see Schädler 1994.
 8. See Schädler 1995.
 9. Roueché in press.
 10. In the list below the type denotations of the British Museum Typology of gameboards (BMT), developed by Charlotte Roueché and Robert C. Bell, are given in brackets. As the BMT does not distinguish my types B3 and C3 from type D3, boards of these types may be included in the boards nos. 28-51. For the BMT see Roueché/Bell 1993: 249-251.
 11. Completely misleading Becq 1869: 397-405 and Murray 1952: 28; disappointing May 1991: 172-173.
 12. Bergk 1884: 177 no.82, Voigt 1971: 320 no.351.
 13. Austin 1940: 267-271.
 14. Pritchett 1968: 189-198.
 15. For the discussion see Pritchett 1968: 200-201.
 16. Kallipolitis 1963: 123-124 pl. 53-55.
 17. Blinkenberg 1898: 2-5 fig.1-8; Pritchett 1968: 189-191 nos.1-3.
 18. Lamer 1927: 1971.
 19. Lund/Rasmussen 1995: 67; Pritchett 1968: 197 pl.7,1; Breitenstein 1941: 19 no.171 pl.19.
 20. Blinkenberg 1898: 9.
 21. 3rd century BC: Mansuelli 1945: 58.
 22. Körte 1897: 144-146 pl.109.
 23. Körte 1897: 191-193 pl.146; Walters 1899: 377 no.3213.
 24. Compare the mirrors Mansuelli 1943: 517-518 pl.40 no.13 (2nd half of the 3rd cent. BC), Liepmann 1988: 43-45 no.17 (early 3rd cent. BC), and de Puma 1987: 38-39 no.21 (early 3rd cent. BC).
 25. Walters 1899: 377; Bell 1979: 30 fig.25; May 1991: 179 fig.174, who wrongly dates it to Roman times.
 26. Schädler 1995.
 27. See Schädler 1995: 84.
 28. Wrongly identified as a ground-plan (!) by Heisel 1993: 193.
 29. See Lamer 1927: 1999.
 30. Chavane 1975: 195 pl.53 and 72 no.575, 197 pl.53 no.576, pl.54 and 73 no.577, 204 fig.12 and pl.54 no.578. Chavane fell into the same trap described above identifying the boards as "jeux des douze lignes", i.e. *XII scriptalalea* boards. But the boards are clearly 2x11-squares boards.
 31. Murray 1940: 35 fig.10, incised in the rock together with two boards of 2x10 squares.
 32. Caputo 1987: 121 pl.94,3.
 33. Akurgal 1993: 122-123.
 34. Gatti 1904: 153-155 fig.2 and 4; for the other gaming boards see Schädler 1995: 89 fig.11a,

- 94s. fig.12a. For gaming boards with leaves see Schädler 1995: 87 fig.6a and 6h, 88 fig.7.
35. Chavane 1975: 197 pl.54 and 204 fig.12 no.578.
36. Pankhurst 1971: 154; Walker 1990: 37.
37. Parker 1909: 579-644; Murray 1952: 160-161.
38. See Walker 1990: 34-35.
39. I quote from a letter dating 14th of July 1996 by Edgar B. Pusch, Hildesheim, to the present writer: "Das Mankala-Spiel ist mir – trotz Murray – aus Alt-Ägypten nicht bekannt. Zwar gibt es Ritzungen auf Tempeldächern und in Höfen, welche an eine entsprechende Aufteilung erinnern, jedoch ist die Zeitstellung völlig offen und vermutlich sehr spät (Islam)." On the roof of the temple at Kurna there are also *siga* or *dara* boards, certainly of rather late date.
40. Petrie 1927: 55 no.175 pl.74; Walker 1990: 35. The unique small scale clay models of gaming tables from Perachora in Greece showing three rows of at least six cup-shaped depressions and dating to the 7th and 6th centuries BC (Dunbabin 1962: 131-132 pl.39 and 132 nos. 1325-1328) have never been regarded as mancala-boards and are likely to be associated with contemporary *senet* boards showing three rows of circles (see a.e. Petrie 1927: 53-55 pl.48 no.3, no.4 = Pusch 1979: 374 pl.94 no.80, 376 pl.95 no.81; Kendall 1991: 151 fig.145 wrongly identified as "game of twenty squares"), certainly not with *XII scriptalalea* as Dunbabin 1962: 132 took it.
41. Rollefson 1992: 1-4 fig.1.
42. Kirkbride 1966: 34 fig.8.
43. Pankhurst 1982: 35; Townshend 1979b: 119-122.
44. Galt 1813: 242; Murray 1952: 158.
45. Townshend 1977: 47.

Inca Dice and Board Games / Thierry Depaulis

Very little is known of the games played in Precolumbian Andean cultures. Significantly none is mentioned in H. Murray's *History of board games other than chess* (Murray 1952) or in R.C. Bell's *Board and table-games from many civilizations* (Bell 1979) where we find a wide scope of games, ancient and modern, from all over the world. The Aztecs are known to have had ball and dice games, notably the *patolli*, a race game. Did the Incas really play? Can we use for their games the same sources as we have for other extinct civilisations? It is the object of this paper to present a sketch of the games that were played by the Incas and some other Andean peoples.

It is through folk funerary rites that Americanists like Nordenskiöld, Karsten, or Rivet have encountered games that were still played by the Indians in some remote villages of Peru or Ecuador. There they observed the use of a very typical pyramidal die and the practice of mock gambling for distributing the defunct's possessions. They realised that these games were probably also played in Inca times and they tried to search for more details. Although they have found some interested sources, their enquiries both ethnological and textual are not satisfying.

The first scholar who tried to survey the games of the Incas was Emilia Romero, who published an article in 1941 then a booklet printed in Mexico in 1943 (Romero 1943). She mainly used the so-called Spanish 'chroniclers' to present what she had collected. But she could not explain what the games were. A games expert's eye was necessary. By comparison with other dice and board games from other civilisations, it is nevertheless possible to trace what the games the Incas played looked like. Archaeological finds can be taken into consideration too, although one of them is much discussed and is more probably an abacus. Ethnological surveys can also help understanding how a game was played.

I. Spanish Chroniclers and Others

The Andean civilisations had no writing. So no written record can give us the description of the games that were played before Columbus in South America. And, contrary to Middle America, pictures are missing here too: the Inca culture did not favour representations of its daily life. Therefore we have to rely first on the records the Spanish made of what they had noted. We must keep in mind that their accounts can only deal with the Incas, late-comers who ruled over what is now Peru and Ecuador, and parts of Bolivia and Chile during the 15th century and the beginning of the 16th. They had been preceded by other civilisations like the kingdom of Chimú (10th to 14th century), and previously by the civilisations of Wari and Tiahuanaco (7th to 9th century), Moche and Nasca (100 BC - 600 AD), to name but a few. We know almost nothing of the games these peoples played, except for the Mochicas who have left us many representations of their everyday life on their delicately painted vases.

At the beginning of this century very few Spanish texts related to ancient Peru were available in print. The conquistadors were not interested in Inca culture, and their

accounts deal only with what they did. The only source which gave a comprehensive description of the Incas' daily life was Father Bernabé Cobo's *Historia del Nuevo Mundo*, written in 1653 but printed only in 1890-3, 'the best and most complete description of Inca culture in existence' according to J.H. Rowe. Here we find a chapter (Bk. XIV, ch. 17) entitled 'De los juegos que tenían para entretenerse' ('Of the games they have for entertaining themselves'). Martín de Murúa's *Historia del origen y genealogía real de los reyes incas del Pirú*, our second most important source, was published only in 1922-5 in a poor edition printed at Lima (even the author's name was wrongly given as Morúa!). Waman Puma's (or Guamán Poma's...) extraordinary illustrated manuscript was still lying in the dust of the Danish Royal Library.

Things changed just before World War II. In 1936, Felipe Waman Puma de Ayala's *Nueva crónica y buen gobierno* (written about 1615) was printed at Paris in a facsimile edition, although without notes or index, and, in 1946, C. Bayle gave a correct edition of Murúa's *Historia* from the original manuscript held in the Jesuit Archives. Even Father Cobo's works were published in a better edition in 1956. Soon another, longer version of Martín de Murúa's *Historia* was discovered in the Wellington Papers and published in 1962-4. Unfortunately games are no longer present. At last an annotated (and indexed) edition of Waman Puma's *Nueva crónica* was published at Mexico-City in 1980.

These sources are not very informative. The celebrated half-Inca half-Spanish writer Garcilaso de La Vega has a brief allusion to gaming among the Incas in his *Comentarios reales de las Indias* (1609). Of the already mentioned authors, Waman Puma offers two puzzling lists and an interesting drawing (which we shall examine further). Only Cobo and Murúa (in his shorter earlier version) give broad descriptions of actual games, though their accounts do not tally.

To these texts Emilia Romero had the excellent idea to add the numerous dictionaries of the local languages, Quechua and Aymara, which were compiled in the late 16th and early 17th centuries. Spanish missionaries quickly understood that, if they wanted to convert the Indians, they had to speak their languages. Fortunately the Incas had already imposed one language known as Quechua, that the Spaniards named 'la lengua general del Inga'. (Quechua is still living and is today spoken by millions of speakers in Peru and Bolivia.) They rapidly drew up grammars and dictionaries – as early as the mid-16th century, whereas the European languages were not so well treated.

All these dictionaries offer entries to games with short descriptions in Castilian. The earliest of these is Domingo Santo Tomás's Quechua dictionary, entitled *Lexicon o vocabulario de la lengua general del Perú* (Valladolid, 1560). Then came *Arte y vocabulario en la lengua general de Peru llamada quichua*, printed in Lima in 1586, and assigned to Juan Martínez. The most important Quechua dictionary is Diego González Holguín's *Vocabulario de la lengua general de todo el Perú, llamado lengua qquichua o del Inca* (Lima, 1608). It was followed by Diego de Torres Rubio's *Arte de la lengua quichua* (Lima, 1619). Although Quechua was the most widespread language of the former Inca empire, Aymara, a close relative spoken farther south, was not forgotten. The Italian Father Ludovico Bertonio published his *Vocabulario de la lengua aymara* at Lima in 1612. It is

by far the most informative source for some of the games we are looking for.

All these sources offer words only. And their descriptions, if any, are very confusing. Strangely we get the impression that the Incas had a wide variety of dice and board games: about a dozen of names can be listed. This may be deceptive since, contrary to a general belief, Quechua was in fact – and still is – split into several dialects of which ‘la lengua general del Inga’ was the dominant one. Obviously there are synonyms owed to the different dialects the Spaniards came in contact with. Enough is said, however, to broadly categorise the games I have collected: clearly there are pure ‘dice’ games, race games and hunt/war games. I will describe them in this order, giving the different names and different spellings that are to be found. (Unfortunately there is no standardised spelling for Quechua, and every author from the 16th century on has his own spelling!) As far as the Incas are concerned, no iconography can help us (save in one case), and the archaeological finds are so rare that they can hardly be used – but I will further discuss some of them. Ethnology, which was so helpful in understanding the Aztec games, is here very disappointing. However, as we shall see, comparisons with neighbouring cultures, like that of the Mapuches, or Araucanians, offer some clues to understanding how some of the Inca games were played.

II. Inventory of the Inca Games

A. The Inca Die

pichqa (*pichka*, *pisca*, *pichca*, *pichiqa*)

wayru (*huairu*, *guayro*)

The Incas had a very special six-sided pyramidal die which they used for pure gambling as well as for race games. It is the only game to be mentioned and described by all chroniclers and in all dictionaries, though under two different names: *pichqa* (Quechua ‘five’) and *wayru*. Inca dice have also been found in archaeological diggings, and ethnologists have collected modern examples. (Fig. 1 and 2)

After López de Gómara (1552), Father Cobo (Cobo 1653) says that ‘el llamado *Pichca* era como de dados: jugábanlo con un solo dado de 5 puntos’. Murúa (Murúa 1590, II, 13) describes it as a teetotum (‘como una perinola’), adding further ‘the Indians play with one die, called *pichca*, with 5 points on one side, 1 on the other, 2 on the other and 3 on the other, plus side 4; the crossed top is 5, and the bottom of the die is 20’ (III, 25). For González Holguín (1608), *pichkana* is a ‘six-sided piece of wood’ (‘*Ppichca*. Un juego como de dados. — *Ppichcana*. Un palo seizavado con que juegan.’). This is exactly what the ethnologists (Rivet 1925; Karsten 1930; Hartmann & Oberem 1968; Hocquenghem 1979) and the archaeologists (e.g. at Machu Picchu: see Bingham 1915 b, p. 176; 1930, fig. 172, b-h, quoted in Rowe 1946) have found.

The *pichqa* die is played either as a simple dicing game, where the winner must make the maximum score, or as part of a race game (Cobo 1653, XII, 15; Murúa 1590, II, 13).

Another name for the Inca die is *wayru*, but no satisfactory explanation has been given for this differentiation. González Holguín (1608) presents both names as

synonyms: ‘Huayru, Ppichca. Juego de los naturales.’ adding: ‘Huayru. El mayor punto, o el mejor que gana’. Santo Tomás (1560) has *guayroni* meaning ‘jugar juego de fortuna’ or ‘jugar juegos de dados’. The *Vocabulario* of 1586 defines *huayru* as ‘un tanto, o azar al juego de los Yndios’ and *pichca*, *pichcana* as ‘un cierto genero de juego de Indios’. In Aymara too the words are roughly the same: Bertonio (Bertonio 1612) offers *huayrusitha* and *piscasitha* for two very similar board games (Romero 1943: 19).

Wayru/pichqa was obviously played in relationship with funerals. Already in the early 17th century Father Arriaga (Arriaga 1621: VI, 60) had noted that ‘*pisca*’ was played to keep watch over the body of a dead (with small scoring sticks, *palillos con diversas rayas*). Juan de Velasco (Velasco 1789: II, 152) states that the five-sided *huayru* (‘gran dado de hueso con cinco puntos’) was preferably played in November. This ritual use of the *wayru* die was noted by many ethnologists (Rivet 1925; Nordenskiöld 1910; Karsten 1930; Roca Wallparimachi 1955; Caveró 1955; Hartmann & Oberem 1968). Rivet thought that *pichqa* was kept alive in Peru whereas *wayru* prevailed in Ecuador. The Inca die is not necessarily very old: the Mochicas, whose games are represented on painted vases, seem to have nothing like this. Instead, they used two-colour beans. It is interesting to note that *wayru* was originally the name of a red-and-black bean (*Erythrina americana*).

Amazingly the dictionaries offer alternative names for the Inca die. According to Bertonio 1612, *chunka* (Quechua ‘ten’) is its Aymara counterpart: ‘Chunca: Tagua de madera para jugar.’ The same dictionary has *ccanccallu* (*kankallu*, *kancalla*) for the wooden die; in modern Aymara *kancalla* means ‘knucklebone’ (De Lucca 1983: ‘taba, astrágalo, hueso del pie’). Paul Rivet has pointed out that the die is also called *tawa*, *tahua*, *tagua* (Quechua ‘four’) in the Cuzco dialect; he saw in this word the origin of the Spanish word *taba* (Rivet 1925). But this is much discussed, since for others the term derives from the Arabic *tâb*, also a game term (see J. Corominas and J.A. Pascual, *Diccionario crítico etimológico castellano e hispánico*, Vol. V, Madrid, 1983).

B. Board Games

From literary evidence, we know the Incas had several board games, most of them of the race game type. Let us first examine the race games.

B.1. Race Games

Our ‘chroniclers’ offer about six different names for what clearly appear to be race games, *i.e.* board games played with a die. Some of them must have been synonyms. If *chunkana* (from Quechua *chunka* ‘ten’) is often mentioned, *aukay*, *takanako*, *halankola* / *hunkuña* appear more rarely. *Pichqa* and *wayru* also seem to have designated actual board games. All these games make use of one ‘Inca die’.

aukay (**awkai**, **aucai**) (Murúa 1590) = **takanako**?
(Romero 1943: 23)

Murúa 1590 (II, 13) presents this game: ‘llaman también *aucai*, que en una tabla con frijoles de diversos colores y dificultoso en jugar, también echando los puntos con la

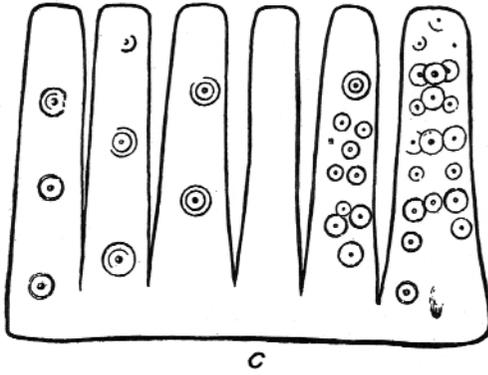
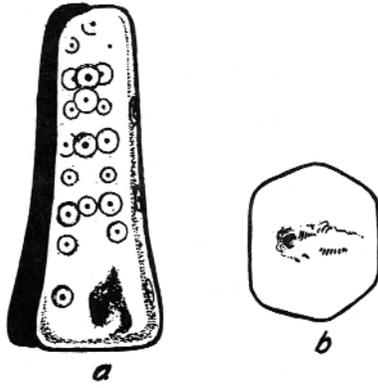


Fig. 1: Pichqa die found at Macchu Pichu by H. Bingham

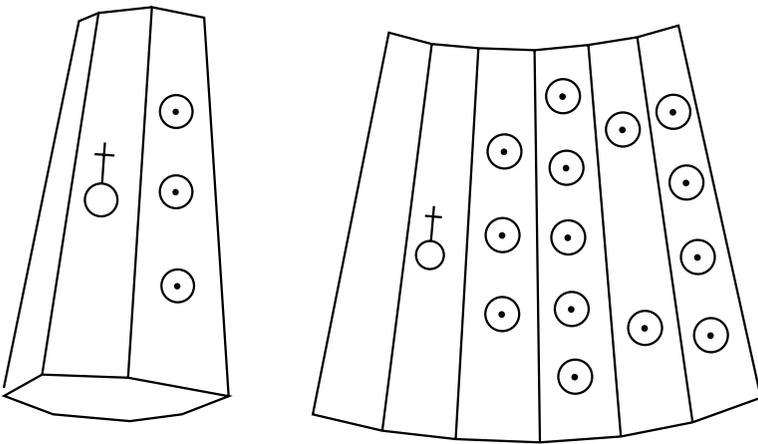


Fig. 2: Drawing of a modern wayru die used at Sigsig (Ecuador) (from Hartmann & Oberem 1968)

pisca como queda ya dicho, el cual es un juego muy gustoso' (*aucai* is a board with multicoloured beans; it is difficult to play, points are counted with the *pisca* die...; it is a very nice game'). In classical Quechua *auccay* means 'war' (González Holguín 1608). Although Murúa is the only author who mentions this game, his account is very close to that given by Cobo (Cobo 1653) for *takanako*. In Aymara, according to Bertonio 1612 (s.v. 'Juego'), the word *aucattana* designates the *halankola* board.

chungani, chuncani (Santo Tomás 1560; Torres Rubio 1619), **chuncana** (*Vocabulario* 1586), **chuncaycuna, ccullu chuncana** (González Holguín 1608), **chuncara** (Cobo 1653)

(Romero 1943: 22)

A race game played on five squares with multicoloured beans and the *pichqa* die. Scoring is by tens, from 10 to 50. Although a complete description is lacking, it is the best documented race game. In Santo Tomás 1560 we find *chungani* meaning 'juego de fortuna' and 'jugar a... los naypes' (to play at cards). The *Vocabulario* of 1586 gives 'Chuncana. qualquier juego de fortuna', and 'Cullu chuncana. ajedrez, o tablas, &c.' (*i.e.* both chess and backgammon – from *ccullu* = 'wood'). González Holguín (1608) repeats all this (s.v. *chuncaycuna* and *ccullu chuncana*) and adds *chuncana cuna* 'gaming instrument' (Lara 1978: *chunkanakuna* 'instrumentos u objetos que se emplean en un juego').

It is once more Bernabé Cobo (Cobo 1653) who gives the most detailed account of this game: '*chuncara* [wrong spelling for *chuncana*?] was another game with five little holes dug in a flat stone or table: they played with multicoloured beans; when the die was cast, and according to lots, they move them from one square to another until the end; the first square was worth 10 and the others went increasing by tens up to the fifth which was worth 50.' ('*Chuncara* era otro juego de cinco hoyos pequeños cavados en alguna piedra llana o en tabla: jugábanlo con frioles de varios colores, echando el dado, y como caía la suerte, los mudaban por sus casas hasta llegar al término: la primera casa valía 10, y las otras iban creciendo un denario hasta la quinta, que valía 50.') Note that Murúa is silent about this game.

Chunka seemed to have had a special meaning for the gamesters. According to Garcilaso de La Vega (1609: II, 62), 'llaman chunca a cualquier juego... (...) Tomaron el número diez por el juego...', they held the numeral 'ten' for gaming. It was also one of the names of the die in Aymara (Bertonio 1612).

halankola, jalankola or hunkuña, juncuña

halancola, halancolatha, halancolasitha (verb) = **huncusitha** (verb), **huncosiña** (Bertonio 1612), **hilancula** (Waman Puma 1615)

(Romero 1943: 22)

According to Bertonio 1612 *halankola* was a race game somewhat resembling backgammon, played with the *pichqa* die on a board called *aucattana* ('se parece algo al de las tablas, y van adelantando las casas con estas palabras: *Halancola*; y a su traza llaman, *aucattana*, y al dado de madera que usan, *pisca*; y a los agujeros o hoitos del

juego les dicen *Halancola*.’, see under ‘Juego’). There are other entries for this game in Bertonio’s dictionary:

‘Halancola. Los agujeros, o hoytos, de un juego assi llamado que algo se parece al de las tablas.’ (*s.v.* Halancola) [Halancola = the little holes (*i.e.* squares) of a game so-called which resembles backgammon]

‘Huncusitha. Jugar como a la tagua con un dado grande de madera, adelantando unas piedrecitas en sus casas u hoyos; lo mismo que el *halancolatha*’ (*s.v.* Huncusitha) [Huncusitha (verb): To play as with knucklebones with a large wooden die, moving some small stones in the squares or holes]

At the same time Felipe Waman Puma de Ayala offers a list of games that were played by the ‘noble lords’ in April (Waman Puma 1615: 243). Among these was *hilancula* (which here too seems to need a *pichqa* die). There is another mention further (Waman Puma 1615: 780), in another list of games with cards, dice, chess, then ‘hilancula, chalco chima’, etc. Again in association with *pichqa*, *hilancula* is quoted a third time (Waman Puma 1615: 844: ‘con la hilancula, pichica’).

pasa (from Quechua *pachak* ‘100’)

(Juan & Ulloa 1748: VI, 6, no. 941 = II, 549; see also Culin 1898: 805)

A race game observed *c.* 1735-44 among the Aymara Indians by Jorge Juan and Antonio de Ulloa, played on a wooden board (or a counter?) in the shape of a double-headed spread eagle of wood with 10 holes on each side, with pegs and a seven-face die, one of the faces being called ‘*guayro*’ (= *wayru*). The game was won by the first player who reached 100. According to Juan & Ulloa, it was ‘el único que los Indios del Perú suelen jugar’ (Index). Maybe a form of *wayrusitha*.

pisca (Murúa 1590), **piscaisitha** (Bertonio 1612)

wayrusitha (Bertonio 1612)

(Romero 1943: 19)

Obviously *pichqa* and *wayru* also meant a race game. Murúa (1590) mentions ‘another game’ played with the *pisca* die and with ‘its table and its holes or marks, where they move their men’ (‘que es muy ordinario questos Indios llaman la *pisca* con su tabla y agujeros o señal, donde iban pasando los tantos.’). Bertonio 1612 gives two verbs *huayrusitha* and *piscaisitha* with the meaning ‘to play with little stones, by moving them in their holes [squares] according to the score of a kind of large die [*huayru* or *pisca*]; in one of these games, they move the stones all around or in circle; in the other [game], they go winding about like a river.’

(‘*Huayrusitha*, *Piscaisitha*. jugar con unas piedrecillas adelantandolas en sus hoytos, segun los puntos de una manera de dado grande; en unos destos juegos van adelantando las piedras alderredor o en círculo; en otros dando buelta como río, &c.’)

Such a game may well fit what Roswith Hartmann and Udo Oberem watched in 1965 at Sigsig (Ecuador) under the name of *huairu*. It is a race game played with the *pichqalwayru* die, on a board with 29 holes arranged in a somewhat triangular circuit divided by a central line (see Fig. 3). An unstated number of men (maize ears, beans,

etc.) are used. The tracks of the two players are not identical: the shorter track (1) has 10 cells, the longer track (2) has 20 cells. The first player who gets the crossed side of the *wayru* die starts. The first who reaches the centre wins. Unfortunately Hartmann and Oberem have forgotten to complete their information so we have no other detail nor do we know what happens when two opponents meet.

We will find a somewhat similar arrangement of the holes in a race game played by the Mapuches (Araucanians), called *kechukawe* (see further). As we shall see, the Mapuche game, which uses the same pyramidal die, may well be a close relative of the Inca game.

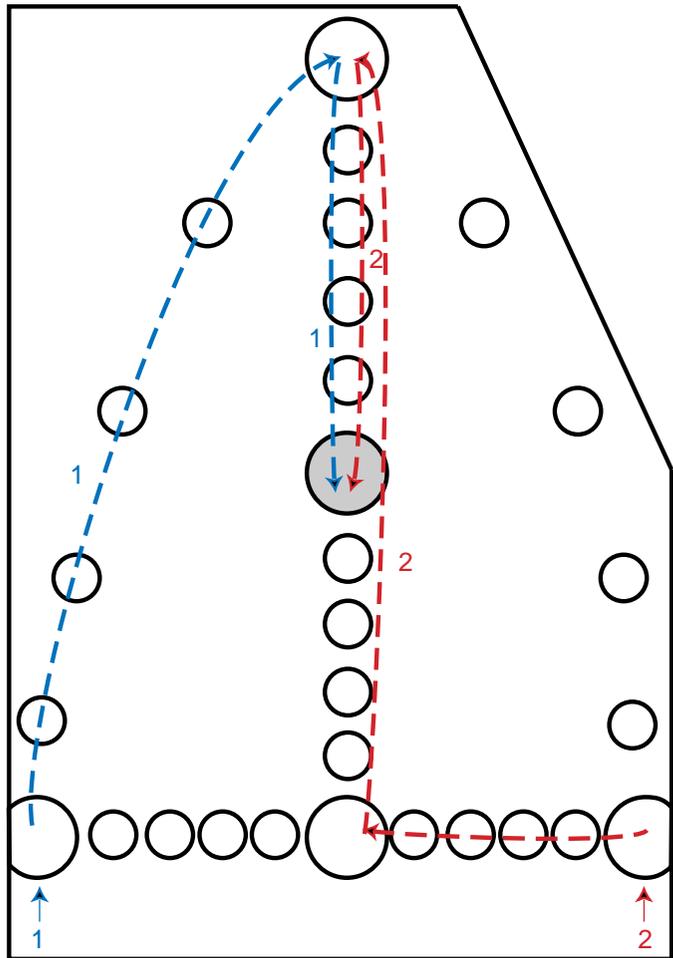


Fig. 3: 'Huairu' board as drawn by Hartmann & Oberem (1968). The two players have different tracks.

takanako (Cobo 1653) = **aukay**?

