

Hnefatafl—the Strategic Board Game of the Vikings

An overview of rules and variations of the game by Sten Helmfrid



*On Itha Plain met the mighty gods;
Shrines and temples they timbered high,
They founded forges to fashion gold,
Tongs they did shape and tools they made;
Played tafl in the court, and cheerful they were.*

– *Völuspá*

Introduction

A century ago, many experts on ancient Scandinavia were fascinated by a mysterious board game, called hnefatafl or tafl, which was often mentioned in the Sagas. Its reputation as intellectual pursuit was equal to that of chess today, and Norse noblemen were often boasting about their skills in tafl-play. In the early Middle Ages, when chess was introduced in Scandinavia, the noble game of the Vikings gradually became extinct and no explanation of the rules survived for the scientists in the 19th century. One of the first persons who became devoted to solving the puzzle of hnefatafl was Willard Fiske, an American expert on languages. He collected a lot of material that was published in

the book *Chess in Iceland* in 1905, but he finally abandoned the problem as insoluble¹. The only conclusion he could make was that it was played between two groups of "maids" with a "hnefi" on one side. Hnefi is an Icelandic word and literally means fist, but since the hnefi had a role corresponding to the king in chess it is often translated as king. The word hnefatafl itself is a compilation of hnefa, genitive of hnefi, and tafl, which is the Old Norse word for board (originally borrowed from the Latin word tabula with the same meaning).

The game remained a mystery until the British chess historian Harold J. R. Murray connected the description of a Saami² game, tablut, in the diary of Swedish botanist Carl von Linné from his trip to

Lapland in 1732 with the descriptions of hnefatafl in the Sagas. Murray's hypothesis, that the Saami game of tablut was identical with hnefatafl, was put forward in his book *History of Chess* in 1913³. Thirty-nine years later Murray published another book called *History of Board Games other than Chess*⁴. By that time, much more material that supported his theory had been discovered, notably a Welsh manuscript from 1587 by Robert ap Ifan describing a game called tawl-bwrdd.

From the material that Murray presented in his second book, we learn that tafl was known not only in Scandinavia, but also in other regions that were under influence by the Vikings: Ireland, Wales, England and Lapland. Although rules and size of the gaming board changed a little bit with time, the basic idea remained intact for more than a millennium. The game is played on a chequered board, the number of squares in vertical direction being odd and equal to the number of squares in horizontal direction, so that there is a distinct central square. It simulates a battle between two unequal forces, a weaker force in the centre of the board, surrounded and outnumbered by an attacking force.

The surrounded side consists of a king (*hnefi*) and a number of mutually identical pieces called defenders. All pieces on the attacker's side are identical, and they outnumber the defenders by 2:1. The king, who is larger than the other pieces on the board, is initially placed on the central square, the defenders are standing on the squares next to him, and the attackers are placed on squares in the outer parts of the board. The objective for the surrounded side is to break out and escape with the king, whereas the attackers win if they manage to capture the king. All pieces move any number of vacant squares in vertical or horizontal direction, like a rook in chess. A piece is captured and removed from the board if it is sandwiched between two enemy pieces, one on each side in vertical or horizontal direction.

The basic rules presented here are fairly simple, but the details are bound by nature to be more complicated. Hnefatafl is a so-called asymmetrical game, i.e. both sides have a different objective and different forces at their disposal. According to game theory, such games are always unbalanced unless the correct outcome of the game is a draw⁵. When two skilled opponents meet, one side will at the end turn out to be easier to play and always win the game.

The degree of imbalance can be adjusted by changing the rules, for instance the initial arrangement of pieces and the escape route for the king. The most simple escape rule is for the king to

reach any square on the periphery of the board. It turns out that for any reasonable initial arrangement of the pieces, this gives a huge advantage for the king's side. Unfortunately, due to misinterpretations of the original texts, it is a widespread misconception that most tafl games used this simple escape rule. If the escape area is shrunk to just the four corner squares of the board, without any further change of the rules, the attackers will always win as they can block the corners in only four moves by putting pieces there.

It is obvious that the rules of any tafl game have to be worked out with great care. A good balance can be achieved by using the entire periphery as escape area, but adding some further restrictions for the king's escape, or by using the corner squares as escape area, but adding some rules that make it more difficult to block them. Further adjustments can be made by changing the initial arrangement of pieces, by letting or not letting the king take part in captures, by making it more or less difficult to capture the king, or by adding squares on the board that are restricted, i.e. squares that can only be passed or occupied under certain conditions. The latter arrangement reduces the mobility of the pieces and in general favours the attacking side. If restricted squares are used, they must probably be made *hostile* to other pieces in the sense that they can replace one of the attacking pieces in a capture. Otherwise it will be too easy to protect pieces by placing them next to restricted squares.



Tablut—the best documented tafl game

The most extensive description of a descendant of hnefatafl is the account of tablut in Linné's diary⁶. The word *tablut* in Saami, sometimes also written as *tablot* or *dablot*, is a verb that literally means, "to play *dablo*". The noun, *dablo*, is used both for the game and for the playing pieces, but curiously enough the verbal form seems much more common when reference is made to the game.

Tablut does not only refer to this particular version of hnefatafl, but is a generic name for board games. *Dablot prejjesne* is another example of a Saami board game. The Swedish ethnologist Nils Keyland recorded the game in Frostviken, Sweden, in 1921. It is related to checkers and alquerque, and it has quite different principles for capturing and moving pieces than hnefatafl⁷. The word *dablo* is ancient, and was probably borrowed from the Old Norse plural form of tafl, *tablo*, already during the Iron Age.

Linné's account begins with a description of

the gaming board and pieces, along with some drawings of these items. The squares where the king and the attackers initially are placed are ornamented and the squares where the defenders are placed are shaded in the sketch of the gaming board. All squares are designated by either a number or a letter. The defenders, called Swedes, are white, whereas the attackers, Muscovites, are dark. After the introductory presentation of the game equipment, there is a section called laws with some notes on observations made by Linné during play. The observations are written down in fourteen entries, often presented as examples of possible moves. Apparently, Linné did not understand the aboriginal Saami language.

In his reconstruction of the game, Murray assumed that the king escaped if he reached any square on the periphery. The escape rule was actually never formulated by Linné himself, but Murray derived it implicitly from one of the examples: if the king goes from square *b* to square *m* (with reference to the figure in the manuscript), the war is over and the king's side has won the battle. Square *m* is located at the periphery.

Other examples in the text suggest that the king could not escape to any of the ornamented squares where the attackers are standing before play begins⁸. Unfortunately, Murray did not consider these subtle details in Linné's notes. His assumption that the king can escape anywhere along the edge of the board and that tablut inherently is unbalanced has been recycled as an undisputable fact in almost all later accounts of tablut⁹. When *Riksställningar*, the Swedish Travelling Exhibitions, made an exhibition on Games and Gambling in 1972, they reconstructed the game in, what I believe, a much more accurate and a much more balanced way¹⁰. Let us sum up the reconstructed rules:

1. Two players may participate. One player plays the white Swedish pieces, a king and eight drabants, while the other player plays the sixteen dark Muscovite pieces.
2. The game is played on a board with 9×9 squares (Fig. 1). Initially, the Swedish king is placed on the central square with his eight drabants on the two closest squares in each point of the compass. The sixteen Muscovites are placed in four T-shaped patterns along the edges.
3. The central square is called the castle and the T-shaped regions where the Muscovites initially are placed are called the base camps. (Ac-

cording to Linné, the castle was called *konokis* in Saami, but this word most likely refers to the king himself. There is no special name reported for the base camps.) The castle and the base camps are all restricted areas, in which special rules apply.

