János Boholy

Extract from the book „**Fundamentals of Globe – chess**"

The author's preface

Man constantly learns how to to think. I would like to add my part to this process with the three - dimensional, spherically shaped chessboard. I give the reader the **fundamentals of Globe - chess** at disposal, that can be played on its surface. This way I help to set free the independent thoughts of an individual, in order to enable him to test his potential in this new area (dimension). He can find out, where his boundaries lie and at the same time which direction of development should he follow. I believe, that **no limits whether concerning ones's capabilities, or limits determined by science should be accepted. I chose to lay down new rules, without respect to the ancient laws and rules of chess, modifying its most fundamental aspect, the chessboard**. If one is willing to think, he will find out that new possibilities and knowledge emerge in the process. On the other hand, if someone is too lazy to think, to learn and explore unknown territories, he accepts his own boundaries.

With the creation Globe – chess a **new possibility** comes for the more demanding chess players, which is demonstrated in the **ability of the pieces to move on an unlimited surface.** The ability to think in three dimensions is thereby indispensable. The player, accustomed to 64 squares in two dimensions, has to mentally transfer them to the third dimension. As a result of this new situation, the pieces multiply their potential compared to their prior status. Their **influence rises to the maximum**, and this can be achieved only on a spherical surface. Enhancement of knowledge at any rate offers at the same time possibility to develop creative thinking not just in games, but in any area of real life.

Globe – chess

As a matter of fact, Globe – chess can be described as playing the original chess game on the new, spherically shaped and therefore endless board, exploiting all its positive characteristics.

The sphere eliminates the less favourable attributes of the original chessboard automatically, due to its very structure. **The fact, that the potential of the pieces is radically reduced on the edge of the board and and even disadvantageous on corner squares, is such an unfavourable attribute.** These drawbacks remain on every two - dimensional board of <u>any shape</u>, because the edges and corners cannot be removed from such boards. **The disadvantage is built – in!**

If the chess board is placed on a sphere, this drawback is eliminated, simply because **the sphere does not have any edges or corners!** The movement of pieces acquires new meaning and purposes, if the pieces move on the three - dimensional board. *A target square can be attacked from a given square in several ways,* in contrast to the normal chess board, where a target square can be attacked from only one direction. Consequently, new and surprising variations arise.

A piece on the spherical chess board always exerts its full potential and can be **obstructed only by the player's own, or the opponents's pieces**. It cannot be stopped by the edge of the board and cannot land on a disadvantageous square in the corner. Moreover, there are two squares (the two polar squares of the sphere, the lower – **X**, and the upper - **Y**), where they multiply their power.

<p style="text-align:center">**Fundamentals of Globe – chess**</p>

In the following we become familiar with all the new possibilities that arise from the three – dimensional design. The outcome of the game is acceptable even under the principles of classical chess. **The significantly increased maneuvering capability of pieces does not exclude the use of rules governing classic chess.**

The „chess – sphere" is a three - dimensional chessboard on the surface of a sphere.

The surface of the sphere is divided into 8 x 8 = 64 light (white) and dark (black) squares and 2 round or octagonal „squares", which are the lower **(X)** and upper **(Y)** polar squares of the sphere and have a different color (e. g. blue). The sphere is mounted on a rotatable stand. The chess – sphere is situated between the two players. Before the first move the player with white pieces sees the **d) and e)** files. The sphere's axis is at the same angle from both players's point of view (side – view). The surface shows a geometrical pattern. The eight vertical

squares are called <u>files</u> and the eight horizontal squares are <u>ranks</u>. Squares of the same color, touching each other with their corners are <u>diagonals</u>.

<u>Even in the first variation of the game ranks become **"annular" (circular) ranks** (this is not true for the files). In the second and third variation of the game the possibilities are further enhanced, because the files and diagonals also become **"annular files"** and **"annular diagonals".**</u> Summary: while on a classic chessboard the ranks, files and diagonals are closed by their first and last square, these "walls" does not exist on a sphere, so endless ring - shaped ranks, files and diagonals are created.

Starting position of the pieces

The white queen is on a light square, the black queen is on a dark square, on the **base (first) annular rank**, **opposite of each other**. The white queen (Qd1) is positioned on the d) file and on the first rank, next to it (on the first rank, from the perspective of the player with white pieces) are the king (Ke1), the bishop (Bf1), the Knight (Ng1), the rook (Rh1), the other rook (Ra1), the knight (Nb1) and the second bishop (Bc1).

Notation

Algebraic notation is used. The files are denoted with the letters a, b, c, d, e, f, g, h, from left to right from white's perspective. The ranks are numbered: 1, 2, 3, 4, 5, 6, 7 and 8 from light to dark. These are the **64** squares, plus **2** additional squares, the **polar squares of the sphere** (these squares have a different color), which are denoted as **X** (light side) and **Y** (dark side). The a1 square is dark.