(Romero 1943: 22)

A race game 'like backgammon', with multicoloured beans and the *pichqa* die.

Cobo (1653) writes: 'another kind of game was called *tacanaco*; it was played with the same die and with multicoloured beans, like backgammon (*como el juego de tablas*)'. Cobo is the only one who mentions this game but his description looks very much like that of *aukay* mentioned by Murúa. Romero 1943 identified *takanako* with *balancolatha*.

B.2. Strategy Games

Besides race games, some sources account for the existence of a 'strategy' game (without dice) under the names of *taptana* or *komina*. These 'Inca chess' are in fact a 'hunt game', played on an 'alquerque' board with a triangle added to one side.

komina, cumi**comina** (Santo Tomás 1560), **cumisiña** (Bertonio 1612)

(Romero 1943: 24)

A hunt game. *Comina* appears in Santo Tomás's dictionary of 1560 as a synonym of *taptana*: '*Taptana, o comina*: axedrez, tablas, o alquerque' ('chess, backgammon or alquerque!') and '*Comina, o taptana*: alquerque'. Bertonio 1612 has an entry under *kumisiña* or *kumisitha*: '*Cumisitha*. Jugar a un juego como al que llamamos oca, aunque en muchas cosas diffiere. — *Cumisiña*. Juego assi.' ('*Cumisitha*. To play a game like the one we call the game of the goose, although it is different in many things'); he also gives *kumisiña* as an equivalent of Spanish *alquerque* and *ajedrez*: '*Alquerque*. *Cumisiña*, y lo mismo significa Axedrez, porque los Indios no distinguen los juegos, si no miran al modo.' ('and the same means chess, because the Indians make no distinction between games if they do not watch how they are played'). In a modern Quechua dictionary (De Lucca 1983) *cumi* is defined as 'juego que en castellano se llama el león y las ovejas', which is indeed a hunt game equivalent to the English fox and geese. *El león y las ovejas* (literally 'the lion and the sheep') is a popular game in South America where *león* stands for puma (there are no native lions in America!).

puma (González Holguín 1608, Cobo 1653, Torres Rubio 1700)

(Romero 1943: 28)

There is also a board game called *puma*.

Unfortunately the rare accounts we have are quite uninformative. González Holguín (1608) writes: '*Puma*. Un juego de Indios. — *Pumani*. Jugar a este juego.', and Torres Rubio (1700) has: '*Puma*. Cierta juego de Indios'. Cobo (1653) mentions it, together with *apaytalla*, at the end of the *ingeniosos* games; for him, *apaytalla* and *puma* are 'less prestigious' (*menos principales*)...

We know *puma* also means the Andean 'lion', and it is tempting to connect the game of *puma* with *el león y las ovejas*, in other words with *komina*. We will see that the Mapuches call their game *komikan*, 'el leoncito'.

CONQUISTA PRESO ATAGVALPAIGA



Fig. 4: The Inca emperor
Atahualpa playing
taptana in jail with his
guard (from Waman
Puma 1615).

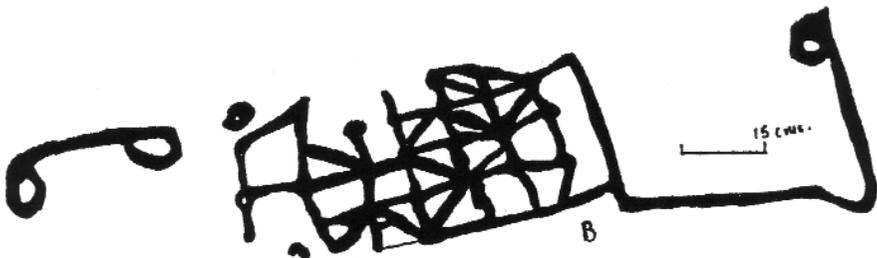
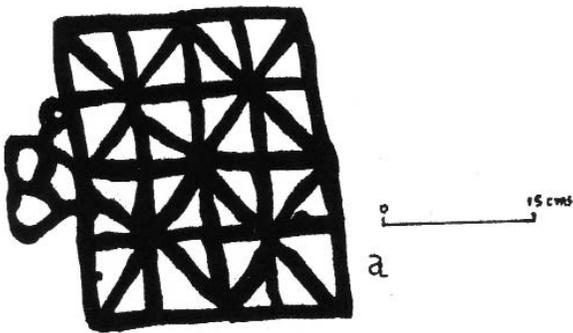
taptana (Santo Tomás 1560; González Holguín 1608; Waman Puma 1615), **tapta** (*Vocabulario* 1586), probably also **atapta** (Murúa 1613: II, 89°, p. 323)

The game of *taptana* must be a war or a hunt game, if we trust the equivalents offered by the Spanish lexicographers. In modern Quechua *taptana* means ‘chess’.

Santo Tomás 1560, the *Vocabulario* of 1586 and González Holguín 1608 all have an entry for a game called *taptana* that they render as ‘alquerque’ or ‘ajedrez’. The *Vocabulario* of 1586 adds that *taptana* means ‘chess-board’, using *tapta* for the game itself. More interestingly Santo Tomás 1560 gives to *taptana* the synonym *comina*. In his ‘long’ and later version, Martín de Murúa mentions only one game that he calls *atapta* ‘que es como a las tablas reales’ (‘like backgammon’); it was played by the Inca Tupac Amaru.

Olaf Holm (Holm 1958) has rightly remarked that Waman Puma alludes to the game played by the last Inca emperor Atahualpa in the Cajamarca jail, before his death in 1533. According to the *Nueva crónica*, Atahualpa ‘played chess [ajedrez] that they [the Indians] called *taptana*’. A drawing shows the scene (Waman Puma 1615: 388 [390]), with Atahualpa in chains in front of his guard. What is at first sight an alquerque board lies between them (Fig. 4).

We now know that *taptana* is also called *komina* (and perhaps *puma* too...), and that it is a hunt game known today as *el león y las ovejas*. As we shall see, the same game is played by the Mapuches under the name of *komikan*, probably a cognate to Quechua



Figs. 5a-b: **Taptana** boards scratched on Pre-Hispanic walls at Chinchero (near Cuzco) (from Alcina Franch 1980).

Fig. 6 (left): Schematic drawing of a **taptana** board (from Alcina Franch 1980).

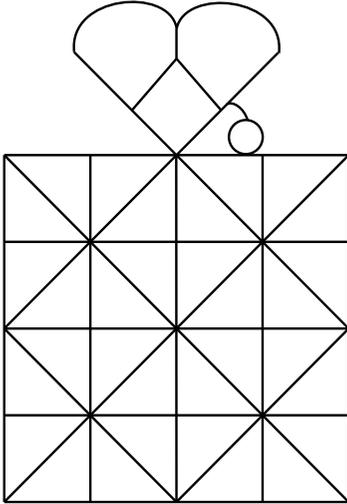
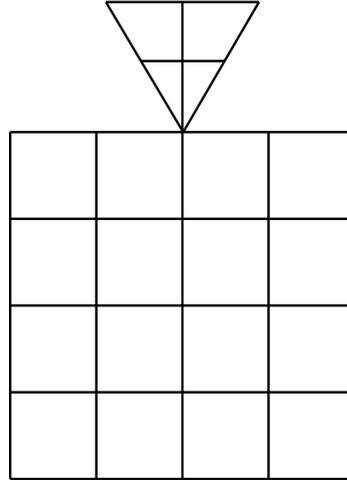


Fig. 7 (right): Board game for **solitario**, Peru, late 19th century (after Culin 1898).



komina and Aymara *kumisiña*. The Mapuche *komikan* has the same latticed board as alquerque with a triangle added on one side. It is possible to imagine that it was the game intended by Waman Puma in his drawing.

Archaeologists have been fortunate enough to find the same design scratched on the Pre-Hispanic walls of the square of the church at Chinchero (near Cuzco). These graffiti were discovered and analysed by J. Alcina Franch (Alcina Franch 1980). One of them (no. 32 – Fig. 5a & Fig. 6) is without doubt a *taptana/komina* board; another one (no. 37 – Fig. 5b) looks like a ‘spoiled’ board. Although the author dates these graffiti in the 17th century, he demonstrates that they are related to Precolumbian traditions. Stewart Culin too reports a Peruvian game called *solitario* (Culin 1898: 876, fig. 183; also Murray 1952: 100, no. 5.2.1) which shows the same triangular appendix (Fig. 7).

Is *taptana/komina* an indigenous game? The board illustrated by Waman Puma de Ayala is nothing but an ordinary Spanish alquerque board, either used for a war game (*alquerque de doze*) or for hunt games (*cercar la liebre*, *castro*). Moreover all our sources are later than Columbus. Other such war games are known in Europe and in Asia, as well as in Mexico and in the South-West culture of the United-States (Keres, Zuñi, Pima, Papago, and Hopi Indians: see Culin 1907: 794-5; Murray 1952: 67). However, triangular appendices only appear in Southern Asia. Hunt games on the same board also exist, but added triangles are known only in China and Japan (Murray 1952: 100-101). These triangles, always in pairs, one on each opposite side, are definitely different: the

South-American game cannot derive from these Asiatic forms. Since they cannot have borrowed their appendix from Europe, it is reasonable to think this game is Precolumbian.

C. Apaytalla: The Game with Beans

In his celebrated *Comentarios reales* Garcilaso de La Vega (La Vega 1609) says that besides edible beans, the Incas knew other kinds of beans called *chuy*, 'que no son de comer' ('not edible'), round, of different colours and of small size ('del tamaño de los garbanzos', *i.e.* like chickpeas), to which they gave ridiculous or 'well suited' names and which they used for many children and adult games. Garcilaso remembered that he himself used to play with these beans (Romero 1943: 14).

apaytalla (Murúa 1590; Cobo 1653)
(Romero 1943: 23)

Murúa 1590 mentions a game called *apaitalla*, using beans 'of different kinds and appellations', cast on the ground from the top (*con la cabacera alta*), with lines and arches like furrows (*rayas y arcos a manera de surcos*); the winner was the player who 'went ahead and was the noisiest [!]'. ... A legend attributed the invention of the game to



Fig. 8: Cutaway drawing of a Mochica vase (first centuries AD) showing gods (or heroes) playing with beans.

Queen Anahuarque.

(‘es un género de fríjoles redondos de diversos géneros y nombres, e hizo en el suelo con la cabecera alta de donde sueltan los tales fríjoles, y el que de ellos pasa adelante y hace ruido más, gana a los otros, está con sus rayas y arcos a manera de surcos’)

For Cobo (1653), it was just a ‘less prestigious game’. The lexicographers (Santo Tomás, González Holguín, Bertonio) have no entry for that word or for any similar game. González Holguín (1608) only has ‘Chuui o chuy. Unos frisoles muy pintados como garvanos y otros menores larguillos.’ (‘multicoloured beans, like chickpeas and other smaller beans’).

It is very tempting to identify this Inca game of *apaytalla* with the game shown on many Mochica potteries (c. 100 BC-c. 600 AD). On these gaming scenes players are shown handling multicoloured beans and waving sticks which were more probably used for keeping the score than as dice, since each player has his own set (Fig. 8). The undulating ground seems to be made of sand; beans are put in hollows as well as on ridges. The Mapuches have such a game, called *lligues* (*llüqn*) or *awarkuden* (see further). Although these Mochica scenes have been interpreted as ‘writing workshops’ by R. Larco Hoyle (who tried to demonstrate that writing was known in Precolumbian South-America), they are now understood as gaming scenes (Vivante 1942; Romero 1943: fig. 1; lastly Hocquenghem 1979).

This implies that prior to the using of the rather sophisticated Inca die, the peoples who lived in the Andean area used beans as dice, like the Aztecs.

D. Unidentified Games

Waman Puma 1615 offers two lists of games played by the ‘noble lords’. Some of these names are unknown elsewhere and cannot be explained. I have nevertheless decided to publish them here.

p. 243 [245]: ‘todo el mes [abril] juegan los señores principales al juego de riui, choca, al uayro de ynaca, pichica de hilancula y de challo chima’ (1987 edition).

p. 766 [780]: ‘y se enseñan a jugar con naypes y dados como españoles, al axedres, hilancula, chalco chima, uayro, ynaca, riui, pampayruna, yspital, uayro ynaca [sic]’ (1987 ed.).

riuichoca (riwichuqa) (Waman Puma 1615: 243 [245])

A throwing game, today known as *riwi* or *lliwi* (Lara 1978) and, in Spanish, as *boleadoras*. It is an old hunting weapon made of three stone or lead balls (*bolos*), tied with a cord. The balls are thrown as far as possible.

ynaca (iñaka?) (Waman Puma 1615: 243 [245]; 766 [780])

The meaning is unclear. In Quechua *iñaca* (or *iñaka*) means ‘mantilla’ (González Holguín 1608); but in Aymara it means ‘noble woman from the Inca caste’ (Bertonio 1612). It is possible to understand ‘al uayro de ynaca’ (= *wayru* [de] *iñaca*) as ‘to the *wayru* game of the noble Inca women’... In the second list, Waman Puma repeats ‘uayro ynaca’ twice.

cha[l]lco chima, challkuchima (Waman Puma 1615: 243 [245]; 766 [780])

'Challcochima' is the name of an Inca war lord (Challcochima, Chalicuchima, Challkuchimaq, Challkuchima...), supporter of Atahualpa, victorious of Huascar, and finally killed by the Spaniards. In Aymara *kallko* (now extinct) meant 'five' (De Lucca 1983).

pampayruna (Waman Puma 1615: 766 [780])

There is only one meaning for *pampayruna*: 'prostitute'! González Holguín 1608 has: 'Pampayruna. Muger pública comun a todos'; and Torres Rubio 1619: 'Panpayruna. Ramera'. In modern Quechua the meaning has not changed: 'Panparuna. Prostituta' (Lara 1978)! Is that also the name of a game?

yspital (Waman Puma 1615: 766 [780])

Another puzzling word whose exact meaning is unknown (hospital?).

E. Game Board or Abacus?

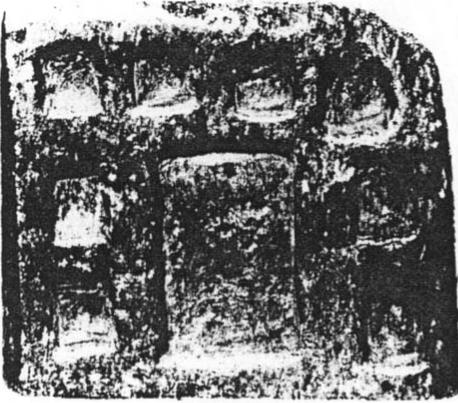
Another artifact has sometimes been presented as 'Inca chess': this puzzling object, which sometimes looks very much like a miniature castle, has alternately been interpreted as an abacus, a model fortress, or a game board (Fig. 9). It is Nordenskiöld who made the hypothesis it was a board game. His demonstration was attractive: the Chaco Indians have a very simple race game called *tsuka*, *chukanta*, or *shuke* (from Quechua *chunka*, 'ten') which they play with throwing sticks as dice. (Actually this was reported in the early 20th century.) Nordenskiöld inferred from this that this game was borrowed from the Incas. Cobo's reference to *chunkara* appeared as a good justification for Nordenskiöld's theory. Moreover when transposed on the Inca artifact the Chacoan rules work!

However, Cobo's description does not fit the Chacoan game at all, and it is hard to believe that such a complicated multi-level object was used for a board game. More recent investigations, undertaken by Carlos Radicati di Primeglio (Radicati di Primeglio 1979) have shown that it is in fact a *yupana*, the Inca abacus. Other objects, which have been sometimes presented as board games, are clear relatives of this abacus (e.g. Holm 1958; Figge 1987). Although some scholars have tried to support Nordenskiöld's theory (Smith 1977; Pratesi 1994), there are good reasons to accept Radicati di Primeglio's well-documented demonstration.

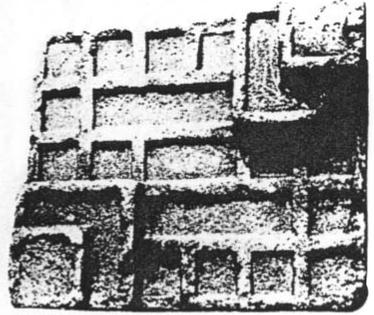
(facing page) Fig. 9:

Abacus or game
board?

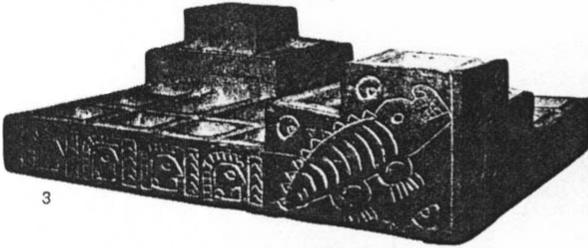
Plate from P. Rivet &
R. Verneau,
**Ethnographie
ancienne de
l'Équateur,**
Paris, 1912.



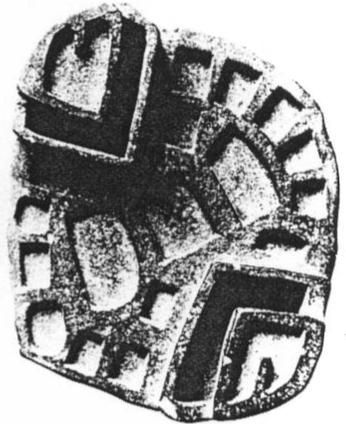
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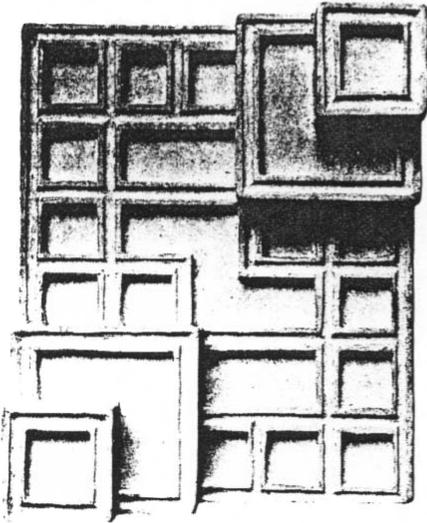
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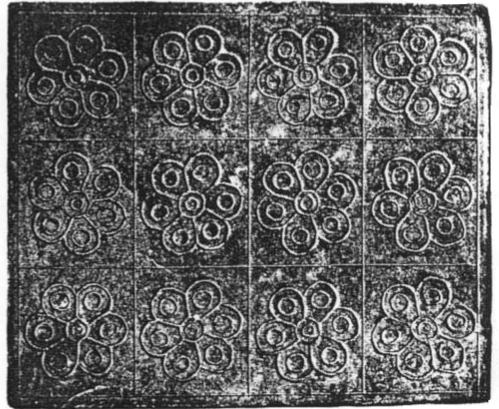
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4



5



6

III. The games of the Mapuches (Araucanians)

Because the study of neighbouring cultures can throw some light on the Inca games, I have studied too the games of the Mapuches. The former Araucanians lived to the south of the Inca empire and were partially conquered by them. Today they call themselves Mapuches and live in the north of Chile. The Mapuches were influenced by the Inca culture: it is no surprise if their games show strong similarities with the Inca games. By chance, early descriptions of the Araucanians are very informative (e.g. De Ovalle 1646) and all give detailed accounts on their games. Alonso De Ovalle has even illustrations showing two games in action (Fig. 10).

kechukawe (quechucayu, quechucague)

According to De Ovalle's description (De Ovalle 1646), *quechucague* is a race game played on a semi-circular board, with segments of five squares each (see picture 'Ludus quechucague' in Fig. 10 and my Fig. 11); the sole die looks like an elongated pyramid; men are little stones. Rosales (*post* 1674, in: Pereira Salas 1947) says it is a gambling game, but does not mention any circuit; he nevertheless describes a perched ring through which this 'triangular' die was cast. Comparison with De Ovalle's engraved plate shows strong similarities between *quechucague* and the race game which Hartmann and Oberem observed in the 1960's in Southern Ecuador (Hartmann & Oberem 1968). There the game was called *huayru* (*wayru*), which, as we know, is a synonym of *pichqa*. Like *pichqa*, *kechukawe* is derived from the Mapuche word *kechu* meaning 'five'!

There was in Francisco Fonck's collection a 'gaming stone' with five little holes on each side, which was found in the Group IV of El Retiro (Fonck 1912: 5). Unfortunately the drawings that Fonck had prepared were not printed.

M. de Olivares's *Historia militar, civil y sagrada ... del reino de Chile* (written c. 1758, quoted in Medina 1952) gives more detail about the Araucanian die: it is an 'isocetes triangle' with faces bearing 1, 2, 3, 5 (?) and 0; the game of *quechuncague* or *quechucan* is a race game 'al modo de la oca' (like the game of the goose) were pieces (*tantos*) are moved according to the throw of the die. More interestingly we learn that every man which encounters another man 'eats' it 'al modo del ajedrez'. So *kechukawe*, as a board game, seems to have been a race game *with capture*, a class of games not unknown in other civilisations (e.g. the Arabo-Muslim *tâb wa-dukk* and its many relatives). Whether the perched ring, known as *chigudhue* according to Fábres's Araucanian dictionary of 1765 (in Medina 1952), was used or not is unclear.

J.I. Molina (Molina 1787: II, x) explains that '*quechu*, que [los Indios] aprecian infinito, tiene una grande analogía con el juego de tablas, pero en lugar de dados se sirven de triángulo de hueso señalado con puntos que echan por un arillo sostenido de dos palillos, como era quizá el fritillo de los antiguos romanos.' (see also Murray 1952: 147-8, no. 6.7.3.).

('quechu, which the Indians liked very much, is very similar to backgammon, but instead of dice they use a wooden triangle marked with dots that they cast through a circle



Fig. 10: (facing page)
Two Araucanian games
in action (plate from
De Ovalle 1646).

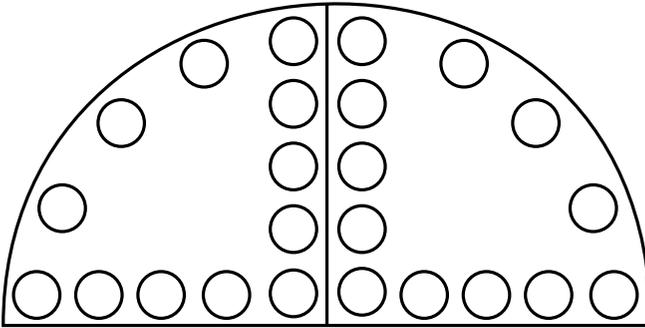


Fig. 11: Schematic drawing of 'Ludus quechucague' (from De Ovalle 1646).

perched on two sticks, as was perhaps the *fritillus* [dice cup] of the ancient Romans') Modern scholars have described a game called *kechukawe*, but it is a simple dice game. Manquilef 1914 (§ 5. 'El kechukawe') reports that the die is a five-sided prism cast through a 'funnel' in a circle on the ground. The score is kept with sticks (*palitos*). This is roughly what De Ovalle's picture 'Modi ludendi Indorum' (De Ovalle 1646) shows (Fig. 10). In the early 19th century Luis de La Cruz (La Cruz 1835: 66) observed the same game among the Peguanches under the name *guaro* [*wayru!*] played with a *quechu* die, *palitos* and a perched ring.

There is a strong parallel between the Inca *pichqa* and the Mapuche *kechu*: not only have they roughly the same shape (see Mátus Z. 1918-19: fig. 49 et 50 for two dice from the Museo nacional de Chile [Fig. 12]; Cooper 1949 states that the 'pyramidal' die – either with 5 or 7 sides – is common to all Andean cultures), not only both words mean 'five', but they were both used for two related games, a simple dice game and a race game. So *kechukawe* is the exact equivalent of the Inca *pichqa*, and it is reasonable to think the race game *kechukawe* is a likely cousin of the Inca *huayrusitha/piscasitha*.

komikan, comican

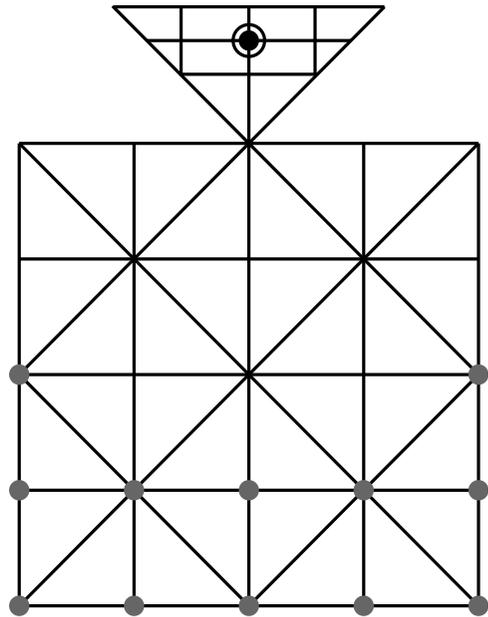
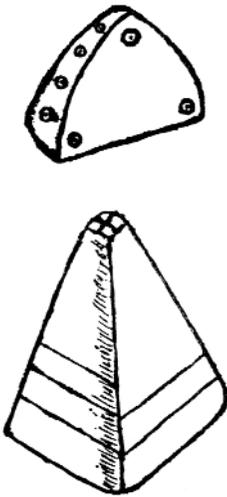
According to J.I. Molina (Molina 1787: II, x) the Araucanians knew 'el artificioso juego del ajedrez, al cual dan el nombre de *comican*' ('the ingenious game of chess, to which they give the name *comican*). *Komikan* was still played in the early 20th century and was described by Manquilef (Manquilef 1914: § 3, 'Komikan') and by Mátus (Mátus Z. 1918-19): it is a hunt game played on a latticed board with a triangle added to one side (see Fig. 12). It is also called *leoncito*. There are 38 points (25 on the main board + 13 on the added triangle). One side has 12 men (Spanish *perros* 'dogs' or *perritos* 'little dogs') and the other has one bigger and more powerful piece called *komikelu* or *leon*. The *perritos* move one step ahead; they try to hem the lion in. The *leon* alone has the power to capture by leaping over a *perrito*. Multiple short leaps are possible. What exactly happens on the triangle is not revealed by our sources. Mátus reports he had seen the game played 'among the Indians of inner Valdivia; but I could not clarify this subject

[the rules of the game] with them because they refused to give me details' (Mátus Z. 1918-19: 169).