4. The objective for the Swedish side is to move the king to any square on the periphery of the board, which is not restricted. In that case, the Swedish king has escaped and the Swedish side wins. The Muscovite side wins if the attackers can capture the king before he escapes.
5. The Swedish side moves first, and the game then proceeds by alternate moves. All pieces move any number of vacant squares along a row or a column, like a rook in chess. However, it is forbidden to pass or enter a restricted area. The Muscovites, who initially are placed in the restricted base camps, may move to other squares in the same camp and may also pass squares in the camp on their way out, but once a Muscovite has left its base camp it may not return, nor enter or pass another restricted area. When the king has left the castle, no piece may pass or occupy the central square.
6. All pieces except the king are captured if they are sandwiched between two enemy pieces along a column or a row, either with the two enemy pieces on the square above and below or with the two enemy pieces on the square to the left and to the right of the attacked piece, respectively. A piece is only captured if the trap is closed by a move of the opponent, and it is, therefore, allowed to move in between two enemy pieces. A captured piece is removed from the board and is no longer active in the play.
7. The king himself is captured if he is surrounded with enemy pieces or restricted squares in all four cardinal points, so that he cannot move in any direction.
8. A drabant who is standing beside his king may be captured by surrounding both pieces in a combined trap. The Muscovite side must be able to close a trap where the king is blocked in the other three points of the compass, either by Muscovites or by restricted squares, and where a Muscovite occupies the square closest to the drabant in the opposite direction as the king. In that case, the drabant next to the king

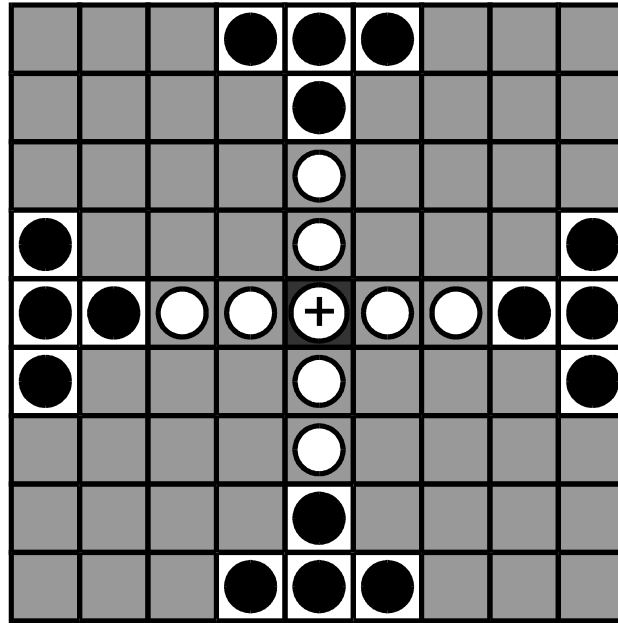


Fig. 1. Initial arrangement of the pieces in Tablut.

is captured and removed. (The king is not captured by this attack.)

9. When the king has one free way to the edge of the board, the player on the Swedish side must warn his opponent by saying *raicki*. When the king has two free ways, he must say *tuicku*, which is the equivalent of checkmate¹¹.
10. A threat that will lead to a sure victory may not be repeated more than twice. After that, the offensive side must make another move.

There are some gaps in Linné's description that have been filled in the reconstruction above. Linné never says which side that makes the first move. This can be resolved rather arbitrarily, as it doesn't affect the balance of the game that much. According to entry number nine in the original text, a man is captured when he gets between two squares occupied by his enemies. It is not clearly stated whether it is allowed to move in between two enemy pieces without being captured. In an Ifans description it is allowed, and, since this is a fundamental feature of the game, the same rule probably applies for both versions.

"Enemy" in the capture rule above should apply to any piece of the king's forces when attackers are being captured, but Linné never explicitly says that the king himself may take part in captures. In the game description from Riksställningar, they ar-

gue that a riddle in Hervarar Saga indicates that the king is weaponless and that a weaponless king makes the game more balanced. Therefore, they have added a rule that the king may not take part in captures. To emphasise that the original text is not clear on this point, the rule is described as optional. I have omitted this rule, since I find the riddle in Hervarar Saga too ambiguous to be useful in this context. A few test games have also convinced me that a weaponless king makes the game unbalanced in favour of the attacking forces. Riksställningar also present two of the rules concerning the throne and the base camps as optional in their reconstruction. The first one is the rule that the Muscovites may move within the base camps before they exit and the second one is a rule that I also have omitted in the summary above. It says that the castle is hostile to all pieces, not only to the king, and it is based on an entry in Linné's account that is unclearly formulated and very hard to translate.

Rule number 10 above is not in Linné's diary, but has been added to deal with situations where eternal threats arise. Such threats may occur, for instance, if the king can escape from a square called A, and the escape can only be blocked by moving a Muscovite from B to C. If the Swedish king then can move to D and threaten to escape over B, and if the escape can only be blocked by the Muscovite at C, then we have an eternal threat with the cycle Swede moves D to A, Muscovite B

to C, Swede A to D, Muscovite C to B, and so on. I believe that experienced players will find it necessary to add more sophisticated rules to deal with eternal threats, and also to work out rules that deal with situations where one side is blocked by the other, and either cannot make a legal move or is confined to a region from which it can never break out.

It is generally assumed that the account from 1732 is the latest description of a surviving hnefatafl game. In 1884, more than 150 years after Linné's journey, there was a book published in Stockholm about Saami legends, folklore and traditions. In a chapter called Shrove Tuesday, we get the following depiction about what happens when the men get back from skiing¹²: "Now an old and dirty card deck is taken out, and the men sit around the table to play *svälta rävv, hund och kola*, or some other game for their entertainment; they rarely play about money, at the very most about a few cups of coffee or drinks. If there are not cards enough for everyone, it may happen that a few men sit down and play a sort of chess, where the pieces are called Russians and Swedes, and try to defeat each other. Here intense battles are fought, which easily can be observed on the players, who sometimes are so absorbed that they cannot see or hear anything else." We cannot be sure that the chess-like game really is hnefatafl, as the Saami played a lot of other board games with two armies fighting each other, for instance the above mentioned game from Frostviken. However, it certainly is intriguing to imagine that hnefatafl may have survived until just a bit more than a century ago.

It is interesting to note that the defenders were called Swedes and the attackers called Muscovites by the Saami. The name Moscow first appeared in 1147, and Moscow became a significant centre of power in the beginning of the 14th century. The Viking Age in Sweden ended around 1060, with the death of the king Emund, the last member of the old Uppsala family on the throne. At that time, the Viking raids deep into Russia gradually were replaced by attempts to control the river entrances along the Baltic coast by building fortified castles. Often, these castles were under siege by troops from Russian principalities. Therefore, tablut may very well be a medieval Swedish variation of hnefatafl, inspired by the new strategic situation for the Swedes on the Baltic coast. The fact that the Saami have retained the original names of the playing pieces suggests that they have made little or no changes to the game since they learned it from the Swedes.

Tawl-bwrdd, hnefatafl in Wales

The Celtic peoples seem to have been just as addicted to board games as the Scandinavians. The absence of music and tables is a sign of mourning, *Fir gun tàilisg gun cheòl; Gur bochd fulang mo sgeoil éisdeachd*, said Mary Macleod in her Gaelic Songs¹³. Gaming boards were used as symbols of wealth and prestige, and could be magnificent and valuable pieces of workmanship. When admitted to his office, a chancellor in Wales received a gold ring, a harp and a gaming board from the king, which he was expected to preserve for the rest of his life. A judge of court received a gaming board with playing pieces made of bone from sea-animals from the king and a gold ring from the queen, which he likewise was expected never to sell or give away.

It is not surprising to find the only other document that gives an fairly clear description of the rules for a tafl game in the Welsh National Library. On page 4 in the Peniarth Manuscript 158 from 1587, Robert ap Ifan gives an account of a game called *tawl-bwrdd*. The English game expert Robert C. Bell used it for a reconstruction, presented in his book *Board and Table Games from Many Civilisations 2* (1969)¹⁴. Unfortunately, it seems that Bell has misinterpreted ap Ifan on some points. In his book, Bell argues that since *tawl* means throw in Welsh, dice were probably used. In the reconstruction, the players throw the die alternately and are allowed to make a move only if they get an odd number. Many people, including myself, have questioned this conclusion. The use of a die to decide the turn seems highly artificial, and there are no other indications in the Celtic or Anglo-Saxon material on tafl that dice ever were used. The similarity between the Welsh word and the Norse word for tafl is too big to be a coincidence. *Tawl-bwrdd* must either have been taken from the Medieval Latin *tabula* and the Saxon *bord*, which means board and table, respectively, or more directly from the Old Norse word for gaming board, *taflbord*^{15,16}.

The escape rules of the game are worth some attention. In Bell's reconstruction, the king escapes if he reaches any square on the periphery. According to our previous discussion, this would make the game strongly biased in favour of the king. It is hard to believe that such a prestigious game would have been as unsophisticated as that. The original manuscript explains the escape of the king in the following way: "If the king can go along the ---line that side wins the game". The "---" denotes an indecipherable part of the text. The missing part of the text may have explained which

line the king has to go along, or where he has to move, or maybe both.