Shortly - variations of the Globe-chess

1. Game on the annulus lines and on limited lengthwised poles !

For a beginner player is much more easier to acquire the ability to play the Globe-chess if he doesn't pay attention to the top panels but he only uses the original 64 panels. In practice it gives an opportunity to play the Globe-chess with an easier way. The figures don't step on the X and the Y top panels / downer and upper cornerpanels of the globe/ and symmetrically, they

don't pass above it. The lines behave as an unlimited form of annulus and by this /on the 4. and 5. lines/ it creates 16 new centered panels.

2.   Game on the annulus lines, diagonals and poles !

For an advanced player is convenient the partial use of all the 64 panels and plus the 2 top panels. This opportunity is the most optimal variation. /but harder/   The figures symmetricaly pass above the X and Y panels but they cannot stay on it. In this variation the top panels behave as neutral panels. /we cannot put a figure on the top panels/

The neutral panels prevents the major pieces to put a total influence on the poles and diagonals. Thereby, that on the X and Y panels they have to pass without stoping, any panels from the total 64 behave as a central area. /any panels of the 1. and the 2. row apart from the traditional 3. side – throught the top panel – has a neighbouring 4. side too/

It's the first time in the history of chess, that the figures under most optimal circumctances are able to get a unique chance to reach their best effect.

3.   Game on the annulus lines , diagonals, poles and on top panels !

Well skilled players – who requires special chalenges – can use the total 66 panels. This opportunity is the top variation of this game. The figures symmetrically pass above the X and Y panels and they have the right to stay on it. / we can put a figure on the top panel/ In this variation the top panels behave as an important central panel.

The position of this prominent central panel allow the figure /from this position/ to   influence the poles and diagonials. During the game, the major piece, with all his power /placed on the top panel/ influence all the 8 panels, wchich are only restricted by the figures. The moves of the figures, placed on the surface of the globe are in continues threat and protection by the figures placed on the two centralpanels. / X, Y/

4. Asymmetrical starting position

This option is based on the very structure of the new chess – sphere, <u>which has endless annular ranks, and on a sphere the symmetrical opposition of pieces can be avoided.</u>

1. Simple version of Globe – chess

The game uses annular ranks and limited files. **The pieces cannot step to the X and Y polar squares, neither can they pass over these squares** (64 squares are used).

In this version the lower and upper edge of the chessboard remains on the outer edge of the first and the eighth annular rank (around squares X and Y, similarly to the so – called **cylinder chess**), but the traditional corner squares disappear. Vertical movement of the pieces along the files is restricted (they cannot pass over squares X and Y). As the pieces move on the files from central squares to the polar squares, their power is gradually reduced (similarly to classic chess).

On the other hand, there are no edges and corners on the annular ranks, which means, that the power of the pieces is greatly enhanced along ranks and diagonals. The opponent's pieces can be attacked from any direction – meaning **from left and from right** around the sphere.

The rook

Along the files the rook can move between the polar squares (a1-a2, a3, a4, a5, a6, a7, a8). Along the ranks the rook can either move around the sphere in the direction a1 – b1, c1, d1, e1, f1, g1, h1 or backwards (a1 – h1, g1, f1, e1, d1, c1, b1). **Attention! 7 squares can be attacked from two directions.**

In contrast to the classic chessboard a given square can be reached **from two directions** on the chess – sphere. In our case the Rook on a1 can reach the opposite square e1) using two ways, to the right (a1 – b1 – e1) and to the left (a1 – h1 – e1). The base rank, as well as other ranks behave as **endless rings** on the sphere. In the practice the path of a rook on the first rank can be obstructed by the player's own or the opponent's pieces, but the rook still has the option to use the opposite direction, where the squares are unoccupied. This way its effect is greatly increased.

The bishop

The bishop moves on the diagonals, using only squares of a given color. Compared to the classic game its value has increased, because it can pass over the invisible boundary between the **a**) and **h**) file (**the original shorter diagonals disappeared**).

The path of the bishop from c1 to the **right** leads through these squares: □c1-d2, e3, f4, g5, h6, a7, b8. This way the bishop doesn't step on the Y square.

The second possibility is to use the other diagonal (to the **left**): □c1-b2,a3, h4, g5, f6, e7, d8. The Y square hasn't been used.

The two routes **meet on the g5 square**, where they cross each other in a 90° angle. Thus, **this square can be reached from two directions**. In case one of them is closed down by own or opponent's pieces, there is still the option to use the other diagonal for attack or defense.