Because he had too little information, Murray 1952 classified *comican* ('said to resemble chess', after Molina) with his 'War-games of which we have no certain knowledge' (Murray 1952: 97). Instead the Mapuche game would rather belong to what Murray called 'tiger games' (Murray 1952: 107-12). However, although *komikan* somewhat resembles any hunt game played on the alquerque board, it has its own features: no European game has any added triangle; and it is dubious that the Mapuche game came from Malaysia or Indonesia! Even in these countries the rules and initial position of the men are different.

The Mapuche game of *komikan* is no doubt the equivalent of the Inca *komina* also known as *taptana* (Santo Tomás 1560: 'alquerque'). *Komikan* must be a cognate to Quechua *komina* and to Aymara *kumi*. The similarity between the games have already been noted. Although *komikan* is not described before the late 18th century (it is not mentioned by De Ovalle, Rosales, or Olivares), it is hard to suppose that it would be just a slightly modified European import.

Fig. 12 (left): Two Mapuche dice from the Museo nacional de Chile (from Mátus Z. 1918-19: fig. 49 et 50).
Fig. 13 (right): **Komikan** board (from Mátus Z. 1918-19): opening positions.



llügün, lüqn, lünq, lüq, llique, lligues (Mapuche *lüg, liq*, 'white' according to Vivante 1946: 33); modern Mapuche **awarkuden** 'beans game' (Vivante 1942; Vivante 1946) Andean people also played 'beans' games, where half-blackened beans were used instead of dice. This tradition can be traced back to the Mochicas (c. 100 BC-c. 600 AD); the Mapuches used to call it *llügün* (or *lligues*), and call it now *awarkuden*.

The game needs 8 beans, peeled and blackened on one side, spotted with dots; the beans are cast on a mat (*pontro*), and 40 'counters' (*kob, kou*) – sticks, seeds or beans – for keeping the score (20 for each player). The games are supported with incantations. The score is won or lost according to the number of faces up: 4 black and 4 white = 1 point; all black or all white = 2 pts. (Manquilef 1918-19: § 6, 'Awarkuden').

De Ovalle 1646 describes, without naming it, a game of *'porotos o habas'* (beans): 'they choose for that the white and they paint them black on one side (...); they drop them on the ground through a suspended circle or a large ring; the player whose beans fall with painted faces up wins the highest score.' Moreover, the players blow themselves on their breasts! (see Fig. 10 De Ovalle's picture 'Modi ludendi indorum' with the perched ring). In the late 17th century Rosales (*post 1674*) described a game called *uies* said to resemble dice. The player shout at the beans (in Pereira Salas 1947: 219). According to Carvalho's *Descripción ... del reino de Chile, c. 1796* (in Medina 1952), *lligues* are '12 halves of beans, the ones black, the others white'.

Armando Vivante suggested that the Auracanian *awarkuden* was the same game as the Inca *apaytalla* and as the game represented on Mochica potteries (Vivante 1942, 1946; cf. Hocquenghem 1979 and Hocquenghem 1987). However, there are some differences: *'palitos'* are never mentioned by the early sources. On the Mochica vases there is no trace of any throwing ring, but an undulating sandy ground is depicted with beans placed in hollows and ridges.

Conclusion

It is not easy to get a precise picture of the games the Incas played. However, from the scarce and confusing sources I have presented it is possible to go further than the scholars who had studied these games previously. One wonders why the Spanish chronicles and dictionaries are so poor, compared to the good accounts we have about the Aztec *patolli*. Expected sources are silent, and there is no useful iconography. After all, it seems that games and gaming had little importance in the Inca world, at least less than in Mesoamerica where all the chroniclers were impressed by the Indians' addiction to gambling (and this was true too for European travellers in North America, who observed the same phenomenon).

Contrary to this, the Incas seem to have had a large variety of games, but no specific enthusiasm for one of them. Did they prefer 'thinking' games? This is what Father Cobo inferred when remarking: 'Although they were barbaric, these Indians invented some ingenious games that correspond to our dice and to other games of ours; but they used them more for entertainment than for the lure of gain.'

'Aunque bárbaros, inventaron estos Indios algunos juegos ingeniosos que corresponden á el de los dados y á otros de los nuestros; pero usábanlos más por entretenimiento que por codicia de la ganancia' (Cobo (1653: XIV, ch. 17).

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On a Phylogenetic Classification of Mancala Games, with some Newly Recorded Games from the “Southern Silk Road”, Yunnan Province, China / Vernon A. Eagle

Mancala is a family of games of calculation, played widely in Africa and Asia, whose details differ profoundly from one venue to another, but whose distinctive features point persuasively to a common origin. Their antiquity appears to be on the order of several millenia. Their present diversity, we may conclude, is the product of a complex evolution whose reconstruction, interesting in its own right, would also help illuminate the (largely unknown) history of cultural contact and human displacement which has taken place in the Asian and African continents outside the boundaries of the written record.

To reconstruct that history in the absence of historical evidence older than a few centuries would appear at first blush to be hopeless, but in fact it is in the richness of the present material that hope may be found. For the hundreds of mancala games described to date, and the, perhaps, thousands of games in existence are not simply diverse. They are diverse in a certain way: their diversity is the product of their actual evolution, and in the organization of that diversity we may seek the reconstruction of their history.

Mancala games are played on boards, which may be carved of wood or scooped out of the ground, and which consist of a number of holes, usually arranged in rows, most often two or four. The playing pieces are simple counters, commonly pebbles or seeds, which are usually completely undifferentiated. Play consists of distributing and redistributing the counters in the holes, typically by lifting the contents of a hole and, beginning with a neighboring hole, dropping these counters one by one in successive holes along a row, then back down the holes of the neighboring row in the other direction, and so cyclically around the board. This operation is known as “sowing”. Depending on where the final counter drops, and the configuration this produces, the player may sow again, or remove counters from the board, or his turn may end.⁽¹⁾

Why Classify Mancala Games?

Classification arises in human thought in several ways. Often, a classification is imposed upon a set of entities for convenience only. For example, a library may be arranged by the size of its books, for economical use of shelf-space. The same books might be arranged alphabetically by author, or grouped by the languages in which they are written, or by subject-matter. Or, a classification may be proposed, or imposed, to reflect a certain point of view as to what differences are most important to the analyst, or to the task at hand. For example, a field guide to flowering plants might be arranged by the color of the blooms. The task may be mnemonic: thus, the night sky, organized into constellations, becomes easier to keep in mind. Such classifications, while not necessarily arbitrary, are subjective, and cannot be shown to be “right” or “wrong”. They are useful, or not; appealing, or not; illuminating or confusing as the case may be.

A special situation arises, however, when the entities to be classified have come into being by a process of evolution from a common stock. Then, the historical task of attempting to describe the actual evolution in question, the sum total of all the “speciation” events by which new entities are generated out of old ones, gives rise to the attempt to construct a hierarchical classification faithfully reflecting that evolution. Such a classification is said to be “phylogenetic,” and it has the property that its categories, its “taxa” at every level, consist of all the descendents of a single ancestor.⁽²⁾ Such taxa are said to be “monophyletic.” Begging the question of whether the entities themselves are well-defined, a phylogenetic classification is objective, not subjective. It carries with it the implicit prediction that characters yet to be examined will be found to be distributed in accordance with its groupings. It can be refuted by evidence, and is hence, in principle, scientific.

The paradigm for phylogenetic classification is, of course, the evolution of biological species. Especially in the 1960’s and later, rigorous attention to principles of phylogenetic classification has greatly changed, and strengthened, the discipline of biological taxonomy. Human languages, analogous to biological species, present a similar task. We take the view here that board games, and mancala games in particular, also present a case of present diversity resulting from a process of evolution from a common ancestor, and hold out the hope of constructing a phylogenetic taxonomy reflecting the actual course of history. This taxonomy should complement, not mirror, a similar classification of languages. On the one hand, a game can spread by diffusion from one culture to another, crossing a language boundary. On the other, the subjugation of one people by another may extinguish a language, leaving a game to survive.

Mancala Games Have a Common Origin

“The point here is that similar and often quite complicated modes of play exist in far-distant parts of the world ... [which] cannot conceivably be of independent invention and parallel development.” (Townshend 1977b).

The hundreds, perhaps thousands, of mancala games played in the African and Asian continents, although differing widely in their rules of play: capture methods, initial configuration, method of relay, have also striking fundamental similarities which argue persuasively for a common origin for the entire group in time and space. That is, it is reasonable to suppose that they are all the descendents of a single ancestral game. First, game equipment consists of *a board of two rows of holes*: this is the generic shape throughout the area of mancala play (other configurations can all be regarded as derivative), and across completely different capture-method types; together with a set of *identical playing pieces*. Secondly, play consists of *sowing*, that is, lifting the contents of a hole and distributing them one at a time, starting with a neighboring hole and proceeding consecutively and cyclically around the board. Moreover, typically sowing is *compound*, that is, a typical move consists of a sequence of sowings, the placing of the final piece of each sowing determining the following one. Moreover, it is typical of all these games (again with exceptional cases) that the player’s free choice is exercised only at the start of a move, and consists in choosing from which hole, and perhaps in which direction, to play: the

result is then determined by the rules of sowing and capture of the particular game.

Mancala games are quite singular among board games in that the playing-pieces used by the opponents are *undifferentiated*. Mancala play, excepting relatively recent spread from the Old World to the New, occupies a vast, but essentially contiguous zone on the Afro-Asian land mass. The simplest explanation for the existence of the multiplicity of mancala games all exhibiting the same (actual or derivative) complex nature is a common origin, and in the absence of strong contrary evidence, the simplest explanation is to be preferred.

The Relationship between Mancala and Other Board games

The nature of a board game as an intellectual contest between two opposing players is reflected in the usual condition of the games not of mancala type, that is, that the playing pieces are divided into two camps, one for each player. This is noted by Deledicq and Popova (Deledicq & Popova 1977, p. 21), whose apparently inelegant term "Anti-Mancala" for the collection consisting of almost all other board games (race-games, war-games, position-games, hunt-games and so forth) is actually quite apt. Mancala games, I suspect, are *absolutely unrelated* to these other "two-camps-of-playing-pieces" games.

It is misleading even to refer to mancala counters as "pieces," in that this suggests they are homologous with, eg, pieces in games like draughts or backgammon or weiqi, which are placed or moved, on game-boards. Mancala counters have a dual role. Consider, for illustration, a board game like "Monopoly." The role of the counters in a mancala game is not only like that of the moving pieces in Monopoly, which the players move around the board. In fact, mancala counters are also like the Monopoly money, which the players compete to obtain. In this sense, mancala games are comparable to card games, in which the equipment, the deck of cards, is neutral, to be used by both, more generally by all, the players. The deck of cards, indeed, is not a priori dedicated to a contest. It may be used for a solitaire, and also, indeed, for divination.

Mancala games may have arisen, not by evolution from earlier games, but from a divinatory method.

Divination generally requires an element of randomness, or unpredictability: which card will be dealt from the shuffled deck? which way will the crack develop in the heated carapace of the turtle? what pattern will the tea leaves form? (cf Townshend 1977c, p. 95). The mancala board and counters provide just such unpredictability when used to perform the act which is the quintessence of mancala play: compound sowing. An extended sowing in a mancala game is reminiscent of a spinning roulette wheel or wheel-of-fortune: "round and round she goes, where she stops nobody knows". Moreover, the result of an extended sowing is not only the identity of the last hole sown in, but also the configuration of the entire board as the pieces have been redistributed in the holes.

I suggest that the closest relatives of the ancestral mancala game were, not other games, but other activities, perhaps divination, performed with the same equipment. My hypothesis is that not only the board, but the activity of compound sowing, existed before the game.

On Phylogenetic Classification of Mancala

Whether or not mancala games are genetically related to any other games and whether or not they arose from divination, if in fact they do have a common origin, then the possibility of a phylogenetic classification arises. Games, unlike living species, have no physical genomes, and are far less complex than living organisms. Too, while hybrids exist in biology, they may be far more common in the evolution of games, so that the resulting branching diagrams illustrating the history of their speciation may be rich in cycles. Recognizing that the analogy between biological species and board games is not perfect, still the core insights of the “cladistic revolution” in biological taxonomy are fully relevant to the task of classifying them, as these insights are based, not on the physical mechanism of evolution, but on the fact (or hypothesis, or assumption) of evolution having actually taken place.

The properties, or attributes, of the entities to be classified used in their classification are known as “characters” – for example, in classifying flowering plants, the position of the ovary, or the number of stamens; or, in languages, the presence or absence of tones; or, in mancala games, the number of rows of holes constituting the board. As evolution takes place, characters change. An ancestral fin becomes a leg, then a wing. When a character changes its state, the earlier condition is called “ancestral”, the later condition “derived.” A central insight of the cladistic method is to note that in adducing evidence for relative closeness of genetic relationship, one must seek for shared derived character states, and completely disregard shared ancestral character states. But this must be done with care. Birds and bats both have wings, but together they do not constitute a monophyletic group: wings arose more than once in the history of vertebrate anatomy. Moreover, the fin that became a leg became a fin again among the cetacians (whales and their relatives). So the piscine fin is ancestral to the mammalian leg which in turn is ancestral to the cetacian fin. Whether a given character state is ancestral or derived depends upon the context, that is, upon what taxonomic level is being considered.

The model is this: a monophyletic group consists of all the descendants of a putative common ancestor. This ancestor is described by character-states, all, in this context, ancestral. Over time, characters change state: new forms, descended from the ancestor, come into being. Assuming a given derived character-state arose only once in the group, and at the level, under consideration (“uniquely-derived”), then sharing it implies common descent not only from the ancestor of the whole group, but from the earliest of its descendants in which the new character-state is to be found. Sharing an ancestral character-state, on the other hand, is evidence only for descent from the ancestor of the whole group, a tautology.

Character states, then, must be assigned a polarity, an orientation in time, if they are to be useful in classification. The principal method for accomplishing this, in the absence of fossil evidence, is “outgroup comparison”. The idea is: to help in deciding, for entities in a given group, which state of a given character is ancestral, consider entities outside the group, but as closely related to it as possible. If these possess the character in a consistent state, then that state is likely to be ancestral for the group under study. (Here

“likely” means more precisely that this explanation is preferred over others because it requires fewer additional hypotheses about unknown ancestors.)

We accept as taxa, then, only monophyletic groups, defined on the basis of shared uniquely-derived characters. Groups unacceptable as taxa, like birds + bats, which are the result of convergent evolution, are called “polyphyletic.” This means they are composed of two or more monophyletic groups lumped together. The use of shared ancestral characters in classification generates a second type of unacceptable group, known as “paraphyletic.” This, in effect, is a group created by subtracting one monophyletic group from another. For example “the great apes,” excluding man, or “monkeys,” excluding apes, or even “reptiles,” excluding birds, are all to be rejected as paraphyletic. To take the second example, the possession of an external, visible tail is ancestral among primates; its loss among apes, including man, is derived.

We will find that both polyphyletic and paraphyletic groups have been proposed, and must be rejected, in classifying mancala games.

Classifications of Mancala in the Literature

1. Murray (1952) divided mancala games into three groups, distinguished on the number of rows making up the board. Thus, he had Mancala II, Mancala III, and Mancala IV. Next, he sorted the Mancala II games by geographic region, and in one of these regions (“West Africa: Guinea from the Senegal to the Gabon and the Sudan”) classified the games into nine groups (including a “none of the above” miscellaneous group), organized by a key (Murray 1952, pp. 178-179). He uses, first, sowing rules, and then, capture methods, for organizing these groups. He didn’t really know the Mancala III games. Mancala IV he divided into two types: (a) and (b) (Murray 1952, p. 207). The type-(a) games are characterized by captured counters being taken out of play. The type-(b) games are characterized by captured counters being sown back into the game by the player who has captured them. Murray then further divided the Mancala IV-(a) games into five groups, based on differences in the rules for capture. He organized the IV-(b) games according to the number of “reverse holes” – holes from which a player may reverse the usual sense of play and sow clockwise in order to capture.

2. Deledicq and Popova (1977) divided mancala games into two groups. The first group, “wari,” consisting of most 2-row games and all 3-row games, is characterized by the players’ sowing in the holes of the entire board (exceptional holes allowed), while the second, “solo,” consisting of all 4-row games known at that time and a few exceptional 2-row games, is characterized by the division of the board into two halves, each player sowing in his own, and capturing from his opponent’s half. They appear to be unfamiliar with the diversity of solo games, but give a typology for wari, (Deledicq & Popova 1977, pp. 102-105), according to the states of four characters: (s, a, p, m)

- i. sowing is simple or compound: s = 0, 1 respectively.
- ii. accumulation holes (sinks) are absent entirely, appear during the course of play, or exist a priori from the start of the game: a = 0, 1, 2 respectively.
- iii. captures are from the final hole of a sowing, or from another hole or holes deter-

mined by it, or take place during the sowing: $p = 1, 2, 3$ respectively.

iv. play is in a single round, or in multiple rounds: $m = 1, 2$ respectively.

There result from this $2 \times 3 \times 3 \times 2 = 36$ possibilities, of which 15 are realized by games known to the authors. The authors hazard various hypotheses deduced from the purported nonexistence of the remaining 17.

3. **Townshend (1977a, 1977c, 1979, 1986)** agrees with Deledicq and Popova in dividing mancala into wari and solo, and follows Murray in dividing solo into two types, inexplicably reversing Murray's nomenclature, so that Townshend's type A is Murray's type (b) and Townshend's B is Murray's (a). As Murray clearly has priority, when letters "a" and "b" are used here, it will be in Murray's sense. Townshend proceeds to provide a far richer and more useful typology than any previous writer. He divides (Townshend 1979) wari games into five types, (designated a, b, c, d, e) distinguished by the method of capture. He divides Solo-(a) games into four groups, again on the basis of capture method only, and describes two "intermediate types" of Solo games with mixed characteristics of (a) and (b) type. He first (1977a) divides solo-(b) games into five types: *sombi*, *mangola*, *cisolo*, *kibuguza*, and Swahili *bao*. Later (Townshend 1986), he describes *bao* as belonging to the *sombi* group.

4. **Russ (1984)** provides a survey of mancala games, and the organization of his book is not perhaps intended as a formal classification. He retains Murray's categories of two-row, three-row and four-row games. Some of his chapters correspond roughly with Townshend's typology of two-row wari games, and he groups together two-row games lacking compound sowing.

5. **Santos Silva (1995)** gives keys to typologies for solo-(a), solo-(b), and "wari", (which he calls Mancala IV-B, Mancala IV-A, and Mancala II, respectively). He apparently is not familiar with the work of Pankhurst or Townshend. He gives a key to 7 types classifying 37 solo-(a) games (Santos Silva 1995, pp. 125-131); a second key to 17 types classifying 28 solo-(b) games (pp. 145, 150-153), and a third key to 44 types classifying 144 "wari" games (pp. 194-217).

Discussion

Let us now examine some of the categories suggested by the referenced authors.

1. **Wari.** Unless one is prepared to argue that the original mancala game was a 4-row game played on a double-board, and that 2-row games arose by a simplification of the board, it is clear that all that is meant by "wari" is "mancala which is not solo." In other words, "wari" is a paraphyletic group, and we reject it as a taxon. When we write "wari," we mean "mancala games in which both, or all, players, play on the whole board (exceptional holes allowed). It is a useful word, but not acceptable as a taxon.

2. **Mancala III.** As we have noted above, Deledicq and Popova reject this grouping on the grounds that it is essentially just a variant of 2-row mancala, and that it is closer to the 2-row than to the 4-row games because it is, like the former, composed of "games of one cycle" in which the players all play over the entire board. But in fact, if we accept the proposition that 4-row games are also derived from 2-row games (by doubling the board), there is no reason a priori to hold that the dichotomy between 4-row games and

all others is any more profound (or more ancient) than that between 3-row games and all others. The real difference in the situation of 3-row as opposed to 4-row games becomes clear when one examines them against Townshend's typology of "wari." For his capture-method analysis applies equally to 4-row games, and it is seen that all 4-row games, of both types-(a) and -(b), employ type-(d) capture, that is from holes opposite the final hole of a sowing. On the other hand, 3-row games can be found employing several capture methods also found in 2-row games. The conclusion is that while this is consistent with the monophyly of 4-row African games played on double-boards (together with the few African 2-row games also played on double-boards, which also employ type-d capture), it implies that Mancala III is polyphyletic.

Thus we accept the category solo defined by Deledicq and Popova, and reject Murray's Mancala III. However, it is clear that there must have been a first 3-row game, and, furthermore, the geographical location of all extant 3-row games in the horn of Africa suggests that all of these games do have a common origin. What complicates the taxonomy is that the likeliest explanation for the multiplicity of capture-method is that some of these games are hybrids. Further analysis may resolve this, perhaps enabling us to construct a monophyletic group of "true 3-row games," as distinct from essentially 2-row games played on a 3-row board. For example, abalala' (Courlander 1943, Pankhurst 1971, p. 163), a type-(d) game (in the sense of Townshend) participates in the the geometry of a 3-row board, in that capture may be from one or from two holes opposite.

3. Townshend's type-(d). These are games in which captures are made from holes on the opponent's side of the board directly opposite the hole receiving the final counter of a sowing. Townshend's type-(d) games as he defined them, that is as a group of two-row and three-row games, is paraphyletic, as it excludes the four-row games which developed from them. But if we put the four-row double-board games in, then the group would seem valid. Solo is then a sub-group. Townshend (1979) also defines type-(d)-ii as the sub-group of games in which the final counter, landing in an empty hole, is captured together with the counters of the hole opposite. This also seems valid. His type-(d)-i, on the other hand, consists of type-(d) games with no other special characteristics, and is paraphyletic.

For convenience, and because the concept is seminal, we will describe capture of this sort, namely from holes opposite the hole on a player's own side receiving a final counter as "Townshendian capture." Games employing such capture as the principal method will be called "Townshendian mancala games." The subgroup of games employing what Townshend designated as "type-(d)-ii captures" as described above will be called "Gogo," after the Mijikenda game *kigogo*, which is in this group, and such captures will be call "gogolian." Then both Solo and Gogo are seen as monophyletic groups of Townshendian mancala games.

4. Solo. Examining the division of *Solo* into types (a) and (b) according to whether captures are removed from the board or sown back in, respectively, out-group comparison with other games shows clearly that (a) is the ancestral condition, and (b) is derived. This is greatly reinforced by looking at capture methods. As noted above,

all *solo* games employ Townshendian capture, so the candidate out-group consists of “wari” games employing this method. In general, Townshendian wari games capture opposite an empty hole on the player’s side receiving the final counter of a sowing. This is also generally true for *solo*-type-(a) games, while for *solo*-type-(b) games capture is generally opposite a non-empty hole on the player’s side receiving the last counter of a sowing. Thus we conclude that *solo*-(a) (which Townshend designates as “*Cela*” (Townshend 1977a, p. 50) is paraphyletic, and *solo*-(b) is monophyletic. Borrowing Townshend’s terminology while perhaps extending its purview, we will use *Sombi* to mean “Solo games with captures opposite a final, non-empty hole sown back into the board.” Thus *Sombi* will include, not exclude, Townshend’s *mangola*, *kibuguzza*, *cisolo*, and *baa*.

5. “**Intermediate Types**”. Townshend (1979, p. 119) reports the existence of games (he calls them “Intermediate Type D”) in Western Kenya (Nandi *kecuek* and Kipsigis *ndoto*, both on 4 x 6 boards) in which capture is opposite an empty hole receiving final counter, but where captures are sown back into the board. He does not give complete descriptions, but it seems likely that the immediate ancestor of *Sombi* would have been just such a game, retaining the ancestral state of the Townshendian capture method.⁽³⁾ It is consistent with this analysis that these “Type D” games have captured counters sown in starting at the postultimate hole of the sowing which captures them. Sowing in captures is strongly reminiscent of compound, or relay sowing. If it is indeed essentially a kind of generalized relay, then its original form might well have been to “relay” the captured counters as if they had actually occupied the empty, final hole opposite them. Townshend’s subgroups “Type A-I-(iv), -(v), -(vi) and -(vii)” all employ sowing in of captures forward of the point of capture, which may be the ancestral state. Let us use *Kecuek* to denote “Solo games with captures sown back into the board.”

6. **Typology of Solo**. Several of Murray’s types of *solo*-(a) games are based on what Townshend calls “bonus captures.” That is, a player who captures in the usual way adds to his winnings the contents of one or more holes of his choosing on his opponent’s side of the board. As this does not appear outside of Solo, it appears to be possible to use this character to define a monophyletic group. We shall designate by *Nchombwa* the group of *solo* games employing bonus captures. The name is based on a game described from Malawi by Sanderson in 1913.

7. **Typology of Sombi**. Consider first the “reverse-holes” of Murray’s typology. For outgroup comparison, we look at *solo* games outside *Sombi*. Most have strictly counter-clockwise sowing, some sow clockwise, and some allow either sense, but none allow sense-reversal only to capture or only from certain holes. It thus appears that “*Sombi* games with reverse-holes” may constitute a monophyletic group. We shall designate the group by *Alok*, which is, according to Driberg (1927), the term employed for the procedure by the Acholi of Uganda.

Townshend (1977a) defines the group *Mangola* to designate *Sombi* games in which the final counter of a sowing skips over an empty hole, to sleep in the following hole. This is a distinctive property, not found in any other games outside the *Sombi* group. Townshend reports one *Mangola* game with reverse-holes: the *Alur* game of Leka. This

game is perhaps a hybrid between *Mangola* and *Alok*.

Townshend defines *Cisolo* to designate *Sombi* games in which compound sowing is performed as in pussa-kanawa games⁽⁴⁾, by relay from the hole following the final hole of the previous sowing, and having a distinctive capture method, first described by Driberg for the game *Choro* as played by the Lango in Uganda. If a player, whose turn it is to play, should have an occupied inner-row hole opposite an occupied inner-row hole of his opponent, then he immediately captures the contents of the latter, together with the contents of the opponent's outer-row hole in the same column, if any, and sows them in, starting in his own inner-row hole of this column. If such a capture is possible, it is obligatory. We call such captures "Langolian." The Lango game also has standard *Sombi* captures, as well as reverse-holes. The relay-method of *Cisolo* influences its capture-method, as captures are from holes opposite an occupied inner-row hole following the final counter of a sowing, that is, from the hole from which, if capture is not possible, a relay would begin. If we believe it likely, as Townshend does (1977a, p. 47) that Langolian captures arose once only, then we may define a monophyletic group Langola, for those *Sombi* games in which it occurs. *Cisolo* is then a subgroup. The fact that the Lango game has reverse holes may be explained in several ways: 1. *Cisolo* games have lost reverse-holes which their ancestors possessed; 2. The Lango game *Choro* is a hybrid between Ugandan *Alok* games and an ancestral Langolian game without reverse-holes; 3. *Alok* is polyphyletic, reverse-holes having arisen independently; or 4. Langola is polyphyletic. The second possibility seems to me the most likely, subject to further evidence.