It seems quite natural that the escape region of the king should be in the periphery of the board, so we can agree with Bell that "---line" most likely refers to the two rows and the two columns along the edge of the board. Bell seems to have missed the fact the text says "can go along" rather than "reaches". It may have been a clumsy way of expressing "can go [to any square] along the ---line", but if ap Ifan actually means what he is saying, that the king has to go along the periphery, the escape rule is a clever way of getting a more balanced game. If the king reaches the periphery, but the attackers can capture the king in the next move, the king's side loses. If the king moves in between two pieces or if the attackers can block his next move, the game continues. With Bell's escape rules, you need nine pieces to completely block one column or row along the edge, but with these more strict rules you only need four pieces, one on each third square, provided that no defenders sneak in. It is possible that it was not enough for the king to make a move along the periphery to win, but that he had to reach a certain goal, for instance one of the squares in the four corners. This hypothesis is contradicted by the fact that there are no special markings in the corners or in other squares on the board.

I suggest the following set of rules for tawl-bwrdd:

1. Two players may participate. One player plays the king's side, with a king and twelve defend-

ers, while the other player plays the twenty-four attackers.

2. The game is played on a board with 11×11 squares (see Fig. 2). Initially, the king is placed on the central square with his twelve defenders placed on the two closest squares in each orthogonal direction and on the closest square in each diagonal direction. The twenty-four attackers are placed in four rectangular formations along the edges.
3. The objective for the player on the king's side is to make a move with the king along any column or row at the periphery of the board. If he manages to do that, the king has escaped and the king's side has won the game. The attacking side wins if the attackers can capture the king before he escapes.
4. The king's side moves first, and the game then proceeds by alternate moves. All pieces move any number of vacant squares along a row or a column, like a rook in chess.
5. All pieces, including the king, are captured if they are sandwiched between two enemy pieces along a column or a row, either with the two enemy pieces on the square above and below or with the two enemy pieces on the square to the left and to the right of the attacked piece, respectively. A piece is only captured if the trap is closed by a move of the opponent, and it is, therefore, allowed to move in

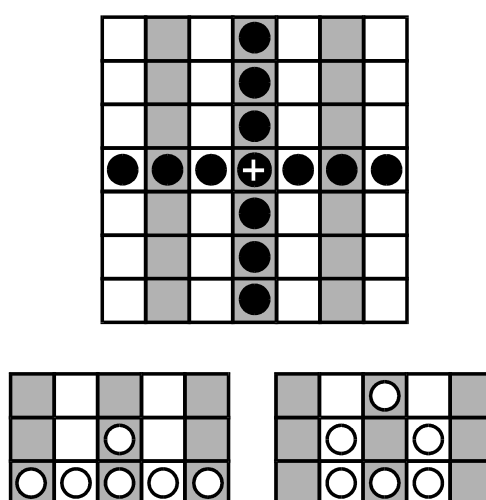
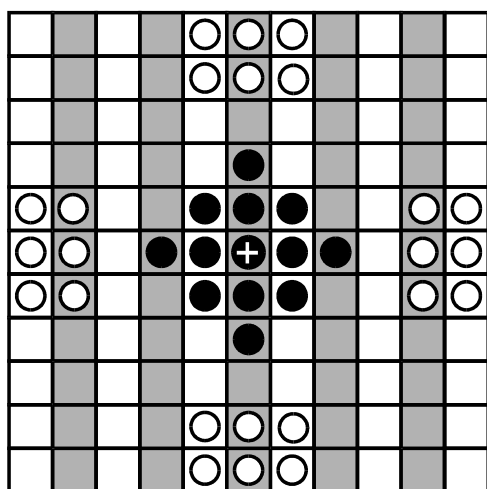


Fig. 2. To the left: Suggested initial arrangement of the pieces in Welsh Tawl-bwrdd. To the right: Alternative arrangement of the defenders (above) and the attackers (below).

between two enemy pieces. If a player makes a move between two enemy pieces, he must declare it by saying *gwrheill*, so that the opponent at a later stage may not claim that the piece was captured. A captured piece is removed from the board and is no longer active in the play. The king may participate in captures.

6. It is forbidden to move the king to a position where he can be captured by the attackers in the next move. If the king's side attempts to make such a move, the opponent must warn him by saying "watch your king". If the king can be captured on the square where he stands, if the king's forces cannot remove the threat by capturing the attacking piece, blocking the square on the opposite side or moving the king to a square where he is no longer threatened, the king is mate and the attackers win.

As in the reconstruction of *tablut*, there are some gaps in the text that must be filled in. It is never explained how the pieces move, but, since this is a fundamental property of the game, it is almost certain that the same rules as in Linné's description apply. The manuscript doesn't say which side that makes the first move. Although the number of pieces participating in the two forces is given in the text, the explanation of how they initially are arranged is a bit contradictory. However, the number of possible set-ups is limited, and I have only run across two or three different suggestions in the literature on how the pieces should be placed. Some obvious variations are given in Fig. 2. The description of the capture rules is a bit vague, and the text doesn't say whether the king is weaponless. It is easier than in *tablut* for the king's forces to block the game by building closed formations, and, therefore, experienced players will have to add rules that deal with such situations.

In ap Ifan's manuscript, there is a drawing of a gaming board for the game, with 11×11 squares and the second, fourth, sixth and eighth columns shaded. It is a reasonable guess that also the tenth column should have been shaded. The text does not mention the shaded columns, nor does it explain what function they had. (It is possible that the indecipherable word "---line" in the escape rules may refer to one of the shaded lines or to all of them, rather than to the periphery as assumed in the reconstruction above. However, I think it is much more likely that the shaded lines simply indicate that certain rows were inlaid with special materials for aesthetical reasons.)

Tawl-bwrdd is also frequently mentioned in the Ancient Laws of Wales, traditionally ascribed to king Howell Dda († 950). King Howell was certainly responsible for the co-ordination of existing laws, but the laws attributed to him are probably not older than 1250. On page 436, the total value of the white forces on the king's own "tawlbort" is said to be 60 pence, while the king (*brenhin*) was worth 30 pence and each man (*werin*) 3 pence and 3 farthings¹⁷. All this sums up to 6 score pence according to the text. Simple calculations show that there must be 4 farthings on a penny and 20 pence on a score penny. Hence, there were 16 pieces on the white side, 8 pieces on the king's side, and one king, consistent with the size of the forces that were used in *tablut*.

Irish games related

to hnefatafl: fidchell and brandub

References to board games in early Irish literature are frequent, but unfortunately often ambiguous and even contradictory. It seems quite likely that some sort of *tafl* game must have reached Ireland, considering the intense contacts between the island and the maritime Viking community. Bell believed that *fithcheall*, also spelled as *fidchell*, probably belonged to the *tafl* group¹⁸. *Fidchell* literally means "wood-sense", and is etymologically identical to the Welsh *gwyddbwyll*, also a game of disputed origin and character. Eówin MacWhite has written an excellent article on early Irish board games where he shows that, although the pieces probably were captured in the same way as in *hnefatafl*, *fidchell* cannot have been an asymmetrical game¹⁹. He quotes an old document describing *fidchell* that says: *half of its men were of yellow gold, the other half of tinned bronze*. This implies opposing forces of equal sizes, i.e. a so-called battle game²⁰. Probably, *fidchell* is a descendant of the popular Roman board game *ludus latrunculorum*.

Brandub, on-the-other-hand, shows good agreement with *tafl* in many respects. Literally, the word means "raven black". In the game, there is a piece of special significance, which is called the *branán*. The word is a common poetic epithet for a chief. In the poem *Abair ríom a Éire ógh* attributed to Maoil Eóin Mac Raith, we find the following description of brandub:

*A golden branán with his band art thou
with thy four provincials;
thou, O king of Bregia, on yonder square
and a man each side of thee.*

The language, meter and style show that the verses belong to the court poetry of the period 1200–1640. Another Irish poem says that *my famed brandub is in the mountain above Leitir Bhroin, five voiceless men of white silver and eight of red gold*. If we sum up all this information, we can conclude that brandub was played between five pieces on one side, probably the branán and four common pieces, and eight pieces on the other side. The relative size of the forces is consistent with other tafl games. MacWhite suggests that the game was played on a 7×7 board and that the pieces were placed in the form of a cross, with the king in the

middle, the king's men in the four positions closest to the king, and the attackers at the two end positions in each arm of the cross, respectively. Archaeological evidence, which will be discussed later, indicates that the four corners were escape points for the king.

Saxon hnefatafl

Hnefatafl was widely spread also in Saxon England. In *Vocabulary*, written by the English monk Ælfric (955–1010) around the turn of the millen-

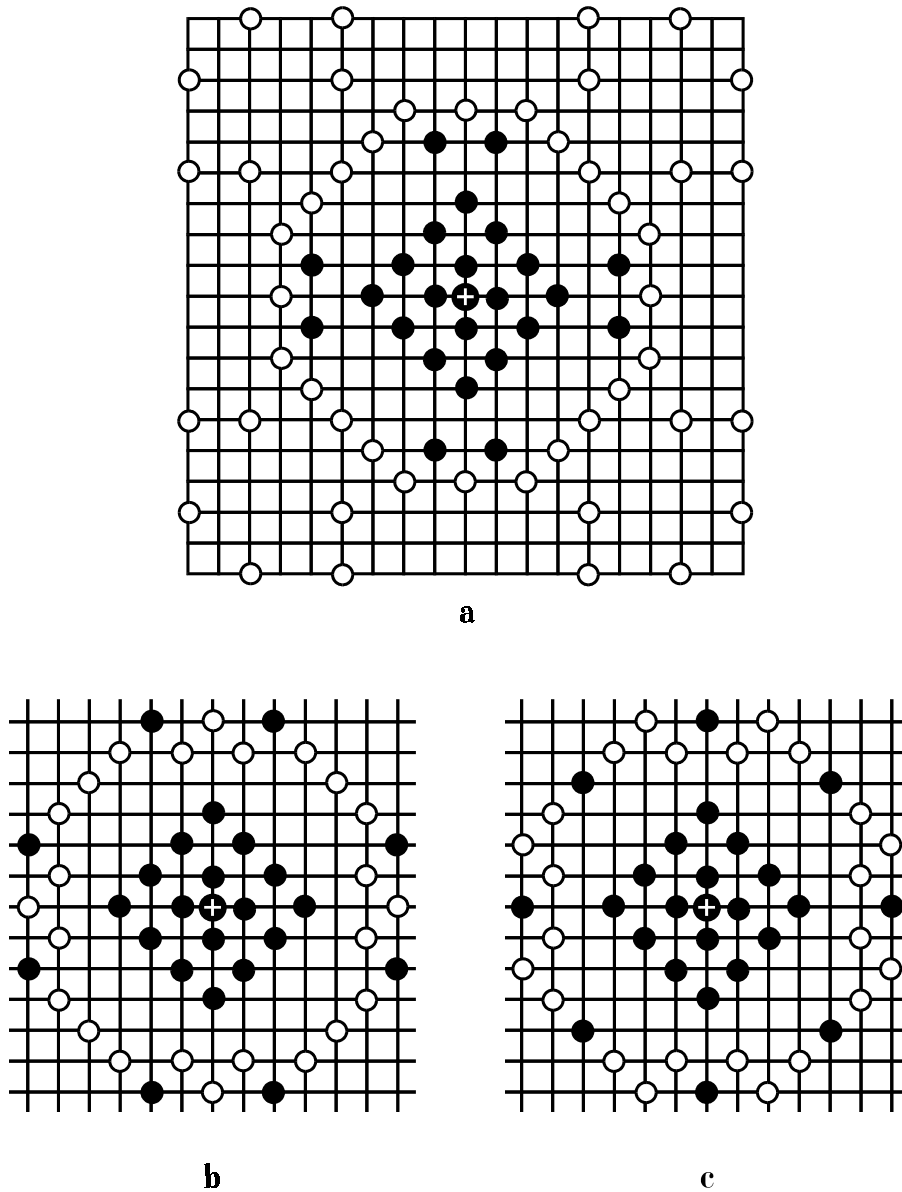


Fig. 3. a) Suggested initial arrangement of the pieces in the Anglo-Saxon version of hnefatafl. b) and c) Alternative arrangement of the pieces.

nium, some gaming terms were translated from Old English to Latin. Although the author of the glossary mixed up the meaning of several terms, we can easily identify the origin of words like *tafel* (tafl), *cynningstan* (king-piece) and *tafelstana* (tablemen). Glossaries from ante 800 mention various forms and spellings of tafl, e. g. *teblas* and *tefil*, but there is no mention of a king²¹.

The most interesting reference to Saxon hnefatafl is a 10th century document of Irish or English origin, now in the library of Oxford. In the document, there is a drawing of a gaming board with playing pieces placed on the intersections of a grid with 18×18 squares (and hence 19×19 available intersections)²². Along with the drawing, there is an allegorical description of a game called *alea evangelii*, which means Game of the Gospels. The text does not give us much information about how the game was played, but there can be no doubt that it describes a version of hnefatafl.

In the text, we are first informed that Dubinsi († 951), bishop of Bangor, brought the game to Ireland from the court of king Aethelstan (925–940) of England. The author continues to say that the game can only be understood if one thoroughly knows about "to wit, dukes and counts, defenders and attackers, city and citadel, and nine steps twice over". Attackers and defenders may refer to the playing pieces of hnefatafl. After that, there is a long and artificial description of how the game relates to the four Gospels. In the description, we are told that there are 72 men, called *vir* in the manuscript, and one *primarius vir*. These numbers are almost consistent with the number of playing pieces in the drawing, and the *primarius vir*, placed on the central intersection, of course corresponds to the hnefi. The four squares in the corners of the board have four men in them, but the text says that they only are there "for the decoration of the playing table".

Some of the playing pieces in the drawing of the gaming board have been misplaced, and there is no distinction made between attackers and defenders. Murray's reconstruction of the initial arrangement of pieces is shown in Fig. 3. This arrangement is reproduced in most of the literary references that discuss *alea evangelii*, but as can be seen from diagrams (b) and (c), there are also other ways of arranging the pieces with a high degree of symmetry. The fact that the playing pieces have been placed on the intersections of the grid in the Saxon manuscript, and not in the centre of the squares, does not necessarily mean that the contemporary gaming boards had this design. The playing pieces are denoted by small filled squares in the drawing, which show a striking resemblance

to Gregorian musical notes when they are placed on the lines of the grid rather than in between the lines. Probably, the author just wanted the drawing to fit the philosophical speculations about the four Gospels in the text.

Bell has combined Murray's arrangement of pieces with the capture rules from tablut and the simple escape rule where the king only has to reach the edge of the board²³. This set of rules is not so well thought-out, and will most likely result in an unbalanced game. In the reconstruction of tablut, special functions were assigned to all ornamented squares. It is not impossible that the decorations in the corner squares of the "*alea evangelii*" gaming board also denoted a special function for the corresponding intersections, for instance that they were escape points for the king. In that case, we could perhaps think of the game as a city under siege, where the king has to escape to one of four safe citadels outside the surrounded town. Note that the king has to move nine positions in vertical and horizontal direction to reach one of the corners of the board, that is "nine steps twice over".

It will become much too easy for the attackers to prevent the king's escape, if pieces are allowed to occupy the corner points or if pieces standing next to the corner points cannot be captured in any way. The fact that the four intersections in the corners are decorated by men suggests that any of these points could replace one of the two pieces taking part in an attack on an enemy piece, i.e. that the corresponding intersections were hostile. Most likely, it was also forbidden for all pieces except the king to occupy the decorated intersections. An attacker blocking the path to the corner along the edge would under these assumptions not be safe on the third intersection from the corner, but would either have to be placed on the fourth intersection or get additional support by other playing pieces from the attacking side. The initial set-up of pieces on the board will also have a great influence on the balance of the game. In Murray's arrangement, the king's forces are almost completely surrounded. There are only two holes in each point of the compass in the wall that encircles the defenders. The suggested arrangement in diagram (b) will make it easier for the defenders to break up holes in the surrounding walls.

Hnefatafl in the Icelandic Sagas

There are numerous references to hnefatafl in the Icelandic literature, but only few of them shed any light on the structure of the game. In *Friðþjófs Saga ins fraekna*, there is a scene where Friðþjófr is

playing at tafl with his friend Björn²⁴. From the conversation that follows, one understands that Friðþjófr is playing the attackers and his friend Björn the defenders. A messenger called Hilding arrives and asks for Friðþjófs help in a raid against king Hring. "That is a bare place in your board, which you cannot cover," Friðþjófr says to Björn without taking notice of Hilding, "and I will attack your red pieces there". Of course, the metaphor has indirectly answered the question. Friðþjófr means that going on a raid would leave a weak point in their defence, which he threatens to take advantage of. From the reply, we learn that the defenders are red in this version of the game, in contrast to tablut where the kings men are fair.