Langolian capture is reminiscent of Swahili *bao*, in that, during the first phase of that game, opposing occupied inner-row holes occasion an immediate capture. Moreover, in Langolian capture and in Swahili *bao*, unusual in *Solo* generally, capture is obligatory.

Townshend defines the group *Kibuguza* to include two games having an unusually generous capture-rule: any final counter landing in the interior row captures from the two opposite holes.

We summarize the discussion above with the following table (facing page).

A Word on Methodology

It should be emphasized that the remarks above are intended only as a rough commentary on the groupings of mancala games which have appeared in the literature. They do not constitute a formal classification. This can only be accomplished "from the bottom up," rather than "from the top down." That is, for each game studied, we pose the question: what is the closest relative? or, failing that: what games described to date are most closely related to the game in question in sharing with it certain uniquely-derived characters. Then, of such a group, we repeat the question. Thus the higher taxa are *constructed* out of the lower, rather than being *defined* by certain properties, like Platonic ideals. Thus, having *proposed* Kekuek, above, or Gogo, as valid taxa does not *make* them such. Many more games will need description, and many more characters will be required, if we are to achieve much confidence in our understanding of the relationships between the mancala games already reported.

Mancala

Games with capture of holes [Townshend type -(a) captures. e.g. “typical”
East African Maasai *enkeshui*]

Games with capture of n-tuples [Townshend type-(b) captures. e.g. “typical”
West African *wari*]

Townshendian games

Solo [four-row double-board]

Nchombwa [bonus captures]

Kecuek [captures sown back in]

Sombi [capture opposite occupied hole]

Alok [reverse holes]

Langola [Langolian captures]

Cisolo [relays from postultimate hole]

Mangola [last counter skips empty hole]

Kubuguza [final inner-row counter captures all opposite]

others

others

others

Gogo [final counter captured together with counters opposite]

others

Pussa-kanawa games [empty, eat. Townshend type (e) captures]

others

Polyphyletic groups:

Games with only simple sowing (no relays)

Games with postultimate relays (= Pussa-kanawa + Cisolo)

Mancala III

Paraphyletic groups:

Wari (in the sense of Deledicq & Popova 1977)

Townshend's two-row type-(d)-i

Mancala-IV Type-(a) (= Type B of Townshend, etc)

Sombi exclusive of Mangola, etc

[all the grab-bag groupings indicated above by “others”]

Some Newly Described Games from China

In a continuing effort to advertise the richness of Asian mancala play, I report here four games from South-West Yunnan Province, China. All the venues of play are on the “Southern Silk Road,” an early trade route between China and India, across Burma.

1. A game with no sectors from Tengchong County.

Principal Informants: Zhang Jingyao, male, 16, and his mother Yang Xiuying, 46, both Han nationality.

Venue: Yunnan Province, Baoshan Prefecture, Tengchong County, Hehua Township, Xiaozhuang Village. This is on the main road from Tengchong to Lianghe.

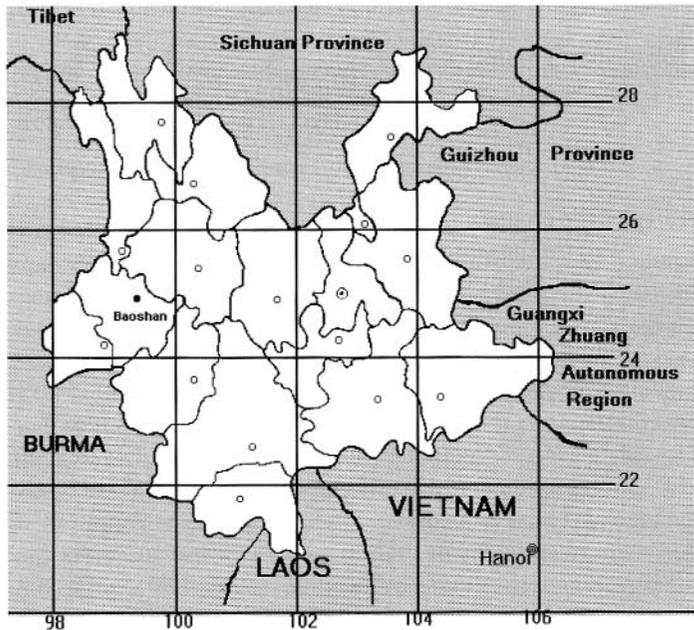
Date of interviews: April 1996.

Name of the game: *Laomuzhuqi*. *Qi* means “board game”, as in *xiangqi* (Chinese chess) or *weiqi* (called Go in Japanese). *Laomuzhu* means “the old mother pig”, and refers to the large stones used in play.

Format: 2 x 5. The board is normally drawn on the ground with chalk or charcoal: a rectangle divided down the middle and into five compartments on each side, two compartments at one end marked with big X's to indicate that the two large stones, informally called *laodao*, are placed there at the start of each round. To begin, each player has five small stones in each of his other four compartments.

Preliminaries: To decide who plays first, the players simultaneously throw out one of three fingers (*huaquan* in Chinese): Thumb, called *taishan* (the mountain); pinkie, called *xiaogongji* (the little cock); or index finger, called *mayi*, the ant. Then, as

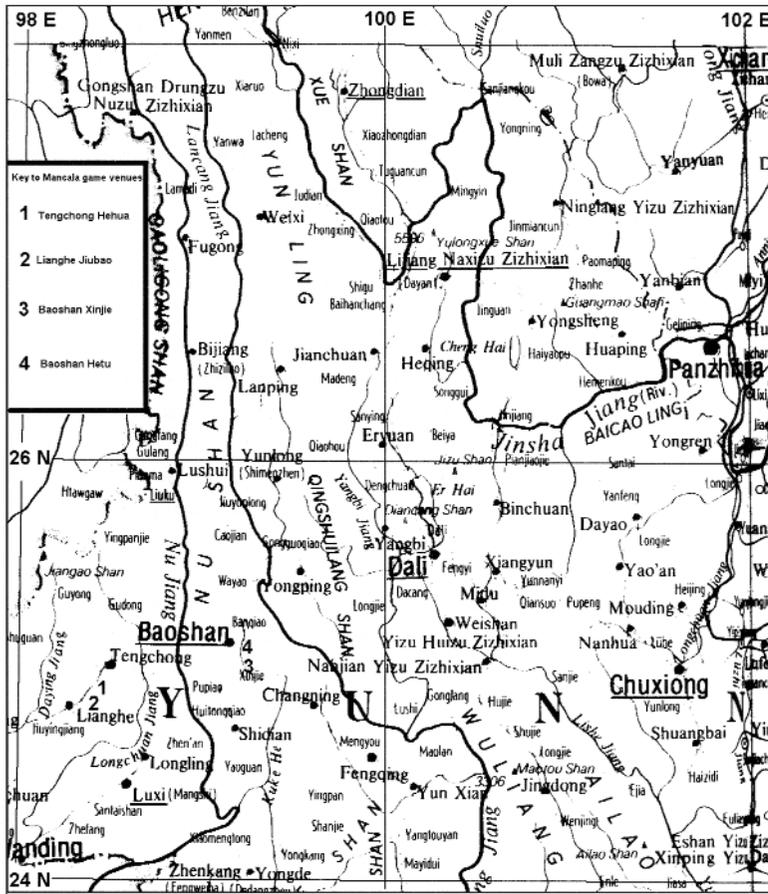
Yunnan
Province,
China



in “paper, rock, scissors” there is a cyclical order determining the outcome. To wit: The mountain crushes the chicken, the chicken grabs and eats the ant, and the ant knocks down the mountain (in Chinese: *Taishan ya ji; ji ba mayi zhuachi, mayi gongdao taishan*) This is done before each round.

The Play:

1. On his first move in each round, each player must play from a hole on his own side of the board. Subsequently, there are no sectors, *i.e.* both players may play from any regular hole, on either side of the board (“regular” meaning that the hole is not a “*tian*” - see 4. below).
2. Play is in either direction, but the *laodao* must be sown first in any sowing containing it.
3. Relays and captures are standard Pussa-kanawa type. That is, relays are from the hole following the final hole of a sowing. If this is empty, the contents of the next hole



Map of Yunnan Province, Baoshan Prefecture

are captured; if the hole following that is empty too, then the contents of the next hole are also captured, and so on. When a stable situation is reached at the end of a round, the stones are divided evenly between the players. If the number is odd, the remaining one is awarded by throwing fingers, as in the preliminaries.

4. At the end of a round, if one player has both *laodao*, he sells one of them to his opponent for 5 stones. Then both players fill their holes if they can. The filled holes, and a partially filled hole, belong to the player who fills them, but any holes left empty become the property of the opponent. They are his “*tian*”, or productive fields.

Subsequent rounds.

5. Normally, the owner of the *tian* keeps a singleton in each, any surplus being removed by him. They are entirely disregarded in reckoning relay and capture. In particular, they are neither played from, captured from nor relayed from, although they may be sown into by either player.
6. When either player, in the course of play, approaches a series of 1 or more *tian*, he has the option either to skip over all of them, or to sow in all of them. If his move circles the board one or more times, he has the freedom to decide this option separately at each circuit.
7. Except that the trailing player, if he has not sufficient stones to sow in all the *tian*, is obliged to skip over them, while the leading player may in that case sow into them. However, if he does so, his move ends, and he may not capture even if the next hole beyond the *tian* is empty.
8. Under no circumstances may a *laodao* be sown into a *tian*. A *laodao* lying in a hole before a *tian* and being played or relayed in the direction of the *tian* must skip over the *tian*.

Affinities: The game’s use of captured holes shows some similarity with the game *mak-hubai*, played by people of Dai nationality in Dehong Prefecture, Luxi County, Fengping Township (my own notes, recorded 1995, not published). In the latter game, the trailing player is forbidden to sow into the captured holes (called *hem* in the Dai language), while the leading player is free to sow or not to sow in them, and to relay or not to relay from them. The lack of sectors appears in *laomuzhu* from Longling county, Longxin Mengmao (Eagle, 1995, p. 56).

2. A game from Lianghe County with a new method of hole capture.

Principal Informant: Zhao Jiakang, male, 25, Achang nationality.

Venue: Dehong Dai-Jingpo Autonomous Prefecture, Lianghe County, Jiubao Township, Henglu Village.

Date of Interviews: April 1996

Name of the game: *Dong Wo* (in Chinese, *dong* is to move, *wo* is a hole)

Format: 2 x 5. At one end of the board, a large stone in each hole; at the start of the game, five small stones in each of the other holes. The large stone is the *laomuzi* (“old mother”) or simply *muzi* (“mother” - pig is understood)

Preliminaries: none. the players agree who plays first; on subsequent rounds, they

alternate

The Play: (in the following, “regular hole,” or simply “hole,” is distinct from “captured hole” as discussed below.)

1. Play is in either direction, with standard Pussa-kanawa relays and captures. A player plays only from his own side, except as in 14. below.
2. It is not allowed to sow one of the *muzi* into a hole containing the other one, but otherwise one is free to sow them in any hole of a sowing. If a *muzi* is singleton, and the neighboring hole contains the other *muzi*, the singleton may not be played in that direction. Such a singleton may, however, in the course of play, be relayed into a neighboring hole containing the other one, even deliberately. In this case, one of the *muzi* is captured by the player who is moving.

Tianzi:

3. If at the end of a move all a player’s regular holes are empty, and his opponent has at least two stones remaining in his holes (*muzi* counting as 5), he must place a singleton in each of his holes. He must do this whether it is he or his opponent who is about to move.
4. The round ends if, at the end of a move:
 - i. All holes are empty, or
 - ii. One player has a single stone and the other has no stones, or
 - iii. Each player is reduced to a single stone, and neither player is in a position to capture the other’s stone.

Winning a hole:

5. In cases i. and iii. above, the round is *ping* (even); but in case ii, the player having the last stone in one of his holes is the winner of the round, even though he may have captured fewer stones, and he is awarded a hole on his opponent’s side. He chooses the hole, except he cannot take the end-hole containing the *laomuzi*. He puts the surviving singleton in it.
6. At the end of a round, after sale of a *laomuzi* (worth 5) if necessary, the players fill their holes with their winnings (except for holes which have been won (or purchased – see below) by an opponent). If necessary, a player borrows from his opponent’s surplus in order to fill his holes.

Buying a Hole:

7. A hole can be bought for 10 stones. In order to buy a hole on his opponent’s side, a player must have not only the purchase price of 10 (taking into account any accumulated debt), but at least one stone in addition to put in the bought hole. The purchaser chooses which hole to buy (except the hole at the end where the *laomuzi* are placed). If his opponent owns holes, won or bought, on the player’s own side, these must first be bought back before a hole can be purchased on the opponent’s side. To buy back a hole, a player must have not only the purchase price of 10, but an additional 5 stones to fill the hole. A player may not refuse to sell, if his opponent has the wherewithal to buy.
8. NB: the restriction on buying holes on his opponent’s side while his opponent owns holes on his own side does not extend to winning a hole. That is if a player wins the

round he takes a hole on his opponent's side without regard to the status of holes on his own side.

9. The players may, by mutual agreement, exchange holes they own on one another's side. Moreover, a hole which has just been won may be immediately bought back by the loser of the round, if he has the 15 stones necessary for the transaction. After a hole has been bought, or bought back, the seller may use the proceeds to buy back, or buy on his own account. Thus a series of purchases might take place between rounds.

Captured holes:

10. Holes which are won or bought function exactly the same in play. We shall call them captured holes. Normally, the owner of a captured hole keeps a singleton in it.
11. Whenever a stone is sown into such a hole, by either player, the owner may remove it, and normally does. The owner may forget to take such a second stone. But if a third stone is sown in, the hole-owner's opponent (the player on whose side the hole lies) is entitled to remove two stones, leaving the hole singleton.
12. The owner of the captured hole may, at any time during play, and no matter who is moving, remove the singleton so that the hole is empty, thus causing or preventing a capture or a relay. If the hole becomes empty through capture, relay, or the owner's having removed a singleton, the owner may at any time put a single stone in his hole, thus causing or preventing a capture or relay. But he must do this quickly if the other player is moving, as the opponent is not obliged to wait for his decision to remove, or add, a singleton.
13. The owner of a captured hole may not sow a *muzi* into it, unless it is unavoidable as a relay. But if his opponent should sow a *muzi* in, it is captured. In other words, a player may not directly play a *muzi* into his captured hole, and he must avoid, if possible, relaying a *muzi* into his captured hole. A player may, however, relay a *muzi* into a captured hole if under standard relay procedure it is unavoidable, and thus capture it. For example, if it is singleton, and the next hole is captured, or if it is doubleton and both of the next holes are captured, etc.
14. A captured hole is added to the sector of its owner. That is, he is allowed to play a singleton from it.
15. The singleton in a captured hole, except it be removed by its owner, is captured or relayed normally.

Victory: A player who is reduced to a single regular hole has lost the match.

Affinities: The functioning of the captured holes is something like that in a game from Tengchong County, Wuhe Lianmeng (Eagle, 1995, p. 58), but here the leading player has much more flexibility in their use. The awarding of a hole as a bonus to the player with the last stone in play has not been reported before.

3. A game from Baoshan municipality.

Principal Informant: Yang Guichang, male, 60, Han nationality.

Venue: Baoshan municipality, Xinjie Township, Shanjiao village, about 10 km south of Baoshan city.

Date of interview: April 1996

Name of the game: *Laomuzhukeng*. Chinese *laomuzhu*, as elsewhere, is “the old sow”; *keng* is a hole

Format: 2 x 5. One large stone in each row, the owner of the row free to place it in any of the holes. Large stones are called *laomuzhu*, small stones called *zhuer* (piglets).

The game may also be played with 3 or 4 rows, and by 3 or 4 players, respectively.

Play:

1. Play is in either direction, with usual Pussa-kanawa relays and captures. A player plays only from his own side, except as in 4. below.
2. Any *zhuer* together in a hole with a *laomuzhu* belong to the player on whose side the hole lies, and may be immediately removed. Thus the *laomuzhu* is always singleton. She is played, relayed and captured normally. If two should fall together, just one is captured, again by the player on whose side the hole lies.
3. When both *laomuzhu* have been captured the move capturing the last one ends normally, but then the round ends, each player capturing what remains in his holes. If at the end of a move the only stone still in play is a singleton *laomuzhu*, the round ends and the *laomuzhu* is taken by the player on whose side she lies.
4. If a player's holes are empty and a *laomuzhu* is still in play, he plays from his opponent's side of the board.

Rounds.

5. *Laomuzhu* are not sold back. If a player has captured both, he keeps them, and puts each of them in one of his holes. Both players fill as many of their holes as they can. The trailing player loses the holes he cannot fill. They become the *shuitian* (paddies) of the leading player. He places a singleton in each. They must be consecutive, if there are more than one, and they must start at an end-hole. The leading player plays first.

Captured Holes:

6. The *shuitian* are sinks, that is, any stone sown in a *shuitian* becomes the property of its owner, and is out of play. They are sown into normally by both players, but neither played from, captured from or relayed from. *Laomuzhu* are sown into them normally by either player. In reckoning capture and relay they are entirely disregarded.

Victory: The game is played until a player has no holes left. If a player is reduced to a single hole, but has a *laomuzhu*, he may battle back.

Terminology. An ordinary hole is a *wo*. When a *laomuzhu* is moved or relayed it is said to *tiao* (leap). *Zhuer* do not leap, they simply *zou* (walk). For a player to move is *dong*. When capturing pussa-kanawa, one may say: *ou wo chi*, *ou wo chi*, where *wo* means hole, *chi* means to eat, but the informant isn't clear what character to write for *ou*, which is pronounced with a high level tone. It's meaning is “to scoop out”, and when the player says “*ou wo chi*” he performs the motion of scooping out the empty hole with his fingers to show that it is empty. Alternatively, one may say: “*ge wo chi*, *ge wo chi*” where *wo* and *chi* are as above, and *ge* means “empty,” but Mr. Yang has no idea how to write it. Thus both *ou* and *ge* are local dialect.

Affinities. The game is similar to *yucebao*, described from a Bai nationality village in Lijiang County (see Eagle 1995). The principal difference is that in *yucebao* captured holes function like regular holes, while in *laomuzbukeng* they are sinks. Also, ending the round when both *laomuzhu* are gone hasn't been reported before.

4. Piggyback. A game from Baoshan municipality.

Principal Informant: Tao Rusong, male, 68, Han nationality.

Venue: Baoshan municipality, Hetu Township, Xiaocun (lower village), several kilometers east of Baoshan city.

Date of interview: April 1996.

Name of the game: *Laomuzhuqi* "Old sow chess," as above.

Format: $n \times 5$, where n is the number of players, and may be 2, 3, 4, or 5. One large stone, the *laomuzhu*, in each row, and five small stones, the *zhuer*, in the other four holes. Each row belongs to one player, and each is free to put his *laomuzhu* where he likes. Boards are drawn in the ground with a stick, and are rectangular, divided into squares, not a series of holes. (Mr. Tao states that he himself has played with five players and rows, but this is maximal. He is positive that he has not played since the age of eight, when all children in the village played, and that no-one plays anymore.)

Preliminaries: Throw fingers (*huaquan*) to see to see who goes first, in subsequent rounds the trailing player plays first.

Play:

1. Play is in either direction, with standard Pussa-kanawa relays and captures. Each player plays only from his own row.
2. The first player is free to choose the direction of play, and if there are more than two rows, and the first player is on an inner row, he decides which way to turn on reaching the end of the row. But once the direction is established it cannot be changed. Adjacent rows are sown in opposite directions.
3. Any stone sown into a hole with a *laomuzhu*, and any stones in a hole into which a *laomuzhu* is sown, stay together with the *laomuzhu*, and if two *laomuzhu* are sown together, they stay together, are relayed and captured together: the piglets stay with their mother. In effect, the *zhuer* travel piggyback, and whoever captures their mother captures them too.
4. When a player whose turn it is to move has only empty holes, the game ends. The stones remaining in the other players' holes belong to no-one. The captured stones are counted, the *laomuzhu* counting five, and the player with the greater number of stones is the winner.

Affinities: The use of the *laomuzhu* is quite unusual: in no other reported mancala game does a group of stones travel as a group, not "spreading out" as sowing normally implies.

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Notes

1. For descriptions, terminology and bibliography, see Murray 1952, Deledicq & Popova 1977, Townshend 1979, Russ 1984, Santos Silva 1995, Eagle 1995.
2. On the taxonomic terms and concepts discussed here, and for extensive references, see Duncan and Stuessy 1985, Minelli 1993, Wiley 1981.
3. Townshend reports at second-hand, but does not confirm, the contrary possibility: a solo-(a) game with capture from opposite a non-empty hole receiving a final counter. He calls this "Intermediate Type C".
4. This would appear to be a notable example of convergent evolution, as Cisolo is otherwise quite unlike Pussa Kanawa. On Pussa-kanawa games, see Eagle 1995.

Chinese character glossary

Baoshan municipality		保山市
Dong Wo	game name	动窝
Hehua Township		荷花乡
Hetu Township		河图乡
Henglu Village		横路乡
Jiubao Township		九保乡
Laomuzhukeng	game name	老母猪坑
Laomuzhuqi	game name	老母猪其
Lianghe County		梁河县
Shanjiao Village		山脚村
Tao Rusong	informant	陶如松
Tengchong County		腾冲县
Xiacun		下村
Xiaozhuang Village		肖庄村
Xinjie Township		辛街乡
Yang Guichang	informant	杨桂昌
Yang Xiuying	informant	杨秀英
Zhang Jingyao	informant	张景尧
Zhao Jiakang	informant	赵家康

The Development of the English Board Game, 1770-1850 / Caroline G. Goodfellow

Throughout the 18th century and well into the 19th century, the size of the middle income group of merchants, solicitors, doctors and industrialists grew. Trade flourished and unknown areas were explored. The adventurers who were prepared to open shipping routes and establish trading agreements reaped rich financial rewards. This was an age of enlightenment, invention, innovation and scientific discovery. Games were a part of the industrial and social life of entire nations, reflecting changing ideas and ideals, particularly during periods of major upheaval.

The upbringing of children within these middle class families changed dramatically. Education became essential, covering not only the 'three Rs', but sensible grounding in national and international affairs. National pride and achievements were stressed, as were faults. In general, everyone seemed to be looking outwards, to try to understand new concepts. We must, however, when viewing the games of this period, remember to set them against their own time rather than to evaluate them in the light of modern history, knowledge or ideals.

The publishers of many of these games were already established producers of maps and books, many of which were aimed at children. The idea of creating an educational tool was, in a way, a novelty. *The Game of Goose* was already well known and it required few changes to create *The Game of Human Life* or the *History of England*. The games were well received by parents who appreciated the educational aspects, the children's resulting enjoyment and possibly that the games could be played in relative peace and calm.

The early games stressed learning through play, but this aspect was gradually dropped in favour of sheer enjoyment of play. However, not all games were that enjoyable despite the claims of their titles. Perhaps the whole logic of such games was summed up by John Harris in the introduction or Advertisement as it was called to his game *Historical Pastimes* which was published in 1810.

"The utility and tendency of this Game must be obvious at first sight; for surely there cannot be a more agreeable study than History, and none more improving to Youth, than that which conveys to them, in a pleasing and comprehensive manner, the Events which have occurred in their own Country.

The little prints, which are regularly numbered from 1 to 158, represent either Portraits of principal Personages who have signalised themselves as Kings, Statesmen, Churchmen, Generals, Poets etc., or some remarkable Occurrence in our Country. This will naturally excite a curiosity in the youthful mind; and that curiosity will be gratified in the short account of each reign subjoined. On the whole, the writer flatters himself, that the public approbation will convince him, that the hours he has devoted to the formation of this little Scheme, have not been spent in vain."

It is known from surviving records, paintings and artifacts that games of the period (and today) are played in a similar way to those of ancient civilisations in the near and far east. There are only a few basic methods of playing games and over the past 250 years

many thousands of variations have been created. The basic methods of play come down to four types – race games, strategy games, table games and card games. Many were originally developed for adults and were later adapted for children. Today I will be discussing only board games developed in the United Kingdom.

It was the race game which above all became the basis for the educational game of the late 18th century and first half of the 19th century. The aim was to win but it was played with an element of chance and normally gambling was included by the means of a central kitty or pool into which players placed an agreed number of counters. Throughout play, rewards were given and penalties paid; sometimes these were the receiving or forfeiting of counters and at other times forward or backward movement on the board itself, though not the removing of markers from the board unless there was a provision for retirement from the game.

Why was this format produced for the wealth of educational games, including those teaching morals and behaviour, even though they retained the element of gambling and chance? Quite simply they were exciting to play. Astute publishers could use this characteristic to great advantage to encourage learning and reading skills.

The Game of Goose is generally regarded as the prototype of the modern race game. Devised in Italy and taken from much early formats of games played in the Middle and Far East, it was first noted in England by John Wolfe in 1597 as “the Newe and Most Pleasant Game of the Goose”. There were usually 61 or 63 squares or compartments which stressed good and bad behaviour. Of these squares, a number were plain and a number decorated with either a scene or a goose. Landing on a goose was a good move and rewarded, often with the words “double his chance forward”, while if landing on a bad square such as the Ale House a double penalty was paid usually in the form of a counter to the pool and waiting until all others had taken a turn. There were also very severe penalties such as death or overthrowing the end of the game, which required the player to either start again or withdraw from the game completely.

One of the earliest versions of this game was published about 1725 by John Bowls & Son and one of the latest during the 1980s. In general the format was a spiral or a flattened spiral but occasionally a new design was made, for example a one published by Richard Holmes Laurie, November 22, 1831. It shows a huge goose with three golden eggs set against a country scene.

Variations of a theme were numerous. Laurie & Whittle, successors to Robert Sayers (they in turn were succeeded by Richard Holmes Laurie) continued to publish *The Royal Pastime of Cupid Or Entertaining Game of The Snake* which was based on the ancient Egyptian Game of the Snake, however, possibly in design only and not in rules. The reissuing of existing and popular games, often by successors to a business, was common. In many cases, no changes were made; in other cases additions were included to update a game, particular ones on history or geography. All that a publisher needed to do was change the name and date of publication.