When Hilding points out that there might be trouble later on if he does not join the raid, Björn says to Friðþjófr that he has two possible moves, and Friðþjófr replies that it is an easy choice, he will go against the hnefi. The reply means that he agrees to taking part in the attack against king Hring after all. The metaphor verifies that the hnefi is a piece with a special function in the game, since it is symbolically used to represent king Hring.

The most informative references to hnefatafl in the Icelandic sources are two riddles in *Hervarar Saga* between king Heiðrekr and the god Óðinn in disguise. Three different manuscripts, which phrase the conversation in a slightly different way, have been preserved. The oldest one is the so-called *Hauksbók* from the 14th century. The other texts are from the 14th or the 15th century and from the 17th century, respectively. The first one of these two riddles is (according to *Hauksbók*):

*Hverjar eru þær brúðir
er um sinn dróttin
vápnalausar vega;
enar jorpu hlífa
alla daga,
en enar fegri fara?
Heiðrekr konungr,
hyggðu at gátu!*

The verse can be translated as: "Who are the maids that fight weaponless around their Lord, the brown²⁵ ever sheltering and the fair ever attacking him? King Heiðrekr, solve this riddle!" The answer is of course the playing pieces in hnefatafl, and *Hauksbók* continues: "It is hnefatafl, the pieces are killed weaponless around the king, and the red ones are following him." The younger medieval manuscript explains the answer in the following way: "It is hnefatafl, the dark ones protect the king and the white ones attack him." The king's pieces

are referred to as reddish brown²⁵, red or dark, and the attackers as white or fair. Hence the colours of the forces are consistent with the ones in *Friðþjófs Saga*.

When Riksställningar made their reconstruction of tablut in 1972, there appeared to be some uncertainty about the interpretation of the word weaponless. In the younger medieval text, the original Icelandic adjective is written in singular form, *vápnalausar*, as opposed the plural form used in *Hauksbók*. Therefore, they argued, the adjective must be an attribute to the king, rather than to the maids, which suggests that the king in hnefatafl is weaponless and cannot take part in captures of enemy pieces. This hypothesis is contradicted by the reply in *Hauksbók*, which clearly states that it is the defending pieces that are slayed weaponless around their king. Probably, the word weaponless is just a poetic way for the author to hint that he is referring to playing pieces and not to real armed warriors, and it has nothing to do with the actual strength of the pieces in the game.

The second riddle is more obscure. In *Hauksbók* it says:

*Hvat er þat dýra
er drepr fé manna
ok er járnri kringt útan;
horn hefir átta,
en hofuð ekki,
ok rennr sem han má?
Heiðrekr konungr,
hyggðu at gátu!*

The English translation is: "What is that beast all girdled with iron, which kills the flocks? He has eight horns but no head, and runs as he pleases. King Heiðrekr, solve this riddle!" The answer in *Hauksbók* is: *Góð er gáta þín, Gestumblindi, getit er þeirar; þat er húnn i hnefatafl; hann heitir sem bjorn; hann rennr þegar er honum er kastat*. The first part of the answer can be translated as "Good is your riddle, Gestumblindi, but now it is solved. It is the húnn in hnefatafl." The meaning of the word húnn and the translation of the last two sentences are disputed. Húnn may either refer to a die, to the king in hnefatafl or to some other playing pieces in hnefatafl.

A possible interpretation of the last two sentences is "It is the húnn in hnefatafl. He has the name of a bear and runs when he is thrown." The game experts who identify húnn as die put forward that playing pieces cannot be thrown. A die, on the other hand, is thrown in the way the text says, and the erratic nature of a die on a gaming board certainly is applicable to the phrase "runs as he plea-

pleases" in the riddle. The eight horns are the eight edges of a six-sided die and the flock that it kills are the stakes that the players lose. The association between bear and húnna can be explained by the double meaning of the word. It is also used for the offspring of a bear in Icelandic. The connection between hnefatafl and dice is more difficult to explain. In spite of Bell's hypothesis that tawlf-bwrdd means throw, few people believe that the riddle actually implies that hnefatafl was played with dice. It has been suggested that the writer may have confused hnefatafl with Icelandic tables, kvátrutafl, which is similar to backgammon.

The double meaning of the words *rennr* and *kasta* in Icelandic also makes it possible to translate the last two sentences in the reply to the riddle as "It is the húnna in hnefatafl. He has the name of a bear and escapes when he is attacked." This interpretation points to some sort of playing piece (or pieces) rather than a die, a hypothesis that also is supported by the abrupt answer in the 17th century manuscript: *það er tafla*. "It is a playing piece." Tafla is the generic name for playing piece, so there is no direct reference to hnefatafl here.

Murray claims that the answer refers to the hnefi himself and identifies the eight horns as the eight defenders. This explanation is interesting, as it provides us with the only hint in the Sagas to what size of gaming boards that were used. It is not clear whether Murray really understood the problem with the translation, as he actually uses the word hnefi instead of húnna in his quotation of the answer. Although Murray's hypothesis is satisfactory in many ways, it doesn't match other references to the word húnna in Icelandic literature. In *Haraldskvæði*, there is a verse about the far-famed warriors who play with húnna in king Harald's court. The poem suggests that húnna is a playing piece in a more general meaning, possibly a defender or just any playing piece in hnefatafl. If we accept the latter explanation, it is unfortunately difficult to understand what the eight horns in the riddle refer to. It may allude to playing pieces of a special shape or to the collective of defenders. Besides, the text doesn't really say "play with", but rather *verpa*, which means "throw". This may give the game experts who argue that húnna means die new support for their case. The true meaning of the word húnna is still an enigma to me²⁶.

Both *Hervarar Saga* and *Friðþjófs Saga* belong to the so-called *fornaldarsögur*, a group of Sagas with mythic stuff from the time before Iceland was colonised by Scandinavian Vikings. Most of them were written down at the end of the 13th century and in the beginning of the 14th century. The rhymed answers to the riddles in *Hervarar Saga*

are, however, not genuine, but added by the writer for an audience who was not familiar with the old traditions²⁷.

Apart from these texts, hnefatafl is only mentioned incidentally in other Sagas. In *Völuspá*, a great poem about the creation of the world and the Scandinavian equivalent to Genesis, the Anses play tafl with golden *tæflor*, "table-men", in the innocent days after the creation of the world. When the world is resurrected after Ragnarök, they find the same table-men laying in the grass. In *Morkinskinna*, Sigurðr Jónsalafari and his brother Eysteinn are having an argument about who is the better man. Sigurðr says that he is stronger and can swim better, but his brother is not so impressed. "I am a more handy man and I can play hnefatafl better than you," he answers. *Orkneyinga Saga* informs us that Kali Kolsson, later earl of Orkney under the taken name Rögnvaldr, showed great promise already in his youth as a man of great ability. Kali wrote a poem about his skills, where he said that he could challenge anyone in nine events: tafl play, knowledge of runes, reading and writing, skiing, shooting, rowing, playing harp and speaking poetry²⁸. Accomplishments in hnefatafl were evidently just as highly valued as abilities in martial arts.

In older literature, the generic word *tafl* is used in most scenes where reference is made to board games. The more specific term *hnefatafl*, sometimes written in contracted or assimilated form (*nettafl*, *bnettafl*, *bneftafl*), only appears in younger texts such as the *fornaldarsögur*. The spelling *hnottafl* has also been documented, but may refer to another game. Murray suggested that the introduction of many other board games in Scandinavia at the end of the Viking Age, for instance kvátrutafl (Icelandic tables) and skáktafl (chess), made a distinction necessary. Probably, hnefatafl is understood in most cases where the generic term tafl is made use of.

Archaeological findings

Boards were usually made of wood, and it is not surprising that only few findings of gaming boards have remained until present time. At Wimose in Denmark, in a grave of the Roman Iron Age, a fragment of a gaming board dated around 400 A.D. was excavated. The fragment is 18 squares long and one and a half square high, each cell around 25×25 mm². One of the corners of the board is included in the fragment, but the chequered region does not look complete in any direction. It is possible that the original gaming board was even larger. The fragment is often associated

with the drawing of the 18×18 gaming board for *alea evangelii*.