Perhaps one of the best games of a goose was *The New and Favourite Game of Mother Goose and The Golden Egg*. It shows episodes and characters from the pantomime of the same title and includes Clown and Harlequin and places in London. It was published at

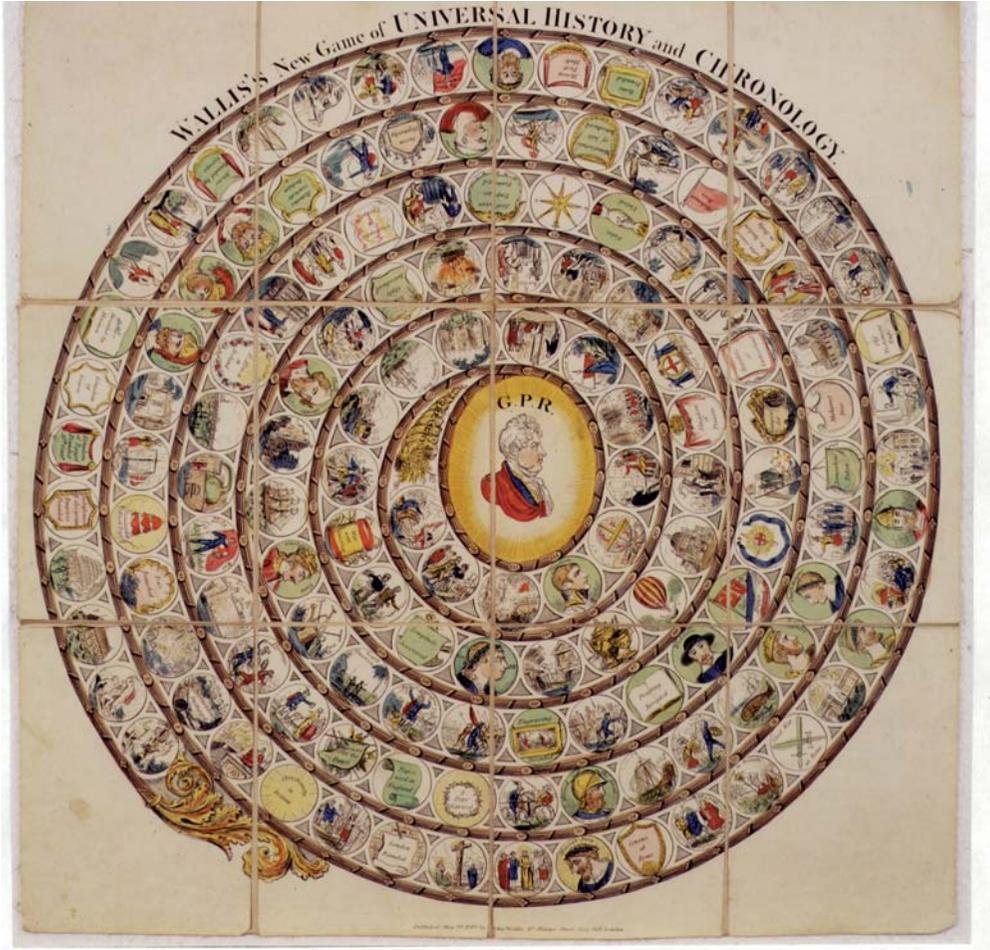


Fig. 1: Wallis's New Game of Universal History and Chronology, 1814. This game has as its centre illustration George Prince of Wales, later George IV.

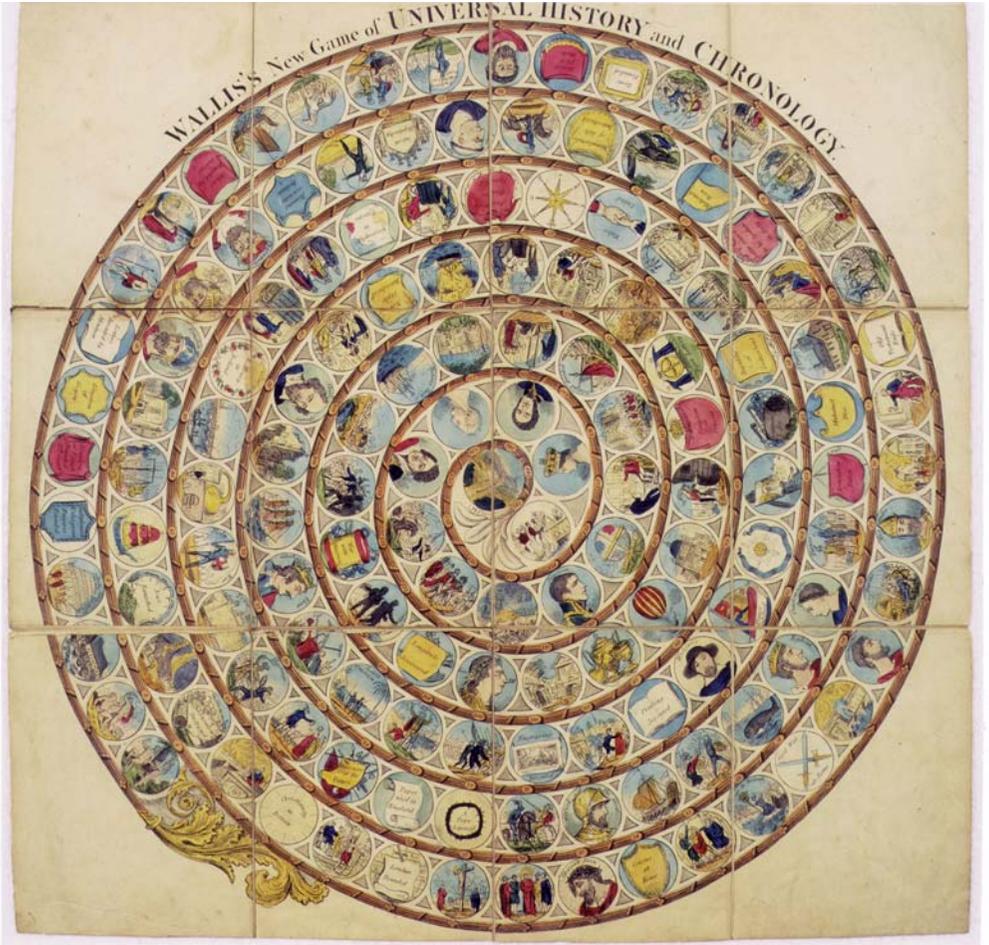


Fig. 2: The second example of the game, published about 1840, has the centre replaced with medallions showing George IV, William IV and Queen Victoria. The last scene shows a railway bringing the game right up to date.

the height of the career of Grimaldi the Clown, in September 1808, by John Wallis.

Many of the first publishers of games were in fact cartographers and they quickly included the race game idea into game of Geography. The spiral format was not used; it was replaced by a map – of England and Wales, Scotland and Ireland (collectively or individually), of Europe or of the world. One of the first publishers was Robert Sayers, working from 53 Fleet Street. He published much for children including puzzles and other games. Having started in 1745, he was succeeded in 1794 by Laurie and Whittle. The ideas for geographical games are summed up in a statement in the booklet of *Geographical Recreations or A Voyage around the Habitable Globe*, 1809.

“The game, consisting of 116 little prints of the most interesting objects in Geography, is designed to familiarise youth with the names and relative situations of places, together with the manners, customs and dresses of the different nations in the habitable globe; and, as curiosity will naturally be excited by the scenes which present themselves, and the observations likely to occur, it is presumed that these, with an occasional reference to the Synopsis herewith given, will prove a continual source of amusement to young people of both sexes, and will furnish such a fund of geographical knowledge, as may prove equally beneficial in reading and conversation.”

This statement shows the high hopes that many publishers had for their games. The geographical ones could be boring to look at, they were simply maps, often surrounded with vast texts. One wonders now as we play these games, were the youths of both sexes excited, amused or entertained by any of them. Often the titles were more exciting than the games. There were *The Tours of Europe, England and Wales* by John Wallis, *The Royal Geographical Amusement of The Safe and Expedious Traveller*, *The Royal Geographical Pastime*. By the mid-19th century, many geographical games were devised on a pictorial note rather than simply maps.

The historical and geographical games are quite illuminating when studying them for the context. To the modern reader, one may be surprised to see how well informed many of the comments could be. For example in *A Tour Through The British Colonies and Foreign Possessions*, published by John Betts, there is expressed disapproval in the selling of alcohol and weapons to North American Indians and the accepted fact that Sebastian Cabot rediscovered Newfoundland in 1496. William Darton, on the other hand, with his beautiful game *The Noble Game of The Elephant and Castle, Or Travelling in Asia*, 1822, seemed quite mystified by the strange ways and creatures found there for which there was no ‘rational’ explanation; this included a woolly mammoth.

The games of geography essentially looked at the world from a British viewpoint but the publishers did acknowledge that other places and people might be interesting. The history based games, however, were altogether more inward looking and usually strictly based on events as they affected the British Isles. During the period under discussion, King George III was on the throne for most of the time, from 1760 to 1820. He and his son became the focal points for the games whether or not the events actually happened during their lifetimes. The second rather amazing fact is that for many of the history games, nothing happened before 1066 and the invasion of William the Conqueror.

There are a few exceptions. One was *The New Game of Universal History and Chronology*, published in 1814 by John Wallis. This game starts with Adam and Eve, Anno Mundi 1. All the dates are given with great conviction, for example the Universal Deluge occurred in AM 1636. One now wonders how this knowledge was lost between then and today.

The games of history had many squares, often more than 150, and of course by reducing the period of history covered more details could be included. The games were often re-issued and reworked with changes being added in or adapted, especially with the death of the kings. George the Third reigned for so long, that a game was published by John Harris to celebrate his Jubilee in 1810. The squares showed events of his lifetime and the text in the accompanying booklet was very flowery when in praise of the king but was equally robust when describing some of the more disagreeable events. Included also were scientific and geographical discoveries.

Ten years later John Harris reworked *The Jubilee as The Sun of Brunswick* to celebrate the new king, George IV. The last 20 odd compartments were redone to include the deaths of Queen Charlotte, wife of George III, Charlotte Augusta the daughter of George IV, who was in a fact heir to the throne and known as Princess of Wales, and of George III himself. By the 1840s, Queen Victoria was on the throne and one of the most important new inventions was the railway, both were added to reissue games.

Gradually both history and geography-based games were replaced by other forms of games and of course, methods of learning. But these subjects were not the only ones to be treated in this way. Mathematics, natural history and languages were also subjected to the race game format though generally these games were not as attractive to look at. However, if played correctly, they were enjoyable ways of learning.

An Arithmetical Pastime was published in 1791 by C. Taylor. It had 100 circles, some of which contained illustrations while others had directions and forfeits to be paid. The forfeits were repeating tables, some of which were obvious such as the times tables, others were less so, for example the wine measures. Other tables are not now used – the avoirdupois, for example, measured pounds and ounces. If a player could not meet the forfeit, he had the choice of missing turns or moving backwards.

A later version, with the same title, had quite different rules and used two teetotums for the moves and to learn the mathematical disciplines. The players had to subtract, multiply or divide the two numbers given by the teetotums and the result formed the move. Used to accompany the game was a set of verses to be read out and a list of further rewards or forfeits. This version was the ultimate teacher as it taught everything - morals, history, geography and arithmetic.

Inked to mathematical games were those of astronomy. *Science in Sport or The Pleasures of Astronomy*, published 1804 by John Wallis, had 35 compartments with the portraits of astronomers and representations of astronomical phenomena. At the time nine planets and their movements around the sun were known, however, these were added to with fictional representations, for example The Man in the Moon. Often behaviour traits, The Studious Boy and the Blockhead, signs of the zodiac, comets,



Fig. 3: The Noble Game of the Elephant and Castle is a geographical trip through Asia, showing the latest archaeological finds including a woolly mammoth.



Fig. 4: Virtue Reward and Vice Punished is probably the best known of the “moral” games. Many of its teaching are as valid today as they were in 1818.

rainbows and even known astrologers were shown.

The Circle of Knowledge, published about 1845 by John Passmore, included the zodiac around the central compartment. Unlike many games of the time, it was arranged in four concentric circles. As well as the zodiac and the four cardinal compass points, Europe, Asia, America and Africa were shown, together with the four seasons, the four houses of the zodiac and the four sciences - electricity, chemistry, optics and astronomy. The illustrations too were unusual, for example fire was illustrated by a volcano, a burning farm and a pit explosion while optics were shown as a giant telescope, a magic lantern show and the perspective of a tunnel.

One of the best games of natural history was William Darton's 1820 version of *British and Foreign Animals*. The subtitle again gave graphic details about the aims of the publisher with "A New Game, Moral, Instructive and Amusing, designed to allure the Minds of Youth to an Acquaintance with the Wonders of Nature." Both domestic and wild animals were included, even the Australian kangaroo. A companion game published by Darton in 1822 had the wonderful title *The Delicious Game of The Fruit Basket or The Novel and Elegant Game of The Basket of Fruit*. Sadly only the design and title were delicious as the game dwelt mainly on penitentiaries and trial by jury, the Royal Academy, hospitals, national schools and the School for the Blind, sciences and religion. Both games while following the principles of rewards and forfeits were very much a teaching tool.

William Darton's games seemed to have a sombre side as many were very moral and rather disagreeable in tone yet beautifully executed. He later produced one which should have cheered everyone up, called *A Voyage of Discovery or The Five Navigators*, 1836. However, it dealt with the dangers and incidents likely to befall sailors.

We have touched on the games teaching history, geography and so on but the final main group was that of morals; these games were extended forms of the original Game of the Goose. Within many of the previously mentioned games, morals were included, however, the publishers devised many more which were very strict. Often they had good titles and possibly the best was *The New Game of Virtue Rewarded and Vice Punished for The Amusement of Youth of Both Sexes*, published in 1820 by William Darton. A generation earlier, a similar subtitle was "Designed for the Amusement of Youth of Both Sexes and Calculated to Inspire their Minds with an Abhorrence of Vice and a Love of Virtue." Taken from *The New Game of Emulation*, published by John Harris in 1804, this game actually showed many images a child would actually come across, a shepherd with his flock, a church, school, even a rocking horse while the almost cryptic words "cheerfully exert themselves to obtain an honorary prize" while being "perfectly aware of the consequences of disgrace and naturally dread it" rather deadened the pleasing illustrations.

Two methods of teaching morals or behaviour were produced, though both used the same games format. One method was based on the passage of life from infancy to old age and death and showed the temptations one might meet along the way. These tended to have straight formal titles such as *The Game of Human Life* and more often than not were based on the male life to the exclusion of females. However, the games were not

restricted to boys playing them, as the subtitle to *The Game of Human Life* states “...most Agreeable and Rational Recreation ever Invented for Youth of Both Sexes.” Parents were encouraged to instruct their children on each of the characters, usually 84, with “a few moral and judicious observations... and contrast the happiness of a virtuous and well spent life with the fatal consequences arising from vicious and immoral pursuits”. Most of the characters have the same meanings today although some of the pursuits would not now draw penalties, for example The Romance Writer must pay two and move back to the Mischievous Child and the Dramatist must pay four and begin again. The Tragic Author has the harshest as he advances to the Immortal Man and dies but to compensate him he actually wins the pool or kitty by finishing first. The game quoted was published in 1790 by John Wallis and Elizabeth Newbery. (While we are discussing only English games of this period, there are some very fine French and German examples of *The Game of Human Life*, often far more intricate in design.)

The second method, developed slightly later, was stricter and based on the fundamental principles that if you behave properly all bodes well, but if you slip from the straight and narrow the penalties are severe. These titles were much more lucid with *The Cottage of Content or Right Road and Wrong Ways*, *The Journey*, *The Mansion of Bliss and The Mansion of Happiness*. (This latter one is also the title of one of the first American board games, published by W & S B Ives in 1843.)

Penalties were paid for often routine bad traits – straying, boasting, wasting time, idleness, self-indolence, obstinacy, ignorance, pride, conceit and forgetfulness; other traits were considered very bad - theft, lying, drunkenness, cheating. In most of the games there were more bad than good traits – recollection, repentance, patience, kindness, exertion and diligence. *Snakes & Ladders* was the game which took over the teaching of morals, and it was a version of a game introduced from India. Like the earlier versions, there were more snakes, the baddies, than ladders, generally 12 to 8.

By the middle of the 19th century new processes were being introduced, lithography had been developed which was cheaper than the engraving and etching processes, even though the publishers had been one of the first groups to involve themselves in new technology – the use of static steam presses instead of hand operated ones. Many of the original group had died. The men and women who developed these early teaching games seemed to be inspired and that inspiration seemed to die with them. New publishers, new methods of production, new methods of teaching and new games formats changed the look of the board games and the very reasons for their existence.

As we study them today, however, the games remain excellent teaching tools. We learn from these games the history and social life of the people, what they felt was important and how they regarded themselves in relationship to the rest of the world and other cultures.

Publishers Mentioned

John Wallis, with sons John and Edward; one of the most prolific publishers of games and dissected puzzles between 1775 and 1847. Also worked with John Harris and Elizabeth Newbery.

Elizabeth Newbery, part of the leading publishing family of children's literature during the 18th century; John Harris managed her establishment. Worked with John Wallis
John Harris, took over Elizabeth Newbery's business in 1801 and worked until it was sold in 1843.

Robert Sayer, one of the earliest publishers of children's games, 1745-1794.

Laurie & Whittle, Robert Laurie and James Whittle; acquired the business of Robert Sayer in 1794. Richard Holmes Laurie succeeded Robert on his death in 1812 and James Whittle on his death in 1818. Also worked with other publishers including William Darton.

William Darton, established 1787 and under went many name changes depending on the partners and sons. The William referred to here was the son who opened his own establishment in 1804.

John Betts, leading 19th century publisher between 1827 and 1874.

John Passmore, published from 1840 to 1869.

Bul: A Patolli Game in Maya Lowland / Lieve Verbeek

Comparative ethnographic research on colonial and contemporary Mesoamerican⁽¹⁾ board games revealed that the Maya board game, called *bul*, played by the Mopan and K'ekchi' farmers in Southern Belize⁽²⁾, is a native American game. There is a well-marked affinity and relation between the pre-Conquest "game of the mat and patol beans" of the Aztec, called *patolli*, and its various twentieth century manifestations.

1. Introduction

In the pre-Conquest times games of chance employing beans or reeds as dice were quite popular and widespread in Mesoamerica. Although there is an abundance of ethno-historical documents, no accurate description has been found of how these games were played. Even the well-known Aztec board game of *patolli* is still a riddle. Only the "superstitious" aspects of the game and the heavy betting that went with it are well documented. If we are to believe what the earliest Spanish chroniclers wrote about the native American games of chance, we must assume that by the end of the sixteenth century the Mesoamerican games were abolished (fig. 1) and replaced by Spanish or Old World games (Duran 1967, Sahagún 1981). Besides, the twentieth century ethnographers and anthropologists do not show much interest in the games of the native Americans either. The reason probably is that there is no direct demonstrable association between modern recreational games and divination. No doubt, in ancient times the Mesoamerican games must have had a mantic significance, but at the eve of the Conquest sheer gambling was the main objective of the native American gamblers. On the other hand ethno-historians and archaeologists are still studying the various designs of the *patolli* boards that have been discovered in ancient sites all over the Mesoamerican area. Although there are still many questions unanswered, it is generally accepted that the *patolli* boards are cosmological images (Caso 1924-27, Duverger 1978, Swezey and Bittmann 1983).

By now the term *patolli* has become a generic term. It does no longer signify one specific Aztec game of chance, played on a mat on which there was drawn a cruciform board, with four black, marked *patolli* beans as dice (fig. 2). *Patolli* now labels any variant of the square, cruciform or circular game-boards drawn or incised on floors or benches of ancient Mesoamerican buildings (figs. 3 to 6), or featuring in the multiple pre-colonial or early-colonial codices (figs. 7 to 9), as well as some of the twentieth century games of chance that are assumed to be survivals or variants of the ancient game of *patolli*. For indeed, in some remote areas, safely away from the surveilling and punishing Spanish authorities, indigenous groups preserved their ancestors' games of chance well into the present century.

Nevertheless, it must be considered a lucky coincidence that this author recently had the opportunity to observe a Maya board game in the field⁽³⁾. In the tide of modern civilization and technology even the most isolated communities are swiftly substituting their cultural heritage for the "blessings" of westernized societies. And thus, the



*Execucion de los juegos y tabulexias de los jueces y fue justiciado
como ellos por el Sr. D. Juan de Vera. Fue por mandado de 'cortes'*

Fig. 1: Execution of a patolli player. His patolli board, dice, counters and bundle with superstitious objects are being burnt (Relaciones Geográficas: Tlaxcala, Tomo I. 241v 11).



Fig. 2: **Patolli**, codex Florentino, lam. XLVIII, nr. 63, reproduction from the work of Sahagun, Madrid, 1905

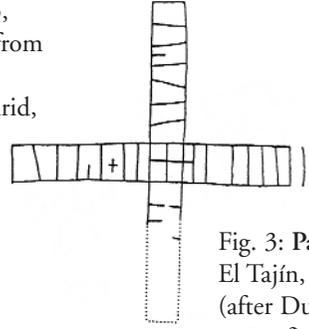


Fig. 3: **Patolli**, El Tajín, Mexico (after Duverger, 1978, fig. 4c)

Fig. 4: Xunantunich, Belize, **patolli** Type I (after Mackie, 1961)

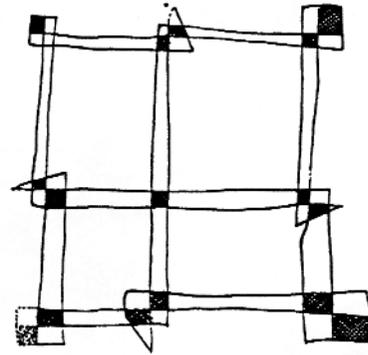
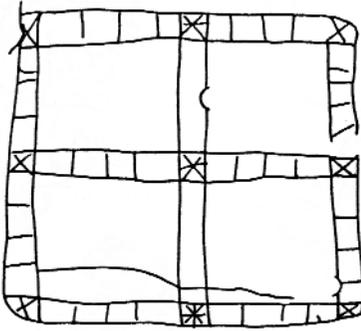


Fig. 5: Teotihuacán, Mexico, **patolli** Type II (after Bernal, 1963, lam. 9:3)

Fig. 6: Chichen Itzá, Mexico, **patolli** (after Ruppert, 1943, fig. 4c)

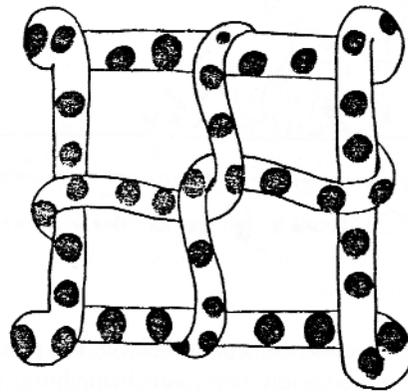
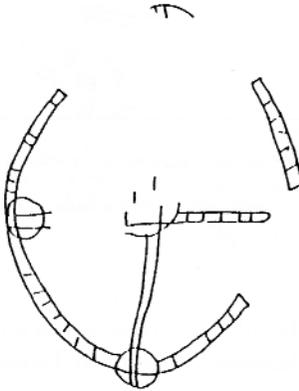


Fig. 7: **Patolli** in Codex Borbonicus, p. 19, facsimile edition, commentary by Hamy, Paris, 1899.

traditional games are being dismissed by the younger generations. The registration of the ancient games is becoming an urgent issue, not only for native American folklorists and ethno-historians but also for the indigenous groups themselves, if they are really concerned about safeguarding various aspects of their cultural heritage.

The study of Mesoamerican board games comprises a large and still unexplored field. In the scarce literature on contemporary Mesoamerican board games most descriptions date from the first half of the twentieth century. The ethnographers seldom gave an accurate reflection of the rules or the playing context and often did not bother to make a distinction between Old World and New World games. Ventur's structural description of the Mopan dice games stands in contrast to the vague accounts in most colonial and even modern sources (Ventur 1980: 257). The purpose of this paper is twofold: first, to present the Belizean version of the game of *bul*, as it was observed in its natural context by this author, and second, to prove that the board game *bul* indeed is a modern variant of the ancient Mesoamerican *patolli* game. For that purpose the data on *bul* will be compared with what is known about a few other Mexican board games. At the same time this comparison should result in a tentative typology of the *patolli* games.

2. Bul, a Ceremonial Game

One day in the month of May, my Mopan hosts invited me to the customary vigil ceremonies they perform before planting their corn. For that purpose the helpers at the next day's planting use to come to the hut of the farmer to spend the night with him. After the habitual prayers and incense-offerings to the God of the Earth and the Wood, Santo Witz, Santo Hook, Santo Che', in front of the house altar, the men told me that now I was going to witness an important part of the ceremony: they were going to "play corn". One Mopan man took some grains of corn out of one of the corn bags in the hut and put them on the floor in a straight line. In the meantime the others went outside to look for suitable counters, each of them returning with five similar small pieces of twig, leaf stem or grass, different from the counters of the other players. They formed two teams and squatted on the floor, in front of each other with the corn "track" between them. One player then looked for four suitable grains of corn to make the lots, the corn dice. One side of each grain was blackened with charcoal he took from the cooking fire. And then the game could be started. It appeared to be a kind of a war-game. The players moved their men up and down along the corn-track by throws of the four corn-dice, called *bul*, which is also the name of the game. During a break the players drank large cups of their traditional cocoa. At a certain moment the farmer took the incense burner, lighted its fire and went outside the hut to pray again to the God of the Wood. I learned later that, in order to enforce their supplication for a rich corn harvest, the farmers mention the playing of the *bul*-game in their prayers as another ritual obligation that is being fulfilled (Verbeeck 1996: 84). Notwithstanding the ritual character of the game the atmosphere among the men is very joyful and exceptionally loud. It is very unusual to hear the retiring Maya laugh and shout boisterously. Women never play or even watch the *bul*-game. But they follow the proceedings of the game in the kitchen with great interest. Judging from the men's exclamations and remarks, they know who are winning.