In the 9th-century Gokstad ship in Norway, a fragment of another chequered gaming board was found. On the reverse side of the board, a pattern for nine men's morris is set out. The fragment is 13 squares wide and complete in this direction, but only four rows remain in the other direction. On every second row, squares number two and five (both from the left and from the right side of the board) have special ornamentations.

In 1932, an artistically carved, pegged gaming board with 7×7 holes was found at Ballinderry, Ireland. It is now kept at the National Museum of Ireland in Dublin. The board has two handles, shaped as heads, and a frame ornamented with eight panels of interlace- and fret-patterns. It was first concluded that the board was made in the Isle of Man, where similar motifs have been found on 10th century crosses. They are now known to have been common also in Dublin, which is a more probable place of manufacture²⁹. The size and shape of the gaming board fit excellently to MacWhite's reconstruction of the Irish tafl-game brandub. It is obvious that the corner points had a special function in whatever game that the board was used for. If it actually was a tafl game, they were most likely escape points for the king.

A fragment of a chequered 11×11 gaming board from the beginning of the 12th century was found in Trondheim, Norway, and is now kept at *Vitenskapsmuseet*³⁰. Seven and a half rows, each with eleven squares, are preserved. There is a cross in the central square and in the third and fourth square from the centre in each point of the compass (apart from the direction in which the gaming board is not complete). A bordering rim is fastened to the board with dowels.

In the excavation of a farm at Toftanes, Faroes, a gaming board with a handle and a rim about 1 cm high was found³¹. The board is split longitudinally and only half of it is preserved. On the underside of the board, there is a chequered region, which is 14 squares long in longitudinal direction. The board, which is now kept at the *Føroya Fornminnissavn* in Tórshavn, is dated to the 10th century.

At Coppergate, York, a fragment of a chequered wooden gaming board with a raised strip nailed along the edges to prevent pieces from falling off was found³². The board is 15 or 16 squares wide, with only three rows preserved, and dated to the 10th century.

Two gaming boards were carved in grey flagstone and another one in red sandstone in a Viking settlement at Buckquoy on the Orkney Islands. The settlement dates from the 9th century³³. The

first two of these boards are clearly related to the Ballinderry gaming board. They consist of grids with 7×7 intersections and both have circles around the central intersection. There are no special markings in the corners.

It has often been claimed that all of these gaming boards were used for hnefatafl, probably under the assumption that hnefatafl was the only board game known by the Scandinavians prior to the introduction of chess. At least for some of the boards, this presumption is questionable. The markings in the squares on the gaming board from the Gokstad ship, for instance, lack the appropriate symmetry. The board from Toftanes has an even number of squares. One of the lines in the grid is carved so close to the border that it is hard to believe that the pieces were played on the intersections. This strikes a discordant note with our knowledge about hnefatafl. The most promising candidates for tafl boards are the artefacts from Ballinderry, Buckquoy, and Trondheim, although the ornamentation on the latter board is different from any other known literary or archaeological source.

Gaming boards can also be observed on illustrations. A rune stone from Ockelbo, Sweden, which unfortunately was destroyed in a fire in 1904, showed an engraving of two men with a gaming board between them. There was a square cut in the centre of the board and a square cut at each edge. The squares at the edges were connected to the central square with four diagonal lines.

Playing pieces were usually made of glass, bone, amber, clay, and probably also wood. More than hundred playing pieces from the time period of interest have been found, but it is sometimes difficult to distinguish pieces that were used for hnefatafl from pieces for chess, tables, nine men's morris, and other contemporary board games. The most interesting set of pieces is from the 9th century and was found in grave no. 750 in Björkö, Sweden^{34,35}, a small island in lake Mälaren where Sweden's largest commercial city during the Viking Age was located. About thousand graves have been found in this area. The set includes twenty-five hemispherical pieces with a diameter of around 25 to 27 mm. Seventeen of the pieces are made of light blue-green glass and eight of opaque dark green glass. There is also a distinct piece of dark green glass, larger than the other pieces and shaped like a man with a head. Apart from an extra attacker, possibly a spare piece, we end up with forces that are consistent with the ones used in tablut. In boat grave no. 3 in the burial-ground in Valsgärde, Sweden, another set of hemispherical



Fig. 4. Set of glass playing pieces from grave no. 750 in Björkö.

glass playing pieces from the 10th century was found³⁶. Fifteen of the pieces are of translucent green-blue glass with a black trail, and eight of plain dark-brown glass. Apart from the king and a missing attacker, the forces agree with the set from Birka. These findings are a strong archaeological support for Murray's theories.

Twenty-six lathe-turned hemispherical playing pieces of bone and a king were found in grave no. 624 in Björkö³⁷. The diameter of the pieces varies between 22 and 26 mm, and the height is about 20 mm. The king is capped with a bronze mount. Six of the pieces are slightly smaller than the others. All pieces have a flat base with a central hollow that contains remains from an iron peg. In grave no. 986, sixteen playing pieces of elk horn and a king were found³⁸. The king, which is higher than the other pieces, has a round head and a conical body with vertical stripes. Six of the sixteen playing pieces are conical with vertical stripes on the upper part, and ten of them without stripes, of somewhat irregular shape, and slightly larger than the first six. In grave no. 524, fifteen pieces of amber were found³⁹. One of the pieces, probably the king, is marked with crossed grooves and is about 29 mm high and 27 mm in diameter. The other pieces are 17 to 24 mm high and 20 to 31 mm in diameter. Three of the pieces are red, the other ones yellow.

At Baldursheimur in Northern Iceland, twenty-four turned pieces of walrus ivory and a carved king of whale bone from the 10th century were found⁴⁰. The king has a large round face, promi-

nent eyes and a long forked beard. It may be a representation of a god. The piece is 39 mm high and 29 mm in diameter. At Torvastad, Norway, eleven conical playing pieces of light-blue glass, one conical piece of dark-blue glass with brown top and yellow point, and four conical pieces of yellow glass with brown top were found in a grave⁴¹. The pieces are dated to about 800 A.D. There are numerous more findings of incomplete sets and single items from graves in Sweden, Norway, the Ukraine, Iceland and Northern Europe.

Which version is really hnefatafl?

In many references that discuss the evolution and grouping of tafl games, the recorded sizes of gaming boards, *e. g.* 7×7, 9×9 and 11×11 squares, are usually matched to the available names of regional variations, *e. g.* brandub, tablut and tawlbwrdd. It is, however, doubtful if the game versions should be classified in this way. The great Asian board game *go* is often played on different board sizes for pedagogical reasons, but the name itself never changes with board size. It seems much more natural to attribute the different regional names to all versions of tafl games that were known in that particular speech area, respectively. It is quite clear that at least in some of the regions, more than one version was in use. The Welsh texts, for instance, describe a 9×9 version and a 11×11 version, which are both referred to with the same name, *tawlbwrdd*.

Of particular interest are which size(s) and set(s) of rules that correspond to hnefatafl, the game played by the Vikings in the time period from about 800 A.D. to about 1050 A.D. Some authors, for instance Schmittberger⁴², identify the 19×19 version *alea evangelii* as hnefatafl, "the Viking game", probably because this version is the only one that is left over once the 7×7, 9×9 and 11×11 versions have been assigned to brandub, tablut and tawl-bwrdd, respectively, and because *alea evangelii* is the only contemporary literary description of a tafl game. The 13×13 board that was found on the Gokstad ship is also a spare version that sometimes has been claimed to represent the original game of hnefatafl.

A closer examination reveals that it is not that simple. If hún is identified as hnefi, the second riddle in the Hervarar Saga points to forces with eight defenders and a board of size 9×9 squares. Although literary references may reflect the situation both during the time period when the oral tradition was established and the time period when they were written down, the difficulty to change words in texts that already have been recited by generations of narrators makes the former alternative much more likely. In this case, the medieval text consequently must refer to game versions from the Viking Age. The archaeological findings of gaming boards from the geographical region of interest suggest, with varying degree of probability, board sizes of 7×7, 11×11, 13×13, 15×15, and 19×19 squares. The glass pieces from Björkö and Valsgärde are probably the remains of sets for a 9×9 gaming board. The incoherence in the source material makes it difficult to single out any particular version as hnefatafl. If anything, it rather leads to the conclusion that hnefatafl was a game with non-uniform rules and board size.

Modern commercial editions of hnefatafl

There is currently an increasing interest for hnefatafl and its offsprings among game manufacturers and producers of software, but the idea to market these games is not new. Already fifty years before Murray discovered the connection between tablut and hnefatafl, a version of tablut appeared in the United States⁴³. It was called the Battle for the Union and was issued in 1863. The king was replaced with a Rebel chief, and the defenders and attackers turned into Rebel and Union soldiers. The move of the Rebel chief was limited to four squares. It has been suggested that this strange rule was an early attempt to improve the balance in the

game, but it was probably due to a misunderstanding of one of the entries in Linné's original notes.

Bell's and Murray's descriptions of hnefatafl are the only ones that have been available for a general public. It must be obvious for anyone who has played according to the suggested rules that they have to be modified in order to improve the balance of the game. The shortcomings of the reconstructions have triggered the interest of some game constructors. Recently, some versions of the game have been issued where the four squares at the corners of the board are escape points for the king. Probably, the Ockelbo rune stone, the Ballinderry gaming board and the illustration of the *alea evangelii* gaming board have inspired the inventor. The corners are restricted for all pieces, except the king, and hostile to all pieces, including the king. A complete set of rules typically looks like this⁴⁴:

1. Two players may participate. One player plays the king's side, with a king and his defenders, and the other player plays the attackers. There are either eight defenders and sixteen attackers, as in tablut, or twelve defenders and twenty-four attackers, as in tawl-bwrdd.
2. The game is played on a board with 9×9 or 11×11 squares and with initial set-up as in tablut or tawl-bwrdd.
3. The central square, called the throne, and the four squares in the corners are restricted and may only be occupied by the king. It is allowed for the king to re-enter the throne, and all pieces may pass the throne when it is empty. The four corner squares are hostile to all pieces, which means that they can replace one of the two pieces taking part in a capture. The throne is always hostile to the attackers, but only hostile to the defenders when it is empty. (There appear to be some variations on this point. Sometimes the throne is hostile to defenders also when the king occupies it.)
4. The objective for the king's side is to move the king to any of the four corner squares. In that case, the king has escaped and his side wins. The attackers win if they can capture the king before he escapes.
5. The attackers' side moves first, and the game then proceeds by alternate moves. All pieces move any number of vacant squares along a row or a column, like a rook in chess.

6. All pieces except the king are captured if they are sandwiched between two enemy pieces, or between an enemy piece and a hostile square, along a column or a row. The two enemy pieces should either be on the square above and below or on the square to the left and to the right of the attacked piece. A piece is only captured if the trap is closed by a move of the opponent, and it is, therefore, allowed to move in between two enemy pieces. A captured piece is removed from the board and is no longer active in the play. The king may take part in captures.
7. The king himself is captured like all other pieces, except when he is standing on the throne or on one of the four squares next to the throne. When the king is standing on the throne, the attackers must surround him in all four cardinal points. When he is on a square next to the throne, the attackers must occupy all surrounding squares in the four points of the compass except the throne.

Origin of hnefatafl

There is no material that gives us any detailed information about when and how hnefatafl was invented, but it is interesting to try to trace the principles of game. Hnefatafl has two original features. The first one is the method of capturing pieces, which is different from any other known contemporary European game. There is evidence that the same principle of capturing pieces was used in the popular Roman board game *ludus latrunculorum*. The game is extinct since long ago, but Saleius Basso vaguely described the rules in a poem written in the first century A.D. In a reconstruction of the game, made by the British game historian Edward Falkener in the 19th century and based on Basso's poem, pieces were captured when they were surrounded by enemy pieces along a row or column of the gaming board, exactly the same way as in hnefatafl. The Germanic peoples were culturally under heavy influence by the Romans, and the discipline of games and gambling was no exception. Hence we have good reasons to believe that the capture principle in hnefatafl was borrowed from *ludus latrunculorum*. This hypothesis is supported by the fact that the Old Norse word *tafl* originates from the Latin word *tabula*.

The second original feature of hnefatafl is that the two players have different objectives and dispose of unequal forces. There is another Northern European game known as fox and geese, which

also simulates a battle between unequal forces. Bell claims that fox and geese was played already by the Vikings and says that it was identical to the game *halatafl* mentioned in *Grettis saga Asmundarsonar*. At a first glance, it seems natural to think that the principle of unbalanced forces in hnefatafl was taken from fox and geese.

The idea that halatafl and fox and geese are the same game was put forward by Cleasby, Vígfússon and Craigie⁴⁵. They pointed out that *hali* means tail in Icelandic, and associated it with the tail of a fox. This conclusion is a bit far fetched and has been questioned by many. In *Grettis Saga*, the game is referred to in quite a dramatic scene where Þorbjörn Öngull Þórðarson is sitting at a gaming board. His stepmother comes by and insults him, and after a short argument, she runs a playing piece through his cheek. Þorbjörn hits her so hard that she later dies. The scene starts with the words *...hann tefldi hnettafl; þat var stort halatafl*. This sentence does not make much sense if we assume that halatafl was the same as fox and geese, "he was playing hnefatafl, it was a big fox-and-geese board". A much better theory has been suggested by Fritzner⁴⁶, who said that halatafl was not the name of a game, but just of a pegged gaming board. According to Fritzner, *hali* referred to the nail-shaped playing pieces. This explains how Þorbjörn's stepmother could run a playing piece through his cheek, although playing pieces at the time usually were hemispherical or flat. The translation with this theory in mind makes a lot more sense: "he was playing hnefatafl, it was a big pegged gaming board".

The earliest known reference to fox and geese is, if we rule out halatafl, from the reign of king Edvard IV (1461–1483). If there really is a connection between fox and geese and hnefatafl, it seems much more likely that the latter has influenced the former than vice versa.

Some final remarks

Enough theory! Play a few games and test the balance of the reconstructions above. Don't forget that there are still some rules that you can experiment with: all the optional rules of *tablut* and the initial arrangement and the escape rules of *tawlbwrdd* and Saxon hnefatafl. Maybe you want to check the original references yourself and form your own opinion about the entire reconstructions.

The balance of the game will depend on your experience. In general, the better player you are the easier it will be to play the defenders. It is important that you try to optimise your strategy

when you test the set of rules you finally want to play with. The king has to make clever sacrifices to create paths into the open, but without weakening his own forces too much. It is important to rapidly establish a threat against at least one of the strategically important corners. The attackers should try to build walls at a larger distance. In the initial phase, it is advantageous for the attackers not to capture defenders unless absolutely necessary, as the defenders tend to block the way for their own king. When the attackers finally have managed to surround the defenders with their walls, they can start to capture defenders and tighten the trap.

If you have any comments about this article or if you just want to discuss this great game, please don't hesitate to mail the author.

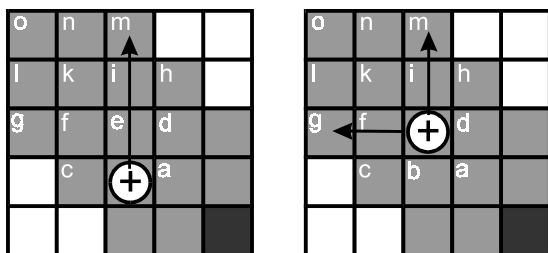
Acknowledgements

I am in debt to Peter Michaelsen, Dronningborg, Denmark, who provided me with copies of many of the new references that were added to the revised version of the manuscript, and who also sent lots of other interesting articles concerning board games. Many thanks to senior antiquarian Inga Lundström, at *Statens Historiska Museum* in Stockholm, who sent me a copy of the reconstructed rules from *Riksutställningar*, and who also gave me a few more references. Gary Walker provided me with two of the references to archaeological findings of gaming boards. I also want to thank Dagmar Helmfrid, who spent a lot of time to correct my English, and Jón Þórðarson, Reykjavík, who helped me with the translation of the verse in *Haraldskvæði*. The photograph at the top of the page was taken by Ulf Ring at the Millennium Festival in Stockholm, December 27–30, 1999.