Fig. 8:
Patolli in
Codex
Borgia, pl.
62 (Anders
& Jansen,
1988: 54)

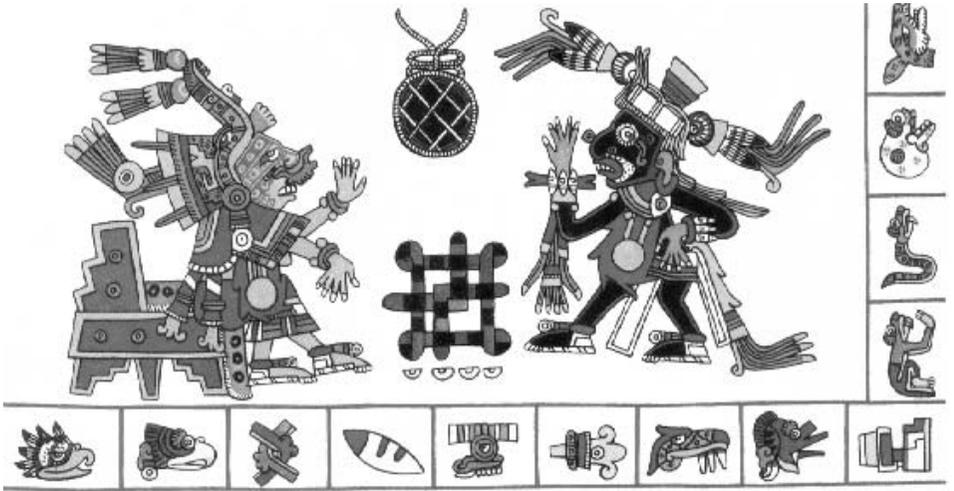
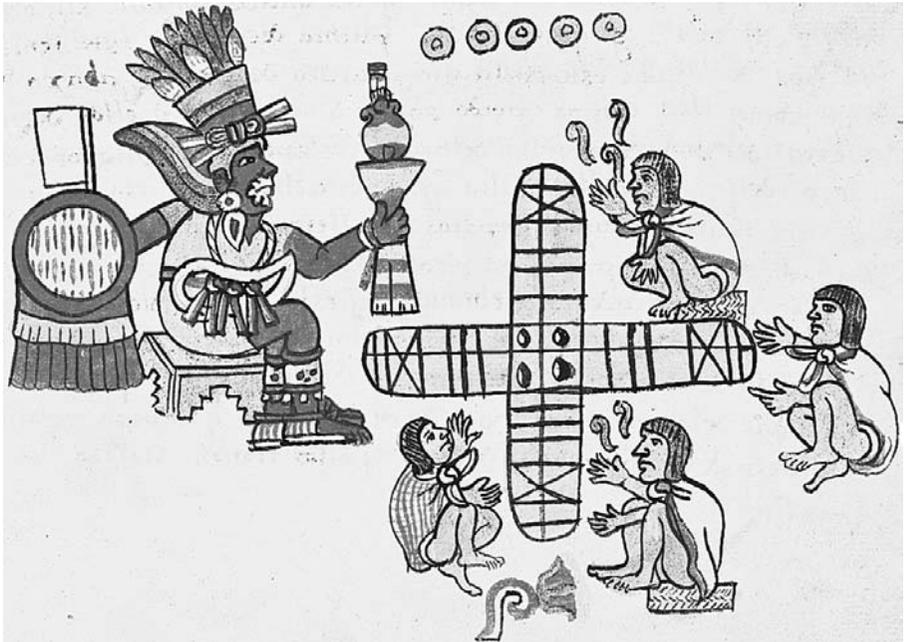


Fig. 9: Patolli,
Codex
Magliabecchi,
fol. 60,
reproduction
Ioubat, Rome
1904; Graz
1970.



They enjoy imitating their excited cries for a favourable throw of the *bul*. That evening the whole play took more than three hours. By then it was midnight and the due moment had come to close the vigil with the ceremonial meal that consists of *wah tel chicharron*, corn tortillas with pork rind in broth. The *bul* and the counters were thrown away, nobody cared about saving the game instruments.

It was confirmed by other Maya informants that the *bul*-game is an essential part of the rituals and ceremonial obligations of the “vigil of the maize”. In the richer villages however, there are music and dancing besides or instead of playing *bul*. What seems to be important is that the corn, which is going to be planted the next day, should be surrounded by bright joyfulness the night before it will go down into the “dark earth” (Pacheco 1981: 104). This is probably the reason why I observed so little competitiveness during the game. The general atmosphere of that *bul*-evening radiated harmony, joy and fun. It did not matter at all who won or lost; what was important was the cheerful playing together. The function of the *bul*-game is to create a foreshadowing of the ‘alegría’ that will reign at the harvest of the corn.

Only the Catholics among the Belizean Maya still maintain the old ‘*costumbre*’ of the vigil of the maize. As they are becoming a minority, the *bul*-game is gradually falling into oblivion and with that another element of the old Maya traditions threatens to disappear.⁽⁴⁾

3. Description of the Game of Bul

3.1. Players and tools

Bul can be played with any even number of players above six. They play in two teams inside the house, squatted in front of each other around the game board. The board is marked on the clay floor of the hut by twenty grains of corn. The grains are placed in a straight line, some 5 cm apart, the intervals being the points of play. The board is called *bej*, the ‘road’, which is the circuit the players have to run up and down from their starting point. Depending on the number of players, more than ten or sixteen, the road is lengthened with five or ten more grains respectively (fig. 10).

Every player has selected his own five counters, recognizable by their specific material, colour or length. They consist of five similar pieces of equal length of twig, leaf stem, grass or any other oblong object measuring between 4 and 10 cm, which can be found in the surroundings of the hut. Bulb shaped counters, like berries, cause hilarity among the players, first of all because the person who introduces these irregular counters proves himself to be lazy or not well acquainted with the rules of the game. But secondly, there is a humoristic linguistic aspect to the deviant shape of counters, because during the game these objects must be referred to as *tziit*, the Mopan numeral classifier for oblong objects. The numeral classifier for bulb-shaped objects, *kuul*, is used for the grains of corn, which are the other game tools: they form the track and are used as dice. In the course of the game the players constantly shout to their partners the number they should throw in order to land on the “right place”. In their exclamations “one!” (*hun kuul*), “two!” (*ka’ kuul*), “three!” (ox *kuul*), etc., the word *kuul*



Fig: 10. Mopan Maya playing **bul** (photo L. Verbeeck 1994).

is always in the air. This intentional linguistic confusion of the dice with the counters is typical for Mopan humour.

The counters are moved by the throws of the four *bul*. These dice are four flat-sided grains of corn, so that they only have two sides to fall on. The grains are prepared by digging out with the thumbnail the eye on one side of each grain. This is called *k'oyik u päsäk'al a ix'i'mi*, "to pick the heart of the corn". Then the hollow of each grain is marked with a black dot, either by rubbing charcoal in it or by using the live end of a glowing stick. This operation is called *bonik tel butz'*, "to give colour with charcoal", or *jo'ochtik tel butz'* or "rub with charcoal". The black-spotted side of the dice is called *u wich a bul*, "the face of the dice", the unmarked side is called *u yit a bul*, "the bottom of the dice". The value of the throws is determined by the number of black dots that fall upwards:

ka wila' bon a jäwá'ana, “look how many are lying on their back”. This may be one, two, three or four. If the four unmarked sides have fallen upwards, *le'ek wa laj päklaji*, when all lie face downwards, the score is five⁽⁵⁾. The *bul* are simply thrown from the hand onto the ground. While a player is preparing his throw, by shaking the *bul* in his hands, the others are anxiously following his movements whispering *tun kaxäl* (“they are falling”).

3.2. Rules

- ◆ Each player has two throws in a turn. He moves his counter after the second throw, advancing it according to the score of each throw, in arbitrary order. This is important because it enlarges the possibilities of capturing an adversary.
- ◆ The home fields of the teams lie at their left end of the “road”. Thus the teams enter their men from opposite sides and move in opposite directions. When they have reached the opponents’ field, they return to their starting point along the same “road”. It is not necessary to throw an exact number to enter the home field.
- ◆ The first men of both teams make a throw to decide who starts the game. The highest throw wins. After the first player entered a marker, the other members of his team, from left to right, each throwing twice, enter one counter. Then the opponents get their turns to advance their men from the opposite side of the board, etc. Each player can only have one movable man at a time on the board. When he has reached his home field safely, he re-enters that man.
- ◆ But it is the hope of every player to land into a space occupied by an opponent. In that case he starts returning back to his home field carrying his opponent as his captive. The opponent loses his man and enters another counter at his next turn.
- ◆ Whenever a player captures an opponent he moves directly backwards towards his home field. But this shortened track does not guarantee his safely passing out, because the combined men remain vulnerable. If any player of the opposite side plays his man to the point occupied by the reversing men, he puts his counter on top of the little stack and moves all of them back to his own home field. This man in his turn may be taken, losing himself and his prey. They will be reversed again in the opposite direction towards the last captor’s home field. There the captives are retained. The counters belonging to the partners of the winner are “liberated” and returned to their owners, who enter them again. The number of these takes and retakes is in fact unlimited. The accumulation of counters increases the excitement of the players. A stack may be captured by another stack.
- ◆ Doubling a space occupied by a partner is permitted and does not change the play of either.
- ◆ Players never throw more than twice. If the first throw takes an enemy’s counter, the second one counts towards carrying him home. If the first throw brings a player safely home, the second can be used for re-entry on the board.
- ◆ No player loses his throw. If he has lost his fifth counter, he continues to throw the *bul* to help his partners. However, Ventur presents a restriction in the Guatemalan *bul* game. If all the markers of a player are “immobilized”, he is temporarily “paralyzed”; his turn is passed, and he cannot again throw the dice until the outcome

of these captures is determined' (Ventur 1980: 251).

- ◆ The game ends when a team has no counters left to enter. Winner is the team that captured most of the enemy's men.

The goal of the game is to capture as many men of the adversaries as possible. The whole idea shown by the terms of the game and especially by the exclamations of the players is that of the pursuit and safe transporting of captured load or prey back to the home field: *in mächaj u kuch* ("I grabbed his load"), *watak ta pach* ("he is coming after you"), *tak ti kol* ("and now straight to the field"), *jobi* ("he is killed").

3.3. Variants of the *bul* game

The game of *bul* consists of a set of five variants, played in a fixed order and which differ from each other in the way of running or attack. Four variants are inspired on local animals and their specific ways of catching their prey. This determines the rules of each variant and its name.

The first game, called *aj sayil* (wee-wee ant) follows the general rules as described above in 3.2. and is indeed regarded as the basic game.⁽⁶⁾

The second game, *aj t'iwil* (the eagle), is the quickest variant. The player who takes an opponent immediately leaves the road with his prey. He does not re-enter his counter.

In the third game, *aj sind'anil* (the scorpion), a man can move forward and backwards to capture an enemy. Retakes are possible in this variant. The winning counter is re-entered.

With the army-ants, the fourth variant, *aj sakalil*, the men keep on moving straight ahead to the other end of the road, even when they are carrying one or more opponents. They do not run back to their home field. The winner re-enters the road from his starting point.

At the start of the last game, *a k'aak'il* (the fire), there is a small circle drawn with charcoal in the middle of the road. The player who lands into that circle is burnt by the fire and his prey will burn with him. If a player captures an adversary before reaching the fire, he may return immediately. His counter may be re-entered after his safe arrival home.

After each variant the teams count how many opponents they 'ate' or 'killed'. But in the end the outcome of the game is not important.

3.4. Some general remarks on *bul*

This Maya war game obviously does not require much mental skill or calculation of its unsophisticated players. The only "clever" move a player can make, is to count his two throws in the appropriate order, when there is an opportunity to take an opponent. In Ventur's description this possibility is non-existent, but he points to the *sind'an* variant as the most complex of the five games. This game requires some strategic insight as the player can move his counter forward or backward to capture an opponent, but is not obliged to do so (Ventur 1980: 253). As was explained before, the purpose of the *bul* games is to pass the time during the vigil and ultimately, it is not important who are the winners. The game is entertaining, not only for the players who can all take part

until the end of the game, but also for the spectators, who love to see the moves that lead to captures and recaptures of stacks of counters. Although the playing of *bul* occurs in a ceremonial, religious context, the elements of the game do not bear any specific religious meaning. Nor did the players indicate any connection between the game circuit and the cardinal points and the centre, which traditionally have a strong symbolic value in the Maya area. The use of grains of corn as game implements is simply obvious as these kernels are always ready to hand in a Maya hut. The symbolism of the game expressed in the players' terminology is not farfetched either: the game reflects the farmers' life. Their walking up and down to the field, their carrying a load, the uncertainties about winning or losing at harvest time: these are the vicissitudes of life that are fairly familiar to them. The players were quite conscious of the fact that they were performing an old "*costumbre*", but they certainly did not bother about the probably ancient roots of their game. Besides, it is quite possible that the set of variants, or at least some of them, are the result of a recent, regional development and perhaps of an Old World introduction. The last variant in particular, in which a 'fire' is drawn in the center of the track, is reminiscent of the game of goose. Another peculiarity, that might illustrate a development in the game, is the fact that the English translation the players gave for certain game elements do not correspond with the Mopan word. When explaining in English certain episodes on the game for instance, the players talked about 'bullets' when referring to the counters, the image of the animals as hunters being lost. In Mopan the counters have no metaphoric name, they are called *che'* (sticks) or reference is made to their owner. The 'fire' (*kaak'*) in the last game becomes a 'ditch' in English.

4. Historical Sources on the Maya Game of Bul

Nearly a century ago Stewart Culin published in his *Games of the North American Indians* a K'ekchi' Maya version of this *bul* game, called *boolik* (Culin 1907: 141-143). A certain Thomas J. Collins had provided him with a detailed description of a corn game, that was in common use among the K'ekchi' Mayan Indians in Alta Verapaz, Guatemala. The ethnographer Karl Sapper described in 1906 a similar game, called *puluc*⁷⁾, which he had observed not only with the K'ekchi', but also with other "tribes of Northern Middle America" (Sapper 1906: 284). The extensive description given by Culin corresponds more or less with the basic game as described above in 3.2.. The testimony of Culin's informant from 1899 only differs on the length of the track. In that K'ekchi' version a player only has to run to the opponent's field, at the other end of the board. When he has completed his passage of the line without capturing an opponent, he immediately enters again at his own end of the board. He does not have to run back to his home field along the line, as today's Mopan players have to do. None of the one century old descriptions mention the five variations, which might indeed indicate a recent development. Nor did the authors make any reference to ceremonial circumstances.

It is unclear why Murray (1952: 149, number 6.7.6.) classified Culin's version of *boolik* as a race game and not as a war game, as he concludes his description with the

remark that “the game ends when all the men of one side are taken”. Bell based his interpretation on Karl Sapper’s very brief description of *puluc* and constructed his own rules to create a playable corn game. Bell classified *puluc* as a “running-fight game”, which is one of the subclasses he differentiates among the war games category (Bell 1960: 89). Following de Voogt’s classification, all four descriptions of the Maya board game (Sapper 1906, Culin 1907, Ventur 1980, Verbeeck 1996) indeed fit in the class of war games, their subclass, based on the purpose of the game, being: destruction (de Voogt 1995: 15).

5. Bul, a Mesoamerican Board Game?

How old is this Belizean board game? It is certainly not a recent invention of some playful Maya Indian. But how to prove that it is not a game the native Americans learned from their European conquerors? There is no direct evidence of its pre-Colonial origin⁽⁸⁾. From the sixteenth-century chronicler de Landa (1566 [1985]) and the Mayan sacred book, *Popol Vuh* (Tedlock 1985), we only learn that the Maya played with dice. But it remains unclear what kind of dice they used and how they played. The etymology of the Yucatec Mayan word *bul* evidences that in the sixteenth century, the Mayans knew dice games and that gambling was associated with them (Barrera Vasquez 1980). Also the K’ekchi’ cognate *buul*, bears the complex meaning of playing a board game and of winning in a game of chance or a lottery (Haeserijn 1979). Ventur’s exploration in colonial and modern dictionaries or vocabularies reveals that *bul* and its cognates gloss the native dice games as well as all European games of chance and their artifacts (Ventur 1980: 244-46). But this linguistic evidence of the existence of Maya native dice games does not prove that the Mopan *bul* game indeed is a variant of an ancient Mesoamerican game. Comparison of the data on *bul* with what is known about other Mesoamerican games of fortune should solve the problem. This will be treated in the remainder of this paper. At the same time it will be attempted to define the most salient features of those board games in order to establish a tentative list of Mesoamerican characteristics. This should distinguish them as a regional subclass from the general class of American race games presented by Murray (1952:150). Murray based his ‘general characteristics of the American race-games’ on Culin’s catalogue (1907), which describes one single Central American dice game. Murray in fact only typified the North American board games.

5.1. Patolli in Mesoamerica

The game of *patolli* was most popular in Aztec times. According to the chroniclers the Aztecs had a passion for gambling. In his *Historia de las Indias*, Diego Duran (1575-81 [1967]) mentions that professional gamblers travelled from town to town with dice, tied in a cloth, and play-mats, with a cruciform board painted on it, under their arms. The dice were four large, black beans, called *patolli*, marked with white dots. The early descriptions of the game unfortunately are unclear and confusing. The ancient Mexicans apparently played various games of chance. But we only know the name of the most famous game, *patolli*. Following Culin’s classification, Murray and Bell presented this particular “game of the mat” as a race game (Culin 1898: 844; Murray 1952: 147 no. 6.7.1.; Bell 1960: 6). But, the earliest Spanish sources in fact referred to both war and

race games, when they tried to compare *patolli* with “alquerque”, or “castro”, or “tablas reales” (Sahagún 1981: VIII, c 10, p 300; Lopez de Gomara 1552: fol. 42).

Just when and where the game of *patolli* originated is not clear. The bean, also known as the mescal bean, was found in archaeological sites in Texas and Northern Mexico and is said to have been used in prehistorical divinatory cults, long time before the Aztecs settled in the valley of Mexico in the fourteenth century. The Aztecs would have brought the hallucinogenic patol beans from the north and named the game after the beans they already used with oracles and divinations (Duverger 1978).

From archaeological sources it can be deduced that the *patolli* boards already occurred in the Classic times, at least some ten centuries ago, in the Maya area as well as in Central Mexico (Swezey and Bittmann 1983). The design of *patolli* boards varies considerably, as is illustrated in figs. 2 to 9, and, from the ancient pictographical manuscripts we infer that also stick dice were used (Codex Vindobonensis Mexicanus, sheets 13 and 20). Moreover, the first board game Durán described in his Chapter XXII, on Aztec games and gambling, appears to be a kind of war game played with cane dice instead of *patolli* dice. He accounts as follows (Durán 1575-81[1967: 197]):

“There was another game, which was that they made in a plaster floor little hollows after the manner of the game called “fortuna”, and one person took ten stones and the other ten stones, and the one put his stones on the one edge and the other on the other on opposite sides, and with some reeds split down the middle, they cast them on the ground so that they sprang up, and as many reeds as fell with the hollow side upwards so many places he moved his stones forward, and thus one followed the other, and all the stones he overtook he took away until he left the other without any and it happened that five or six were taken and with the four that were left, he could tell the reeds to turn against the other and he would still win the game.”

In the colonial period dice games, played with beans or with reeds or sticks, were observed all over Mexico. In many cases the word *Patol* labelled stick-dice games too⁽⁹⁾. Culin mentions several of these dice or board games in his catalogue. Their variations are more in the materials employed and the circuit than in the object or method of play⁽¹⁰⁾. Summarizing the data presented above this author complies with the use of the name *patolli* as a generic term. As will become clear in the next paragraph, *patolli* labels both race and war games of Mesoamerican origin.

5.2. In search of the Mesoamerican link

The board games still extant in Mexico, which were studied for this comparative presentation, are the Nahuatl *petol*, played in Puebla (Caso 1924-27: 203-211), the Purehepecha *kolitza* or *kuiliche*, played in Michoacan (Beals and Carrasco 1944: 516-22; Soto Bravo 1992), and the Chinantec *los palos*, played in Oaxaca (Weitlaner and Castro 1973: 189, 191). They will not be presented here at length. Only the common characteristics with *bul* will be highlighted. An important contribution to the study of *patolli* was paid by the Mexican ethno-historian Caso. Seventy years ago he discovered in the Mexican state of Puebla a race game called *petol*, that he considered to be a regional variant of the famous ancient game (Caso 1924-27: 203-211). The Nahuatl-

Fig. 12 (right):
Petol game
board (Caso,
1924-27, fig.
6)

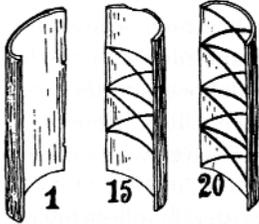
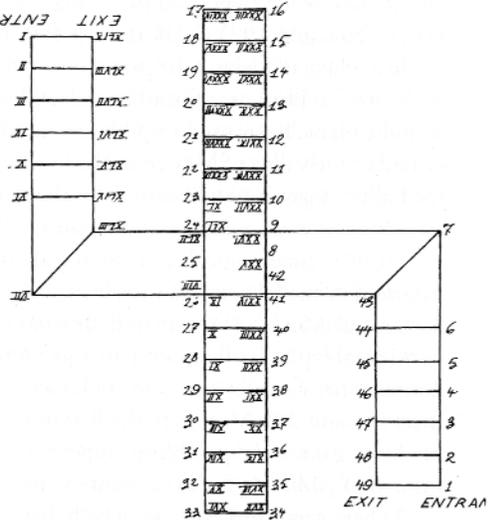


Fig. 11: Petol
cane dice
(Caso, 1924-
27, fig. 5)

speaking descendants of the Aztecs now use four short stick-dice, made of split reeds, two of which are marked differently with crossed lines in their hollow insides (fig. 11). Caso also refers to Durán to prove the ancient origin of the stick-dice. This set of cane dice resembles the various North American sets described by Culin (1907), not only in their markings but also in the throwing and scoring method. However, the resemblance of this Nahuatl *petol* game with other Mesoamerican games is quite striking and offers good evidence for a common origin or development within the Mesoamerican culture area.

First of all there is the use of four two-sided lots [1], which corresponds with the number and characteristics of the patol beans used in the ancient times. As to the cane dice, it appears that in the modern games also the hollow sides indicate the score, just as in the game described by Durán, above in 5.1. (Durán 1575-81[1967:197]). We may assume that also the pre-Hispanic scoring method has survived: as a rule every marked side counts one [2].

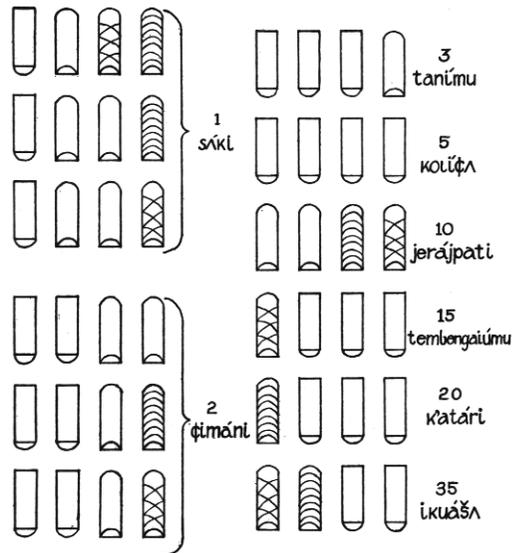


Fig. 13: Kolítza
scoring method
(Beals and
Carrasco, 1944
fig. 5)

Some modern scoring methods may be more or less complicated according to the variety in markings on the sticks or reeds, but the common characteristic is the value of five [3] for a throw of four identical lots, four unmarked sides up mostly. This value of five is no coincidence. The number five had a symbolic value in the ancient times (Duverger 1978:93) and it was associated with Macuilxochitl “Five Flower”, the Aztec patron deity of the *patolli* game, as is illustrated on folio 60 of the Codex Magliabecchi (fig. 9). The importance of the number five is also reflected in the name of the Purepecha board game *kuiliche* or *kolitza* (Beals and Carrasco 1944: 519; Soto Bravo 1992: 3). Both words label the throw that counts five, although the highest score is 35 (fig. 13). The higher scores, due to extra markings on two of the reeds are probably a colonial introduction. This is probably also the case with the Nahuatl *petol* dice. According to Caso the reed that now is worth 15 is a substitute for the ancient value of 5 or 10.⁽¹¹⁾ The Maya game of *bul* exemplifies the simplest version of the scoring method and thus, a throw of four unmarked grains of corn gets the highest score of 5.

Another correspondence in the Mesoamerican board games we find with the number of players. The games are always played in two teams [4] of equal numbers. Every player has his own distinctive set of counters but the games are team games. The individual player participates until the end of the game.

Capture by simple replacement [5] is another pan-Mesoamerican characteristic. No matter the shape or length of the circuit, the teams have their own entrances [6] on the board. As to the boards indeed, there are differences. The modern Nahuatl *petol* board for instance, shows the “modification” of the ancient Aztec cruciform pattern into a swastika shaped circuit (fig. 12). According to Caso this change probably did not affect the character of the game, as neither did the substitution of *patolli* beans by cane dice. Which means that in Caso’s opinion the ancient *patolli* was a race game. What is

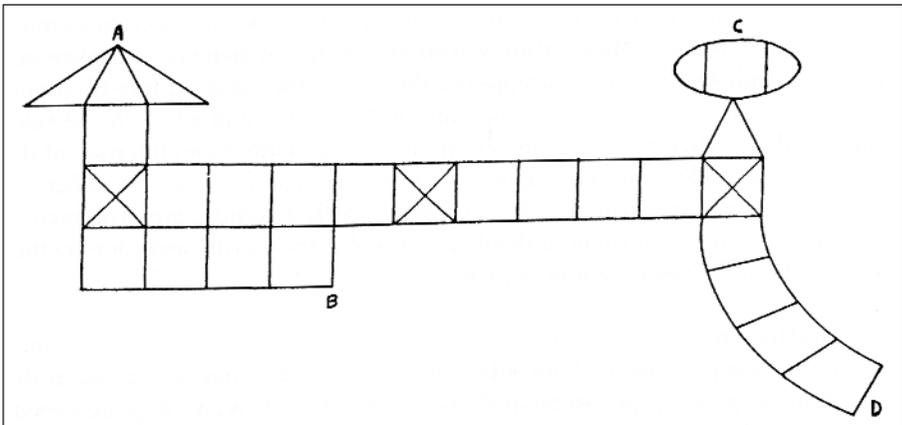


Fig. 14: Los Palos
(Weitlaner and Castro,
1973: 192, fig. 47)

especially important in this comparative study is how the circuit is used. It appears that in the modern *petol* variant the players run their men only along three arms of the cross. The pieces enter at the opposing far ends of the bent arms of the swastika and move by the throws towards the centre of the board. Then the counters run along the two stretched arms of the cross. It is only in this straight section (in fact between the points 10 and 40 of fig. 12) that the men can be captured. When a player arrives again at the arm of his entrance, on point 42 of fig. 12, he is not vulnerable anymore. He just has to get a correct throw to leave the circuit. His opponents leave along their own 'safe' arm. By counting the number of points the teams have to run Caso found a strong indication that the modern *petol* game reflects the symbolic numbers related with the ancient Mexican chronology and astronomy, which certainly also applied to the ancient game of *patolli*. But this aspect has fallen into oblivion among the modern *petol* players. In this author's opinion the common part of the circuit, where capture is the object of both teams [7], is a crucial feature in the comparison of the Nahua race game with its contemporary variants. In the Mexican state of Oaxaca the anthropologist Weitlaner observed a *patolli* variant, called *los palos* ("the sticks", obviously named after the cane dice they use), with a similar common circuit of going up and down a straight line (Weitlaner and Castro 1973: 189, 191-2). The 'safe' entrance arms, however, are moved to the ends of the line (fig. 14). This means that in the Oaxaca variant, *los palos*, the players enter the common part of the circuit at the ends of the line, and not in the middle. Thus there is little resemblance left with the original Aztec cruciform board, except for the cross markings, which remind of the enigmatic markings on the original boards (figs. 1, 2 and 9). In this Oaxaca variant these marked places are "safe spots" where a man cannot be taken, just like the centre in the *petol* game.