References and notes

1. Willard Fiske, *Chess in Iceland and Icelandic Literature*, Florence, 1905, p. v, vii, 58, 70 and 156. The author rapidly lost track of the theme he set out for the book. "It is", Fiske admitted in the preface, "as if a scribbler, having begun a poem on love or some other fine emotions of the heart, should suddenly transform it into a dissertation on affections of the liver." The book was published one year after Fiske's death and is a disorganised compilation of references to games not only from Iceland, but from all Indo-European civilizations.
2. The Saami are a minority in Sweden, Finland, Norway and in the north-western part of Russia. Their language belongs to the Finno-Hungarian group and is related to Finnish but not to other Scandinavian languages. Lapland is a historic province in the Northern part of Sweden and Finland, which was named after the Swedish word for the aboriginal Saami population. Sweden-Finland was a united kingdom at the time when the province first appeared. The province was split in two pieces when the Russians conquered Finland in 1809. Linné made his discovery in the part of Lapland that belongs to Sweden. The Saami are often referred to as Lapps or Laplanders in older English literature, but both these names are nowadays regarded as deprecatory.
3. Harold J. R. Murray, *A History of Chess*, Oxford, 1913, p. 445–446.
4. Harold J. R. Murray, *A History of Board Games other than Chess*, Oxford, 1952, p. 55–64.
5. R. Wayne Schmittberger, *New Rules for Classic Games*, John Wiley & Sons, Inc., New York, 1992, p. 24–25.
6. C. Linnaeus, *Lachesis Lapponica*, J. E. Smith, Ed., London 1811, ii., p. 55–58. This account is not complete, but only gives a translation of the first twelve entries. The complete original notes in Latin can be found in C. von Linné, *Iter Lapponicum*, Uppsala, 1913, p. 155–156. (Carl von Linné was born Linnaeus, but changed names to von Linné after he was raised to the peerage.)
7. Nils Keyland, "Dablot prejjesne och dablot duoljesne. Tvänne lappska spel från Frostviken, förklarade och avbildade", in *Etnologiska Studier tillägnade Nils Edvard Hammarstedt 193/3 21*, Sune Ambrosiani, Ed., Stockholm, 1921, p. 35–47 (text in Swedish)
8. In entry number 3, where the escape of the king is discussed, the king is assumed to be on square *b*. It is stated in the text that he can escape to square *m* from this point, if the path is clear. Obviously, the king could also escape by going to the left over *c* to the top square in the left base camp—if such a move were allowed. Interestingly enough, Linné never mentions this option. In entry number 5, where double escape routes and threats that the attackers cannot respond to are discussed, the king is assumed to be on square *e* instead of *b*. The text explains that the king can escape either to square *m* or to square *g* from this position, if there are no intervening pieces. Both of these

squares are located on the periphery of the board, outside the base camps.



9. See for instance reference 5, p. 21–29. Schmittberger tried to balance Murray's version of tablut by introducing a bidding procedure. The players could bid on how fast they believed that they could escape with the king.
10. The reconstructed game for this exhibition was called Tablo. See also an article by Jan af Geijerstam in *The Magazine of the Swedish Railways*, Q1, 1992 (text in Swedish).
11. Many texts say *raichi* and *tuichu* instead of *raicki* and *tuicku*, for instance Smith's English translation of *Lachesis Lapponica*. The original notes are untidy, but the disputed letters more look like badly written k's than h's to me.
12. P. A. Lindholm, *Hos Lappbönder*, Albert Bonniers Förlag, Stockholm, 1884, p. 82 (text in Swedish)
13. J. C. Watson, *Gaelic Songs of Mary Macleod*, London and Glasgow, 1934, p. 18
14. Robert Charles Bell, *Board and Table Games from Many Civilisations*, Oxford, 1960 (part I) and 1969 (part II). See also the revised edition with both volumes bound as one, published in New York, 1979. Tawl-bwrdd is presented on p. 43–45 in part II of the revised edition.
15. Frank Lewis, "Gwerin ffristial a thawlwrdd", in *Transactions—honourable society of Cymmrodorion*, 1941, p. 185–205
16. Johannes Brøndsted, *The Vikings*, Penguin Books, London, 1965, p. 256
17. Reference 14, p. 44 in part II of the revised edition
18. *Ibid.*, p. 45–46
19. Eóin MacWhite, "Early Irish Board Games", in *Eigse: A Journal of Irish Studies*, vol. V, Dublin, 1946, p. 25–35
20. Murray identified three main categories among board games: battle games (for example chess and checkers), race games (for example backgammon) and hunt games (for example hnefa-tafl and fox and geese). Battle games usually have equal forces, and the objective is to capture all opposing pieces or a special piece of the opposing force such as a king. In race games, the objective is to move all pieces to a certain final point. Dice are usually used to determine the number of points that the players may advance their pieces. The participating forces are equally large. In hunt games the forces are unequal. A larger force, the hunters, tries to catch one or several isolated pieces from a smaller force. The outnumbered force may or may not have some additional pieces as support. For the sake of completeness, it should be mentioned that there are other board game categories than the above mentioned, for instance mancala games (*wari*, *hus*) and games of position (*go*, *renju*). See reference 14 for a more general discussion of the topic.
21. Reference 4, p. 57
22. A translation of the manuscript can be found in J. A. Robinson, *Times of St. Dunstan*, Oxford, 1923, p. 68–71 and 171–181. There is also a reproduction of the original drawing in the book.
23. Reference 14, p. 79–81 in part I of the revised edition
24. For English translations of this Saga, see E. Magnusson and W. Morris, *Three Northern Love Stories*, 1875, or Margaret Schlauch, *The Saga of Fridthjof the Bold*, Prentice-Hall, New York, 1934.
25. In Icelandic dictionaries, the adjective *jarpur* is translated as reddish brown. In most English translations of the Saga, however, the pieces are simply described as brown, which is slightly incorrect.
26. Murray claims that there is another reference to *húnn* in the Greenland Lay of Atli, which he quotes as "The hnefi is often beaten when the hunns are taken". This quotation is incorrect. The original Icelandic text (*Codex Regius*) uses the word *qvistir* in the place where Murray has inserted *húnn*. It is doubtful if the word *hnefi* in this poem really refers to the king in *hnefa-tafl*.
27. Reference 1, p. 58
28. Finnbogi Guðmundsson, *Íslensk Fornrit. XXXIV. Bindi. Orkneyinga Saga*, Hið Íslenska Fornritafélag, Reykjavík, 1965, p. 130 (text in

- Icelandic). Translated into English in Hermann Pálsson and Paul Edwards, *Orkneyinga Saga*, The Hogarth Press, London, 1978, p. 99. Note that tafl is translated as chess in the English version.
29. James Graham-Campbell, *Viking Artefacts. A Select Catalogue*, British Museums Publications Limited, 1980, p. 23
 30. Else Roesdahl and David M. Wilson, *From Viking to Crusader*, Rizzoli, New York, 1992, p. 378
 31. Ibid., p. 311
 32. Richard Hall, *The Viking Digest*, The Bodley Head, London, 1984, p. 114–115
 33. Claude Sterckx, "Les trois damiers de Buckquoy (Orcaades)", in *Ann. Bret.*, vol. 80, 1973, p. 675–689 (text in French)
 34. L. Berglund, "Hnefatafl – en gåta", in *Saga och Sed*, Kungliga Gustav Adolf Akademins årsbok, 1970, p. 80–92 (text in Swedish)
 35. Holger Arbman, *Birka. I Die Gräber*, Almqvist & Wiksells Boktryckeri Aktiebolag, Uppsala. Teil I (1940): Tafeln, Teil II (1943): Text. Text in German. The set of pieces is illustrated on p. 147 in part I and described on p. 271 in part II.
 36. Reference 29, p. 24 and 212
 37. Reference 35, p. 149 in part I and p. 206 in part II
 38. Ibid., p. 150 in part I and p. 413 in part II
 39. Ibid., p. 149 in part I and p. 161 in part II
 40. Reference 30, p. 246
 41. Ibid., p. 143 and 258
 42. Reference 5, p. 29
 43. M. Gardiner, "Mathematical games. About two new and two old mathematical board games," in *Scientific American*, vol. 209, no. 4, October 1963, p. 126–129.
 44. See the site www.expomedia.se.
 45. See discussion in Odd Einar Haugen, "Brettspel i nordisk mellomalder", in *Eigenproduksjon*, a periodical published by Nordisk Institutt, University of Bergen, Bergen, 1983, p. 1–37 (text in Norwegian). Haugen in turn quotes Cleasby, Vígfusson and Craigie, *An Icelandic-English Dictionary*, Oxford, 1957
 46. Haugen (ibid.) quotes Fritzner, Johan, *Ordbog over Det gamle norske Sprog*, part I, II, and III, Kristiania, published in 1886, 1891, and 1896, respectively (text in Norwegian), but the suggested interpretation of the word halatafl can also be found in other Old Norse dictionaries.