On the other hand this game of *los palos* shows sufficient similarities with the Maya *bul* game too, such that their Mesoamerican affinity is fairly evident. To begin with: they are both war games. They use four two-sided lots and have the same scoring method, their highest score is five, their circuit consists of a continuous going up and down one line, their counters also move in opposite directions, they also capture by simple replacement. On the *bul* game-board the 'safe' playing area is omitted, the home fields lying outside the circuit. In this author's opinion this is another simplification of the Mesoamerican *patolli* board. The circuits on the *bul* board or of *los palos* are in fact not linear, but continuous, just as they are on the other Mexican board games. This cyclical movement of players returning to their starting point and leaving again for another round is typical for Mesoamerican thinking.

6. Conclusion

The Maya board game *bul* undoubtedly is another survival or modern variant of the pre-Columbian *patolli* games. As this is the only instance of a Maya board game it is not possible to define a typically Maya development in the Mesoamerican board games. Within the group of Mesoamerican board games *bul* offers a special attractiveness by the fact that captives keep on accompanying their captors on the circuit and consequently may expect their chances of retakes and liberation. This is might be a

colonial or perhaps more recent development of this Maya *patolli* variant.

The comparative study of four existing Mesoamerican board games resulted in a tentative typology of this regionally defined group of native American board games, called *patolli*. Common characteristics we find in the dice [1] and the scoring method [2],[3], the team game [4], the captures [5] and the circuit [6],[7]. This typology includes both race games and war games. This distinction in object of game does not really play a part. In both types the opponents have to run a circuit. Besides the dissimilar objects of *petol* and *kuiliche*, the Nahua and Purehepecha race games, and *bul* and *los palos*, the Maya and Oaxaca war games, the difference between the two types of games actually only lies in the fact that in the latter games the opponents' counters are not returned to let them enter the circuit again. We can agree with Yuri Averbakh (1997:3) that this difference is very small.

Still, the question whether the famous Aztec *patolli*, the "game of the mat" was a race game or a war game, remains an intriguing one.

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Notes

1. The term *Meso-America*, introduced by Paul Kirchhoff (1947) does not indicate a strictly limited geographical area, but the pre-Columbian culture area in which different native American peoples shared common cultural traits. According to Kirchhoff the northern frontier of Meso-America reached at its peak the Rio Grande, a line that had receded again by the fifteenth century. The southern frontier ran east of Nicoya in Costa Rica. The Maya area is the southernmost subregion comprising southern Mexico, Guatemala, Belize, southwestern Honduras and El Salvador.
2. The 10,000 Belizean Mopan and K'ekchi' belong to two distinct Mayan linguistic groups, whose languages are mutually unintelligible. Both are the descendants of emigrants from the Guatemalan Petén area. They are subsistence farmers maintaining the traditional slash and burn method. The data on this board game were collected in the village of Santa Cruz, Toledo District, Belize in 1993 and 1994, while making a study of linguistic acculturation in Mopan Mayan. The author wishes to express her gratitude to Santiago Ash, Benito Canti, Enriques Coy, Marcos Sho, Placido Sho and Raymundo Sho. Without their assistance this paper could never have been written. Many thanks also go to Thierry Depaulis, Dr. Irving Finkel, Dr. Bas van Doesburg, Hans Roskamp and Rosanna Woensdregt, who pointed out to me most valuable literature.
3. Pierre Ventur (1980) presented a description and analysis of similar Mopan dice games still practised in the Southern Peten (Guatemala) based on staged games with his informant.
4. There is another game that indicates the link with the religious belief system. The Mexican board game *kuliche* or *kolitza* is played in the restricted context of the vigil of Assumption of the Holy Virgin, on the 15th of August, in the state of Michoacán.
5. According to Ventur the Guatemalan players determine before each game on how to count unmarked kernels that land edge-wise or end-wise (Ventur 1980:248-49).
6. The Guatemalan taxonomy of the five *bul* variants does not differ much from the Belizean. The basic game is labeled *jil bul* 'real dice'. The second variant is called *mujan* 'hawk'. The rules of the variants however are identical (Ventur 1980:250-52).
7. The names *boolik* and *puluc* have obviously been written down by ear, by persons who were unacquainted with the spelling of the K'ekchi' language. In nowadays' K'ekchi' the spelling of the name of the corn game is *buul*.
8. Stewart Culin strongly emphasized the interrelation and native origin of the dice games he described in his catalogue of North American games, in which he included a few Middle American games (Culin 1907: 32). He opposed Tylor's theory that American lot games were brought over from Asia before Columbus. Tylor based his argument on the similarity between the Indian game of *Pachisi* and the early-Colonial accounts of the Mexican game of *Patolli* (Tylor 1879 and 1896). Although he did not have accurate data on this ancient Mexican game, also Murray concluded that Tylor's claim was not valid (Murray 1952: 231). The discussion of diffusion or invention is still open as can be read in Erasmus' "Patolli, Pachisi, and the Limitation of Possibilities" (1950) in Avedon and Sutton-Smith 1971:109-29.

9. The transfer or the extension of the name *patolli* to the name of similar games with different lots is quite common in the Mesoamerican languages. In the sixteenth-century Nahuatl dictionaries one finds *amapatolli* ('paper-*patolli*') for playing cards and *quauhpatolli* ('wood-*patolli*') for chess.
10. A selected list of *Patolli* variants consists first of all of descriptions published in Culin's *Games of the North American Indians* (1907: 146-154). They were played by various native American groups in the states of Arizona and New Mexico (US) and Sonora, Chihuahua, Sinaloa (Mexico) such as the Papago, Pima, Opatá, Tepehua. The names of the games are *Patol* or *Kinse* (which is the Spanish word for 'fifteen', indicating the highest score that can be thrown. This is probably borrowed from an introduced Spanish game of cards.) The Tarahumara were reported to play a *patolli* variant called *romavóá* (Lumholtz 1902, *Unknown Mexico*, Vol. 1, p. 278). A more detailed description was provided in 1992 in an article by Lopez Batista *et al.*, in an occasional publication of *Nuestra Palabra* titled "Romayá: un juego Tarahumara, el '15'". Beals and Carrasco described in 1944, in *American Anthropologist*, Vol. 46, a Purhépecha game called *kolitza* or *k'uilichi* (= five). This *patolli* variant is still known in the conservative community of Angáhuán in the Mexican state of Michoacán (Soto Bravo 1992, *Nuestra Palabra: K'uilichi: Juego ancestral Purhépecha*.)
11. Caso bases this hypothesis on Durán's rather obscure description of the *patolli* game, in which five or ten *patolli* beans were used. A throw of five marked *patolli* up was rewarded with 10 and ten *patolli* gave 20 (Durán 1967: 198). This does not quite correspond with the information we get from the other chroniclers and from the pictographical documents: they all indicate that there were four *patolli* beans. Did Durán mix up two different games? Caso does not seem to pay attention to this problem. (Caso 1924-27: 208).

Board
Games

**Research Notes / Notes de
recherche / Forschungsberichte**

Studies
/ 1

Edward Falkener: Old Board Games for New / Irving L. Finkel

1. The Book

The interesting work by Edward Lyon Falkener (1814-1896) entitled *Games Ancient and Oriental and How to Play Them*, was first published by Longmans, Green and Company in 1892,⁽¹⁾ and remained a very considerable rarity until it was reprinted by Dover Books in 1961. In its day this was a pioneer investigation which combined scholarly method in historical research with practical field-work and discussion with native players. Falkener also undertook what hardly a single board-game specialist has attempted since, namely to give for each game, be it ancient or oriental, a step-by-step record of a complete game played through for the purpose, often with the aid of patient friends who had learned the rules specially.

Falkener's investigations cover five principal groups of games, tracing oriental and other versions in some detail. It is subdivided as follows:

1. The Games of the Ancient Egyptians
2. Chess
3. Draughts, including We'i k'i
4. Backgammon
5. Magic Squares
6. Figures of the Knight's Tour

The book was admittedly affected for the worse by the author's over-enthusiastic attempts at reconstruction, both of fragmentary ancient boards and their possible system of play. The classical scholar R. G. Austin, for example, remarked disparagingly of Falkener that his "zeal for reconstruction so often outruns scholarly method,"⁽²⁾ and many subsequent writers, often benefiting from new discoveries, have been equally dismissive of the book. The volume itself, always hard to find, was effectively eclipsed by the remarkable products of Stewart Culin, and nowadays, if mentioned at all, Falkener's work tends to be relegated to discussions of the history of board-game studies. Nevertheless, there is much of interest within its pages, and the book can still be consulted with profit in regard to some oriental games.

Edward Falkener was architect, antiquarian, Justice of the Peace and other things; an outline sketch of his life and achievements has been given by R. C. Bell.⁽³⁾ After the fashion of the day Falkener had a sepia photograph of himself included as the frontispiece to the original book. It is interesting to compare the solemn and august character that he presented to the world in 1892 with the drawing made of him by S. Vogel von Vogelstein in Dresden in 1847, when the subject was 33 years of age.⁽⁴⁾

The book itself is a handsome production, and includes nine additional original photographs of Oriental games and pieces, pasted in by hand. One reason for its scarcity became clear in 1991, when Falkener's last surviving grand-daughter died at the age of eighty in her house in Guernsey.⁽⁵⁾ Among the family possessions that came to light was a considerable number of original copies of *Games Ancient and Oriental*, in brand-new condition, many still in their original wrappers as received from the printers.

Falkener, like many an author before and since, subscribed to a commercial review service, but unlike many he kept all the reviews very carefully, and they survive among his papers to make highly interesting reading today.⁽⁶⁾

The majority of these reviews were enthusiastic and favourable, although usually written by people who had no serious knowledge of the subject. One or two professional reviewers struck a jaundiced note in 1892 that will jar on the ear of any valiant worker in the field of board-games history. One wrote, in *The World*, as follows:

“Varieties of taste are, of course, infinite, but it may be doubted whether under any stress of ennui or laziness, the majority of men would care to be instructed in all the intricacies of the games of skill and chance played by the ancients ...”,

while the *Yorkshire Post* commented:

“Nothing is more curious in literature than the devotion of scholars to out-of-the-way subjects. The man of the world, who tries everything by the utilitarian test, ‘Will it pay?’ is amazed to see persons devoting their leisure to the elucidation of some obscure subject, or corner of a subject...”

although the same journalist, considering the persistent nature of some games, muses that

“Their permanence is a remarkable proof of their fitness to meet the needs of intelligent men in all time; and the fact that some definite forms of recreation are older than powerful religions should convey an instructive lesson to those who, from a strange misconception of human life, would cheerfully confide all forms of recreation to the keeping of the devil.”

One particular short review in Falkener’s local *Weekly Mail* seems to endorse the book without reservation, but ends up a little obscurely with the following remarkable sentence: “The book is bulky, and ought to be interesting.”

Two reviews in particular were more critical, focussing on the methodological drawbacks to the book that have been criticised subsequently. The *Classical Review* examines the material from Greece and Rome with a very detached pen, especially with regard to use of literary sources. The review in *The Field* is lengthy and hostile, and greatly upset the author, indeed it formed the subject of correspondence between Falkener and the editor of the *The Field*, Ilyd Nicholl. From this letter it is clear that the reviewer, who attacked Falkener very vigorously, was the “Mr Kesson” who had written articles on Magic Squares in 1879-1881 referred to by Falkener in his book, pp. 337-338.⁽⁷⁾ Nicholl, evidently an experienced editor, wrote consolingly (probably not for the first time in his career):

“... you must take comfort in the thought that to be found fault with at such length is in itself a compliment. Probably your work has forestalled something of a similar nature which Mr Kesson himself contemplated, and that is an offence which some people can never forgive.”

It appears from papers preserved by Falkener that about 468 copies of the book were printed by Messrs Longmans, Green and Co. By March 1892 some 310 were left; a note from the firm dated October 6 1892 reads “We now have about 242 copies of your work on “Games” on hand,” and by June 1893 some 170 still remained unsold. One surviving

letter from W. H. Wilkinson⁽⁸⁾ dated August 20, 1892 reveals that Falkener considered that the book was not selling well. Item 14 of Messrs Longmans and Co.'s still surviving Terms For Producing and Publishing Books on Commission stipulates that "When the demand has ceased, the stock to be returned to the Author or proprietor, or disposed of ..." Thus it came about that the remaining stock of copies was sent to Falkener himself for disposal. The distinguished author died four years after publication, and the books remained in the family ever since.

2. The Games

Page 361 of the original publication contained a brief advertisement that for obvious reasons was omitted from the modern Dover edition, while a longer loose advertisement was distributed within the pages of the book. These advertisements show that Falkener had arranged for commercial reproductions to be made of the four Egyptian games he had studied and reconstructed, and that these were available to the public on receipt of the considerable sum of seven shillings and sixpence. Commercial reproductions of ancient games with reconstructed rules, dice and pieces, are nothing unusual in this day and age, but it seems probable that this spirited venture by Falkener in 1892 was the first of its kind.

The four available games, reconstructed according to Falkener, are the following:

1. Ludus Latrunculorum (12x12 squares)
2. The Game of Senat (13x13, 11x11, 9x9, 7x7, or 5x5 square board)
3. The Game of the Bowl (12 concentric rings)
4. The Game of the Sacred Way

Each of these reconstructions, it must be said, is extremely doubtful. The reconstructed boards proposed for nos. 1 and 2 never existed as such; the name "Senat" has been misapplied by Falkener to his reconstruction no. 2, whereas in reality it is the name of the well-known ancient Egyptian race-game *senet* which was played exclusively on a board of 3x10 squares. Some evidence has since been forthcoming for how the "Game of the Bowl," anciently called *mehen*, might have been played, and it seems probable that this was a race from the outer ring to the middle, and back out again. Falkener's so-called "Game of the Sacred Way" is again a misnomer, since the name belongs properly within the classical world, while the board is that for the ancient Near-Eastern Game-of-Twenty-Squares, sometimes otherwise known as the Royal Game of Ur. The rules for this game are now understood, a subject to which the present writer hopes to return in a future issue of this magazine.

It seems far from likely that this product sold in great number or brought great riches to its originator, and up until recently it has seemed doubtful that many examples of such little-known replicas have survived. Falkener's own set has been preserved within the family.⁽⁹⁾ A second complete set is to be found in the reserve collections of the Pitt Rivers Museum in Oxford, accession no. 57.IX.220.⁽¹⁰⁾ This set was presented to the Museum by Lady Tylor, widow of the eminent English anthropologist Sir Edward Burnett Tylor (1832-1917). Tylor was one of the most productive and influential of early anthropologists, and among his many writings are two serious articles on the

subject of board games, the first of which was published in time to be used by Falkener, p. 258.⁽¹¹⁾ It is not surprising that Tylor should have procured a set of Falkener's reproduction games for consideration and experiment, and one can readily imagine how Lady Tylor, packing up her late husband's books, papers and collections to be handed over to the Pitt Rivers Museum in Oxford, slipped them in with the other treasures with the thought that they might one day be useful to future researchers into the history of board games.

Notes

1. Games Ancient and Oriental, and How to Play Them. Being the Games of the Ancient Egyptians, the Hiera Gramme of the Greeks, the Ludus Latrunculorum of the Romans, and the Oriental Games of Chess, Draughts, Backgammon, and Magic Squares. By EDWARD FALKENER. With numerous Photographs, Diagrams &c. 8vo. pp. 440, price 21s. Messrs LONGMANS, GREEN & CO.
2. R.G. Austin, "Greek Board Games," in *Antiquity*, 14 (1940) p. 258.
3. R.C. Bell, *Board and Table Games of Many Civilizations*, vol. 1 (Oxford, 1960) pp. 191-192. Edward Falkener could well form the subject of a serious biography.
4. This drawing is now housed in the Kupferstich-Kabinett in the Staatliche Kunstsammlungen in Dresden. I am very grateful to Madeleine McClintock, Falkener's great grand-daughter, for informing me about this portrait, and lending me a photograph of it for reproduction here.
5. An evocative description by Andrew McClintock of the "excavation" of this veritable Aladdin's Cave under the title "Treasure Trove at Icart" was published in the *Guernsey Society Review*, Summer 1992, pp. 52-53.
6. It is a pleasure here to acknowledge the kindness of Colonel Michael Portman who has loaned me the Falkener papers drawn on here. The surviving clippings include reviews from the following publications that appeared in 1892:
 1. March 3: *The Sheffield Independent*
 2. March 9: *The Saturday Review*
 3. March 14: *The Scotsman*
 4. March 14: *Weekly Mail*
 5. March 16: *The Yorkshire Post*
 6. March 17: *The Times*
 7. March 24: *The Standard*
 8. March 30: *The World*
 9. April 1: *South Wales Daily News*
 10. April 27: *Western Daily Press*
 11. May 14: *The Field, The Country Gentleman's Newspaper*
 12. July: *Imperial and Asiatic Quarterly Review*
 13. August 6: *The Graphic*
 14. October 1: *The Spectator*
 15. *South Wales Daily News*, undated
 16. *The Ladies Pictorial*, undated
 - 17-18. Two unidentified and undated reviews
 19. W. Wayte in the *Classical Review* for 1892, pp. 458-460
7. This reviewer wrote furiously: "Then, when discussing Indian squares, Mr Falkener remarks (p. 338) that Mr Kesson, who has treated of these squares in the Queen, says that name

'Caïssan squares' was given to them by Sir William Jones. Mr Kesson says nothing of the kind; that gentleman knows better than anyone else that the adjective 'Caïssan' was suggested to him by 'Cavendish', who originated it. Caïssa is Sir William Jones' fanciful goddess of chess..." According to Iltyd Nicholl "Kesson" was a nom-de plume, deriving from the site called "Nassek," where a contention-producing magic-square had been earlier discovered over a gateway.

8. Then H.M. Consul at Wenchow, China. W. H. Wilkinson carried out very serious investigations into Chinese and Korean chess and Oriental playing cards; see H. J. R. Murray, *A History of Chess* (Oxford, 1913), pp. 125-137; S. Culin, *Korean Games* (Pennsylvania, 1895), pp. vi, 82-91. In this letter Wilkinson identified the mysterious Japanese gameboard described by Falkener, p. 363 (about which they were corresponding) as a backgammon (*i.e. sugoroku*) board. In a later letter from Chemulpo, Korea, dated February 27, 1894, and following his researches into the Korean game, Wilkinson wrote as follows: "Is there, I wonder, a variety of chess besides this of Corea yet left to be explored? Perhaps there may be in Tibet; and if I go to Chungking and am sent to the frontier I may be able to send you a description of that too!" Unfortunately for the board-game historian Wilkinson seems not to have been posted to Tibet.
9. Again I owe thanks to Colonel Portman for kindly making this material available to me for study and photography.
10. Thanks again are offered to Marina de Alarcon for her help at the Pitt Rivers Museum.
11. "On the Game of Patolli in Ancient Mexico, and Its Probably Asiatic Origin," in *Journal of the Anthropological Institute of Great Britain and Ireland*, 8 (1879), pp. 116ff., and "On American Lot-Games as Evidence of Asiatic Intercourse Before the Time of Columbus, in *International Archiv für Ethnographie*, 9 (Suppl. 1896) pp.55-66, reprinted in the immensely useful compendium E. M. Avedon and B. Sutton-Smith, *The Study of Games* (John Wiley and Sons, 1971) pp. 77-99 For a modern consideration of the problematic relationship between Patolli and Pachisi see T. Kendall, *Patolli. A Game of Ancient Mexico* (Kirk Game Company, Mass., 1980) pp. 10-11, and C. J. Erasmus, "Patolli, Pachisi, and the Limitation of Possibilities" in *Southwestern Journal of Anthropology*, 6 (1950) pp. 369-387 (reprinted in Avedon and Sutton-Smith, *op. cit.*, pp.109-129). For a consideration of Tylor's writings on games see also G. E. Smith, *The Diffusion of Culture* (London, Watts, 1933) pp. 153-164.

Board
Games

**Book Reviews / Comptes ren-
dus / Rezensionen**

Studies
/ 1

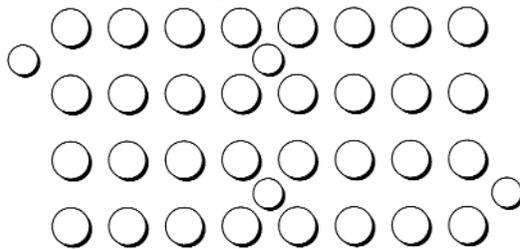
Elisio Romariz SANTOS SILVA

Jogos de quadricula do tipo Mancala com especial incidência nos praticados em Angola
Lisboa : Instituto de Investigação Científica Tropical, 1995 ; 323 pp.

This is the first general treatise on Mancala to appear in Portuguese and as such is welcome for making Mancala literature more accessible to Portuguese-speakers world-wide. For those of us familiar with the up-to-date literature in English, French and German however this book offers relatively little new. Despite its title suggesting an overwhelming Angolan focus, over three quarters of the book is devoted to Mancala Africa-wide and to a lesser extent world-wide, retelling in Portuguese the essentials of established classic sources such as Murray, Béart, Herskovits, etc.

Moreover, as the author acknowledges in his preface, his active interest in these games dates from his years working in Angola in the 1960s with only limited additions to his typed manuscript of 1970 before he began preparing for publication in the 1990s. This means that he had no access to much essential material published in the 1970s and 1980s, such as Mizony, Pankhurst, Popova, Townshend etc. nor even to the minor but relevant contribution of Fontinho in 1983 to NE Angola itself.

After a short introductory Chapter 1, Chapter 2 gives an idea of the spread, antiquity and variety of Mancala games, including an interesting list of African vernacular names (pp. 36-38), details of the use of Mancala in Angolan ritual, and terminology for the material used and special moves in some Angolan games. Some moves are described at length with the aid of diagrams and the author's own original notation, which is a valid option (and in some cases addition) to those already published elsewhere, though I personally find it somewhat cumbersome and confusing.



Chapter 3, 50 pages long, contains the bulk of the specific Angolan data. The author gives details of 4-row games of up to 22 holes per row in which captured seeds are re-sown into the game (pp. 71-86). These are of the same general type as those already described elsewhere for Namibia. Their main peculiarities lie in the initial disposition of seeds in the outer rows only, with a preponderance in each player's left-most hole, and in the irregular opening moves.

Several games where captures are set aside are also described, this being also the commonest type in Zambia, Malawi and northern South Africa. They closely resemble in their finer detail those I described (Townshend 1977 [CEDAF Bruxelles], 53-56) for

the Cokwe and Bindi of southern Kasai (Congo/Zaire) bordering on Angola in that they feature the curious smaller ‘refuge holes’ sited in varying positions on the right-hand half of each player’s side in-between his inner and outer rows (see diagram) which can be used optionally to escape the imminent predations of the adversary or to lie in ambush for him.

A somewhat similar escape manoeuvre is also recorded by both of us at the left-hand side of each player’s inner row (though not involving any extra holes) where a single seed can jump one of the two end holes to flee (*kuchina*) to the outer row and escape capture. The games of Angola then fit in closely with those on their borders to the north, east and south. However, as Angola had previously presented one of the most frustrating gaps in African Mancala literature (as indeed Moçambique still does) – largely, in recent decades at least, because of the long-lasting civil war – it was important that we obtain an idea of what games are played there, and herein lies the main original contribution of this book.

However, some 2-row games are also tantalisingly mentioned from various parts of the country but described hardly or not at all, which is a great pity as such games are known to exist, sporadically at least, in neighbouring Congo/Zaire and Zambia. For all these games the author has had to rely on the lamentably scant data given in Portuguese colonial ethnographies.

Chapter 4, entitled ‘Origin of the traditional games of Angola’, presents a comprehensive classification of 4-row Mancala (63 pages) and 2-row Mancala (84 pages) world-wide before devoting 21 pages to the spread and possible transmission routes. Much of this is in my opinion ill-conceived through a lack of acquaintance with the post-1970 Mancala literature, in particular the idea that Arabs brought the 4-row game of *Bao* ready-made to the Swahili coast from the Persian Gulf (based on the mistaken belief that the ‘Ansan’ where Hyde’s (1694) 4-row game of *Morabba* was reportedly played as in Arabia rather than being, as we now know, the Comoro Island of Nzuani [Anjouan]). However, the author’s theories of 4-row transmission within southern Africa and of 2-row transmission via the Sahara are based on accepted plausible reconstructions of general cultural diffusion. Overall too he shares my belief that Mancala originated in Africa and subsequently spread to Asia.

Chapter 5 is effectively an appendix of short notes and accounts of games that have come to the author’s notice since his original draft of 1970.

In conclusion I note that the author publishes for the first time a number of interesting photographs and has compiled his own extensive tables of known 4-row games (pp. 126-131, 150-153) and 2-row games (pp. 194-217) which allow useful and easy comparison of the principal traits.

Philip TOWNSHEND

Arie van der STOEP

*Over de herkomst van het woord damspel :
een probleem uit de geschiedenis van bordspel en bordspelterminologie.*

Rockanje, 1997 ; 259 pp.; illustrated; 24 cm

PhD-thesis RijksUniversiteit te Leiden with name, word, and subject index; literature and bibliography of primary dictionaries; summaries in English and French.

Never before has a thesis been published that concerned the game of 'Dam or Dammen' (= draughts/checkers). Made curious by Murray's *A History of Board Games other than Chess* (1952) and the monograph by Kruijswijk *Algemene historie en bibliografie van het damspel* (1966), Arie van der Stoep, a Dam-playing linguist, decided to investigate the question: Where does the word *dam* come from?

According to board-games historians and linguists this question was already answered. The word *dam* was borrowed from the French *jeu de dames*. This was a semantic extension of the French word *dame* (= chess queen), which goes back to Latin *domina*. It soon became clear to van der Stoep that this etymological explanation required further investigation. He tried to investigate the following:

1. the original meanings of the French *dame*, *jeu de dames* and *damier*.
2. the terminology that *dam* and chess had in common
3. the names for *dam* in the Middle Ages
4. the pronunciation of the French *dames* (meaning Dam-game)

For this research he used a range of dictionaries of the Dutch, German, English and French languages, material studies and board-games literature and board-games names recorded in the literary works of the above languages.

Etymological proposals

In his thesis a number of etymological claims are discussed in brief and almost immediately rejected because the arguments are clearly insufficient: Such as *jeu de dames* being borrowed from Greek $\delta\eta\mu\omicron\varsigma$ (a piece in the *polis* game), Arabic *dama*, Latin *domus* (square on a board) or Spanish *dama* (chess queen), also that *jeu de dames* was a semantic extension from French *dame* (disc), French *Damas* (Damascus = game of Damascus), French *dame* (respectable lady, game loved among women).

After a careful selection two proposals remained:

1. the traditional

Dam (=the game of draughts) < *jeu de dames* < *dame* (chess queen) < Latin *domina*
Murray's evidence is based on two quotations which, according to van der Stoep, are open to different interpretations. In addition, the chronology of names is at least suspicious. Murray's etymological proposal is, according to van der Stoep, too much based on the underlying thought that Dam-terminology is obviously derived from chess-terminology.

Van der Stoep suggests the following:

2. Dutch *Dam-spel* (= Dam-game) < French *jeu de dames* < Middle French *jeu de dams* < Middle French *dam* (dike, wall) < Middle Dutch *dam* (dike, wall)

He points out that the idea of the name of the game *dam* going back to *dam* (dike) goes back to Kiliaan (1599), Hyde (1694) and recently Mehl (1990). *Jeu de dames* is a game in which the pieces, which can move forward but not beyond the edge of the board, are promoted when they reach this end row. '*Jouer aux dames*' is then translated as playing at the end row of the board.

Next to the French *dam* (dike) from the Middle Ages (1270 and 1442), there should also have been a Middle French *dam* (end row of the board). Because of palatalisation the back vowel in the medieval word became a mid-vowel in the 17th century which resulted in the orthographic addition of an [e]: *dam* becoming *dame*. In this way a coincidental but confusing similarity occurred between *dame* (end row of the board) and *dame* (woman).

In the 16th and 17th century the distinction was not made any more and the plausible etymological explanation was lost.

Strengths and weaknesses

The publication by van der Stoep is very useful for solving questions of translation of board games terminology. The thesis sums up the objections against the generally accepted etymological proposal by Murray and, in addition, the obviousness of this proposal is undermined. Some arguments by Murray can even be used against him.

Almost surprising is the discovery that the 17th and 18th and 19th century knew a Dam and chess terminology that was used interchangeably in which the chess terminology did not necessarily have a dominant role. Also the assertion that the last row of fields where pieces are promoted in the chess-game and Dam-game has the name '*dam*' is of particular interest. The topical meaning of this word was not recorded in Dam research.

As a critical note, one could state that the Spanish literature has been neglected, especially since it was superior to the French Dam books. Also the comparison of words between dictionaries was investigated to make a chronology of terms, while the comparison of words within one dictionary was neglected and could have provided more precise semantics where definitions appeared vague at first glance. Lastly, the diagrams suggest, erroneously, that it is possible to indicate accurately the period in which a word was common and had a certain meaning.

Rob JANSEN
(translated and edited by BGS)

Manfred ZOLLINGER

Bibliographie der Spielbücher des 15. bis 18. Jahrhunderts. Erster Band: 1473-1700.

Stuttgart : Anton Hiersemann, 1996

(Hiersemanns bibliographische Handbücher, Bd. 12) ; LXXXIV-471 pp. ; 27 cm

Depuis quelques années, initiatives et publications se multiplient autour de l'étude sérieuse du jeu. D'indispensables instruments de travail voient le jour qui donnent à ce thème de recherche une impulsion supplémentaire. Le plus ambitieux et le plus précieux de ces instruments vient de paraître : Manfred Zollinger est l'auteur d'une impressionnante *Bibliographie der Spielbücher des 15. bis 18. Jahrhunderts*, publiée par l'éditeur allemand Anton Hiersemann (Stuttgart) avec le concours de l'Institut für Spielforschung und Spielpädagogik (dirigé par le Pr. Günther Bauer). Certes, seule la première partie est parue, qui couvre la période 1473-1700 ; le XVIIIe siècle sera traité plus tard – l'auteur y travaille déjà – et promet de nécessiter deux ou trois volumes tant la matière est abondante!

Tenter de cerner ce que sont les "livres de jeux" (*Spielbücher*) est un exercice difficile, car cela suppose que soit clairement définie au préalable la notion de "jeu". Or celle-ci fait l'objet de multiples angles d'approche, selon la langue que l'on choisit (par chance, l'allemand et le français placent à peu près les mêmes réalités sous le vocable "jeu/Spiel" – mais ce n'est pas le cas de l'anglais...), selon les restrictions que l'on y met ou l'époque à laquelle on se situe. Ainsi, pour un historien de l'Antiquité classique, "les jeux" n'ont souvent qu'un sens : les jeux du corps et de la représentation ; les jeux "privés", de hasard ou de stratégie, n'existent pour ainsi dire pas... Intituler un volume "Le jeu au XVIIIe siècle", c'est prendre la parti – inverse – de traiter essentiellement des jeux de hasard (le XVIIIe étant aux yeux de beaucoup "le siècle du jeu") et négliger totalement les jeux du corps...

Manfred Zollinger n'a pas voulu de ces œillères : sa *Bibliographie der Spielbücher* couvre la production imprimée de l'Europe occidentale dans ses principales langues, allemand, anglais, espagnol, français, italien, néerlandais, sans oublier le latin, et offre du jeu la définition la plus large. Tous les jeux – à l'exception des jeux "publics" (jeux de combat: tournois, joutes, escrime, pugilats et luttes, tir à l'arc et autres ; jeux scéniques et athlétiques) – sont mis ici à contribution. Le champ d'investigation comprend en outre la prestidigitation et la divination, dans la mesure où l'une et l'autre utilisent des instruments de jeu.

Mais il ne suffit pas de s'arrêter à une acception du jeu, encore faut-il repérer les "livres de jeu". Manfred Zollinger les a répartis en trois grandes sections : textes pratiques (manuels, recueils de règles, collections de tours, d'oracles, etc.), textes théoriques (philosophiques, théologiques, historiques et mathématiques), textes littéraires (poésie, théâtre, roman), à quoi s'ajoutent deux autres sections, l'une consacrée à la musique (5 partitions), l'autre, plus brève encore, à l'iconographie. C'est dire que l'éventail des genres littéraires est large. Tous les livres qui traitent principalement du jeu ou d'un jeu ont été traqués à travers les bibliothèques d'Europe occidentale et dûment examinés

(“autopsiés”, aime à dire l’auteur) avant d’être admis à figurer dans cette bibliographie. Quelques raretés introuvables et non localisées, mais documentées par des sources sûres, ont pris place dans ce corpus. On regrettera sans doute de ne pas y voir figurer les traités d’escrime, éliminés par l’auteur, comme on l’a vu plus haut, ni de textes à caractère politique, un “oubli” que Zollinger promet de réparer dans un supplément à venir. De même, on aurait aimé que les livres en portugais, probablement peu nombreux, soient pris en compte, mais cela sera pour le prochain volume.

Disons tout de suite que ce qui impressionne le plus est l’abondance : presque mille ouvrages parus avant 1700 (en comptant, bien sûr, les rééditions, très nombreuses pour certains titres) sont décrits par Zollinger. Chaque entrée offre le nom de l’auteur (quand on le connaît...), le titre complet, avec l’adresse quand elle figure, respectant la typographie et les coupes, un bref (peut-être trop bref...) collationnement, limité à l’essentiel, un commentaire toujours pertinent et fort utile, un dépouillement des jeux mentionnés (pour les manuels pratiques), les renvois aux autres éditions et, enfin, l’indication des bibliothèques où ce livre a été vu et examiné. L’ordre chronologique des éditions a été suivi dans chaque section et sous-section. De copieux index – des auteurs/traducteurs/ adaptateurs, des éditeurs et libraires, et même des jeux – assurent au lecteur un grand confort visuel, que la typographie – un élégant Garamond – et l’impression rendent encore plus sensibles. Tout cela aurait suffi à combler le chercheur, mais Manfred Zollinger lui propose en outre un guide de lecture sous la forme d’une longue et riche introduction que l’éditeur a accepté de voir paraître en trois langues, l’allemand, l’anglais et le français.

Thierry DEPAULIS

Board
Games

Summaries / Résumés / Zusammenfassungen

Studies
/ 1

ULRICH SCHÄDLER

Mankala in Roman Asia Minor?

In Roman cities gameboards of different types engraved into the marble pavements of streets, public places and buildings can be observed. One pattern frequently met with in Asia Minor consists of two parallel rows of normally five squares, often with circles or even circular depressions inscribed in these squares. Many boards have only two parallel rows of five cup-shaped holes. The author discusses the possibility of these boards to have been used for a kind of "Five lines" or even Mankala games.

Although one of the world's most widespread boardgames, the origins of Mankala are not very well known. It is thought that the game developed in the north-eastern part of Africa or Arabia. The statement that Mankala boards already existed in Egypt during the 2nd millennium B.C. has not been confirmed by modern egyptology. Other neolithic examples cannot be convincingly identified as gameboards. Therefore the boards in the late antique Roman cities could perhaps offer a new perspective towards the origins and the distribution of Mankala.

Des mancalas en Asie mineure romaine?

On peut fréquemment observer dans les villes romaines des tabliers de jeux de divers types gravés dans le dallage en marbre des rues, des places publiques et des bâtiments. Un des motifs que l'on rencontre le plus souvent en Asie mineure est formé de deux rangées

parallèles contenant normalement cinq "cases" carrées, avec un cercle ou parfois une dépression circulaire dans chacune. Plusieurs de ces tabliers sont faits seulement de deux rangées parallèles de cinq cupules. L'auteur discute l'utilisation possible de ces tabliers pour une sorte de jeu des "cinq lignes" ou même pour un mancala.

Bien qu'il soit l'un des jeux de pions les plus répandus dans le monde, les origines du mancala ne sont guère connues. On pense que le jeu s'est développé dans le nord-est de l'Afrique ou dans le monde arabe. L'affirmation selon laquelle il y avait des tabliers de mancala en Egypte au IIe millénaire avant notre ère n'est pas confirmée par l'égyptologie moderne. D'autres exemples néolithiques ne peuvent être identifiés avec certitude comme des tabliers de jeu. C'est pourquoi les tabliers trouvés dans les villes romaines de la basse antiquité pourraient peut-être offrir de nouvelles perspectives quant aux origines et à la distribution des mancalas.

Mankala im römischen Kleinasien?

In römischen Städten trifft man oft auf verschiedene Arten von Spielbrettern, die in die marmornen Fußböden von Straßen, öffentlichen Plätzen und Gebäuden eingeritzt wurden. Eine in Kleinasien häufige Form besteht aus zwei parallelen Reihen von normalerweise fünf quadratischen Feldern, oft mit eingeschriebenen Kreisen oder kreisrunden Vertiefungen. Viele dieser Spielbretter weisen nur zwei parallele Reihen von fünf schalenförmigen Vertiefungen auf. Der Autor diskutiert die Möglichkeit, daß diese Spielbretter

für eine Art “Fünf Linien”-Spiel oder gar für Mankala-Spiele benutzt wurden. Obwohl eines der am meisten verbreiteten Brettspiele der Welt, sind die Ursprünge des Mankala kaum bekannt. Es wird angenommen, daß das Spiel im nordöstlichen Afrika oder im arabischen Raum entstand. Die Behauptung, es habe im 2. Jahrtausend v. Chr. schon Mankala-Bretter in Ägypten gegeben, wurde von der modernen Ägyptologie nicht bestätigt. Andere, jungsteinzeitliche Beispiele können nicht zweifelsfrei als Spielbretter identifiziert werden. Deshalb könnten die Spielbretter aus den römischen Städten der Spätantike möglicherweise eine neue Sichtweise hinsichtlich der Herkunft und Verbreitung des Mankala eröffnen.

THIERRY DEPAULIS

Inca Dice and Board Games

Very little is known of the games played in Precolumbian Andean cultures. Only a few Spanish chroniclers have kept the memory of some Inca dice and board games. Unfortunately pictures are missing: the Inca culture did not favour representations of its daily life. Dictionaries of the local languages, compiled in the late 16th and early 17th centuries, offer more words, both in Quechua and in Aymara, but give little details. Emilia Romero, who surveyed these early Spanish texts, published what she had collected in 1943. But she could not explain what the games were. By comparison with other dice and board games from other civilisations, it is nevertheless possible to trace what the games the Incas played looked like. The Incas had a very special six-sided

pyramidal die which they used for pure gambling as well as for race games. It is the only game to be mentioned and described by all chroniclers and in all dictionaries, though under two different names: *pichqa* (Quechua “five”) and *wayru*. From literary evidence, we know the Incas had several board games, most of them of the race game type: if *chunkana* (from Quechua *chunka* “ten”) is often mentioned, *aukay*, *takanako*, *halankola/hunkuña* appear more rarely. *Pichqa* and *wayru* also seem to have designated actual race games. Besides race games, some sources account for the existence of a “strategy” game (without dice) under the names of *taptana* or *komina*. These “Inca chess” are in fact a “hunt game”, played on an “alquerque” board with a triangle added to one side. The study of neighbouring cultures can throw some light on the Inca games. The Mapuches – formerly called Araucanians – were influenced by the Incas. Fortunately, Mapuche games were described in more detail than the Inca ones. No surprise if the same kind of pyramidal die is to be observed, here called *kechu* (Mapuche “five”). Under the name *kechukawe* the Mapuches played two different games with the same die: a game whose object was to throw a die through a perched ring, and a board game which appears to be very similar to the Inca race game *wayru*, as observed in the 1960’s in Southern Ecuador. The Mapuches knew a “hunt game” that they called *komikan*: it is the same as the Inca *taptana/komina*. Andean people also played “bean” games, where half-blackened beans were used instead of dice. This tradition can be traced back to the Mochicas (c. 300 BC-c. 500 AD); the

Incas called the game *apaytalla*, whereas the Mapuches used to call it *llügün* (or *lligues*), and now call it *awarkuden*.

Jeux de dés et jeux de pions incas

On connaît très mal les jeux des cultures andines précolombiennes. Seuls de rares chroniqueurs espagnols ont conservé la trace de quelques jeux de dés et de pions incas. Malheureusement l'iconographie manque: la culture inca ne prisait guère les représentations de la vie quotidienne. Des dictionnaires des langues locales, établis à la fin du XVIe et au début du XVIIe siècles, offrent en outre quelques mots, à la fois en quéchua et en aymara, mais donnent peu de détails. Emilia Romero, qui a étudié ces premiers textes espagnols, a publié le fruit de sa collecte en 1943. Mais elle ne pouvait expliquer ce que ces jeux étaient. Par comparaison avec d'autres jeux de dés et de pions d'autres civilisations, il est néanmoins possible de dire à quoi les jeux des Incas ressemblaient.

Les Incas possédaient un dé pyramidal à six faces très spécial qu'ils employaient aussi bien pour des jeux de dés purs que pour des jeux de parcours. C'est le seul jeu mentionné et décrit par tous les chroniqueurs et tous les dictionnaires, quoique sous deux noms différents: *pichqa* (quéchua "cinq") et *wayru*. Les sources littéraires nous apprennent que les Incas avaient plusieurs jeux de pions, la plupart du type jeu de parcours: si le *chunkana* (du quéchua *chunka* "dix") est souvent mentionné, *aukay*, *takanako*, *halankolalhunkuwe* apparaissent plus rarement. *Pichqa* et *wayru* semblent aussi avoir désigné des jeux de parcours. Outre les jeux de parcours, certaines sources

attestent l'existence d'un jeu de "stratégie" (sans dés) sous les noms de *taptana* ou *komina*. Ces "échecs incas" sont en fait un "jeu de chasse", joué sur un tablier d'"alquerque" pourvu d'un triangle sur un côté.

L'étude des cultures environnantes peut apporter quelque lumière sur les jeux incas. Les Mapuches – autrefois appelés Araucans – furent influencés par les Incas. Heureusement, les jeux mapuches ont été décrits avec plus de détails que les jeux incas. On n'est pas surpris d'y observer le même type de dé pyramidal, appelé ici *kechu* (mapuche "cinq"). Sous le nom de *kechukawe* les Mapuches jouaient deux jeux différents avec le même dé: un jeu dont le but était de lancer un dé à travers un anneau fixé à une potence, et un jeu de pions qui paraît très semblable au jeu de parcours inca *wayru*, tel qu'il a été observé dans les années 1960 au sud de l'Équateur. Les Mapuches connaissaient en outre un "jeu de chasse" qu'ils nommaient *komikan*: c'est le même que le *taptana/komina* chez les Incas. Les peuples andins jouaient aussi à un jeu "de haricots", où des haricots à moitié noircis étaient utilisés en guise de dés. Cette tradition semble remonter aux Mochicas (c. 300 av. JC-c. 500 ap. JC); les Incas appelaient ce jeu *apaytalla*, alors que les Mapuches le nommaient *llügün* (ou *lligues*) et l'appellent aujourd'hui *awarkuden*.

Brett- und Würfelspiele der Inka

Über die Spiele der präkolumbianischen Anden-Kulturen ist nur wenig bekannt. Nur wenige spanische Chronisten haben die Erinnerung an einige Brett- und Würfelspiele der Inka bewahrt. Leider

fehlen Abbildungen: Die Inka-Kultur stellte Szenen des täglichen Lebens nur selten dar. Lexika der lokalen Sprachen aus dem späten 16. und frühen 17. Jahrhundert bieten zwar einige Bezeichnungen und Begriffe der Quechua- und Aymara-Sprache, aber keine näheren Einzelheiten. Emilia Romero veröffentlichte im Jahr 1943, was sie diesen spanischen Texten entnommen hatte. Doch sie konnte die Spiele nicht erklären. Durch den Vergleich mit Brett- und Würfelspielen anderer Kulturen ist es allerdings möglich, die Form der Spiele der Inka zu ermitteln.

Die Inka benutzten einen besonderen sechsseitigen Würfel pyramidalen Form für reine Glücksspiele und Wettlaufspiele. Es ist dies das einzige Spiel, das von allen Chronisten und in allen Lexika genannt wird, wenn auch unter zwei verschiedenen Namen: *pichqa* (Quechua: "fünf") und *wayru*. Aus Schriftquellen wissen wir, daß die Inkas verschiedene Brettspiele kannten, die meisten davon Wettlaufspiele: Häufig erwähnt wird *chunkana* (von Quechua: *chunka* "zehn"), seltener dagegen *aukay*, *takanako*, *halankotal* *hunkune*. *Pichqa* und *wayru* bezeichneten auch zwei bestimmte Wettlaufspiele.

Darüberhinaus berichten manche Quellen von der Existenz eines "Strategie"-Spiels (ohne Würfel), das *taptana* oder *komina* hieß. Dieses "Inka-Schach" ist jedoch tatsächlich ein Jagd-Spiel, das auf einem Alquerque-Brett, dem an einer Seite ein Dreieck angefügt ist, gespielt wurde.

Ein Blick auf die Nachbarkulturen kann ein Licht auf die Spiele der Inka werfen. So wurden etwa die Spiele der Mapuche

– früher Araukaner genannt – glücklicherweise genauer beschrieben als die der Inka. Es überrascht nicht, in dieser von den Inka beeinflussten Kultur den gleichen, hier *kechu* (Mapuche "fünf") genannten, pyramidenförmigen Würfel anzutreffen. *Kechukawe* nannten die Mapuche zwei verschiedene Spiele mit eben diesem Würfel: eines, bei dem ein Würfel durch einen aufgestellten Ring geworfen werden mußte, und ein offenbar dem Wettlaufspiel der Inka *wayru* ähnliches Brettspiel, wie in den 60er Jahren im Süden Ecuadors beobachtet wurde. Die Mapuche kannten ausserdem ein Jagd-Spiel, das sie *komikan* nannten und das mit dem Inka-Spiel *taptana/komina* identisch war. Einige Anden-Völker spielten auch mit Bohnen, die als Würfel benutzt wurden. Diese Tradition geht bis auf die Mochica (ca. 300 v. Chr.-500 n. Chr.) zurück; bei den Inka hieß dieses Spiel *apaytalla*, bei den Mapuche früher *llügün* (oder *lligues*) und heute *awarkuden*.

VERNON EAGLE

On a Phylogenetic Classification of Mancala Games, with some Newly Recorded Games from the "Southern Silk Road," Yunnan Province, China.

This paper considers the problem of constructing a classification of the family of board games known generically as "mancala," and distributed widely in Africa and Asia. On the assumption that these games are genetically related, and collectively constitute all the descendants of an ancestral game, it is proposed to

apply methods used in biological taxonomy in order to construct a classification that, as closely as possible, reflects the actual history of the evolution of the games.

The essential idea is to consider at every level only groupings which are "monophyletic," that is, consist of all the descendants of some common ancestor. This is achieved by basing groups on the shared possession of newly-evolved characteristics. After a discussion of principles of classification, with specific application to mancala games, the paper gives a critical discussion of the literature, in particular the work of Murray, Deledicq and Popova, and Townshend. There follows a sketch of what a portion of a classification scheme for an important group of mancala games designated here as "townshendian," and including all African four-row games, might look like.

An appendix to the paper describes four games from Yunnan Province in southwest China. The four Chinese games described here all belong to the family *Pussa Kanawa*, whose games are distributed from Vietnam to Ethiopia, and all employ two types of counters, typical of Chinese mancala games, but not reported elsewhere. Of particular interest is a game played by members of the Achang nationality from Lianghe County employing a previously unreported method of capturing holes between rounds of play. In another rather unusual game, played by Han Chinese near Baoshan city, several counters move together as a group.

Classification phylogénétique des jeux de Mancala, avec quelques jeux récemment recueillis sur la "Route de la Soie du Sud", province du Yunnan, Chine

Cette étude propose de construire une classification de la famille des jeux de pions connus génériquement sous le nom de "mancalas" et largement répandus en Afrique et en Asie. Partant du principe que ces jeux sont génétiquement liés et qu'ils forment tous ensemble les descendants d'un jeu ancestral, on propose ici d'utiliser les méthodes employées dans la taxonomie biologique afin de construire une classification qui refléterait, aussi étroitement que possible, l'histoire réelle de l'évolution de ces jeux.

L'idée essentielle est d'examiner à chaque niveau les seuls groupements "monophylétiques", c'est-à-dire ceux qui comprennent tous les descendants d'un ancêtre commun. Ceci se fait en limitant les groupes à la possession partagée de caractéristiques d'évolution récente.

Après une discussion des principes de classification, avec application spécifique aux mancalas, l'étude présente une discussion critique des travaux antérieurs, notamment ceux de Murray, Deledicq et Popova, et Townshend.

A la suite, nous publions une esquisse de ce que donnerait une section du schéma classificatoire appliqué à un important groupe de mancalas qualifiés ici de "townshendiens" et incluant tous les jeux africains à quatre rangs.

Une annexe à cette étude décrit quatre jeux du Yunnan, dans le sud-ouest de la

Chine. Les quatre jeux chinois décrits ici appartiennent tous à la famille "Pussa Kanawa", dont les représentants sont répandus du Vietnam à l'Éthiopie et qui tous emploient deux types de pièces, typiques des mancalas chinois mais absents partout ailleurs. Très intéressant est un jeu joué par des membres de la nationalité achang du comté de Lianghe qui utilise une méthode inédite de capture des trous entre les tours. Dans un autre jeu plutôt inhabituel, pratiqué par les Chinois Han près de Baoshan, plusieurs pièces se déplacent ensemble en groupe.

Eine phylogenetische Klassifizierung von Mancala-Spielen und einige neu aufgenommene Spiele der "Südlichen Seidenstraße", Provinz Yunnan, China

Vorliegender Beitrag diskutiert das Problem der Klassifikation der Familie von Brettspielen, die allgemein unter dem Namen "Mancala" bekannt und in Afrika und Asien weit verbreitet ist. Unter der Annahme, daß diese Spiele genetisch verwandt und insgesamt Nachfahren eines einzigen ursprünglichen Spiels sind, wird hier die Anwendung von Methoden aus der biologischen Taxonomie vorgeschlagen, um eine Klassifikation zu erstellen, die die Geschichte der Evolution der Spiele so nah wie möglich widerspiegelt. Die Grundidee ist die, auf jeder Stufe nur monophyletische Gruppierungen zuzulassen, d.h. solche, die ausschließlich aus Nachfolgern eines gemeinsamen

Vorläufers bestehen. Dies wird erreicht, indem Gruppen auf der Basis gemeinsamer, neu entwickelter Eigenschaften gebildet werden. Im Anschluß an die Diskussion von Prinzipien der Klassifizierung unter besonderer Berücksichtigung von Mancala-Spielen folgt eine kritische Durchsicht der Literatur, insbesondere der Arbeiten von Murray, Deledicq und Popova sowie Townshend. Sodann wird skizziert, wie ein Klassifikationsschema für eine bedeutende Gruppe von Mancala-Spielen, hier als "townshendian" bezeichnet und alle afrikanischen Vier-Reihen-Spiele umfassend, aussehen könnte.

In einem Appendix werden vier Spiele aus der Provinz Yunnan im Südwesten Chinas beschrieben. Diese vier Spiele gehören alle der Familie "Pussa Kanawa" an, deren Vertreter von Vietnam bis nach Äthiopien verbreitet sind. In allen Spielen dieser Familie werden zwei Arten von Spielsteinen verwendet, was typisch für chinesische Mancala-Spiele ist, von anderen Orten aber bisher nicht berichtet wurde. Von besonderem Interesse ist ein Spiel, das von Menschen der Nationalität Achang im Bezirk Lianghe gespielt wird. In dieser Variante findet eine bislang unbekannte Methode der Eroberung von Mulden zwischen den Spielrunden Anwendung. In einem anderen ziemlich ungewöhnlichen Spiel, das von den Han Chinesen nahe der Stadt Baoshan gespielt wird, können mehrere Spielsteine gemeinsam als Gruppe gezogen werden.

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