The queen

The queen can move on the sphere like the **bishop** and the **rook** combined. From the first rank it exerts its influence over 14 squares (7 in each direction) if it moves like a rook, but the queen can reach 13 additional squares moving like a bishop. This way the queen is the piece with the greatest power. The **movement of the queen as a bishop and as a rook cannot cross each other** in the simple version of Globe – chess (e. g. □d1).

The knight

The knight on b1) can reach the following four squares: a3, c3, **h2**, d2. The power of the knight has also increased on the chess – sphere, because on the classic board it couldn't reach **h2.** The knight can horizontally travel around the chess – sphere in four **L –** shaped moves, e. g. □b1 – d2 – f1 – h2 – b1, coming back to its original position. If the knight is positioned on the <u>crossing point</u> of the diagonals used by queen and bishops, its movement and attacking potential is greatly increased compared to its usual power (with the protection in two directions).

The king

The king can move one square in any direction, including movement from the **a)** to the **h)** file (and back), e. g. ▢a1 – h1, ▢h2 – a3. Along the ranks the king can travel around the chess – sphere.

Castling

Due to the structure of endless ranks a new possibility emerges for the king to be protected by the **annular protection** of the rooks. This is a new way of castling on the chess – sphere, the rooks protect the king from two directions. **On a single annular rank the king is protected by two rooks, each using two directions in their movement.**

The pawn

The pawn can capture from the **a)** file to the **h)** file and back, because the board has no horizontal edges. If the pawn reaches the last rank, it is promoted to a chosen piece of the same color (except for the king).

Summary:

The game requires a certain amount of practice, greater knowledge and concentration, because the player sees only half of the „board" (which is compensated by the new capabilities of the pieces and new variations of the game), although all the squares are under control if the sphere is rotated. **The gameflow becomes easier by the study and utilization of typical patterns and situations.** The simple version of Globe – chess provides means to explore new, uncharted territories, to understand them, to solve more demanding problems and to realize the beauty of the game.

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2. The <u>optimal</u> version of Globe – chess

*The game flows on annular ranks, annular diagonals and annular files (64 squares are used fully and 2 squares partially). The pieces can pass symmetrically over squares **X** and **Y**, but can't be positioned on these squares.*

mmm

In this version of the game the polar squares (squares X, Y) behave as **neutral squares**. Even though they exist, they are <u>not used</u> in practice (pieces cannot step on them).

Compared to the first version of the game now even the lower and upper edge of the chessboard disappear (next to squares X and Y), consequently the movement of pieces is unobstructed even in vertical direction. **A new opportunity is to move from the first square to the first square of the opposite file, or from the last square to the last square of the opposite file.** Thereby the edges and corners of the traditional board are removed from every side and as a result of this the power of the pieces is enhanced in vertical, horizontal and diagonal direction. From now on, the movement of pieces can only be hindered by each other.

<u>In the optimal version of Globe – chess all unfavourrable effects of the traditional chessboard are eliminated</u>, **but a new positive effect is created with the 2 neutral squares!** (an opportunity to pass over the polar squares). The function of the neutral squares enables further development of the agility of pieces. The opponent's pieces can be attacked from any direction – meaning around the sphere, from left and right, up and down – within the observance of rules. **Every square has its neighbouring squares**. *All the 64 squares could be regarded as central squares of equal value and therefore the pieces can move in optimal conditions exerting their maximum influence. The difference in the value of the respective squares (which depends on the current position on the board) can be modified only by the strength and potential of the pieces. This is a great development compared to the classic*

board, where these differences in value originate in the effect caused by the edges and corners of the board! (The closer we get to the edge or corner of the board the worse our position gets).

On the traditional board the target square can be reached from a given square from only one direction, e. g. the rook, the bishop and the queen can attack or defend a square using only one route.

On the other hand, these goals can be achieved using several routes on the chess – sphere. The easiest way is to use 2 routes, but it is also possible to create 4 routes on the four sides of the sphere. The queen's combined movement (rook – bishop) further enhances the number of possible routes.

The rook

The rook moves on vertical files (across neutral squares) **upwards** (□a1 – a2, a3, a4, a5, a6, a7, a8, Y, e8, e7, e6, e5, e4, e3, e2, e1, X) and **downwards** (□a1 – X – e1, e2, e3, e4, e5, e6, e7, e8, Y, a8, a7, a6, a5, a4, a3, a2).

On horizontal ranks the rook moves around the sphere to the **right** (□a1 – b1, c1, d1, e1, f1, g1, h1) or to the **left** (□a1 – h1, g1, f1, e1, d1, c1, b1).

A given square can be reached from two directions on every rank and file. The rook on **a1** can reach the opposite square **e1** using **four different routes**. In case of **annular movement** empty ranks and files are required. A rook can check the enemy king from four different directions, from left and right (horizontally), upwards and downwards (vertically).

The bishop

The bishop moves on diagonals of a given color. Compared to the classic game its value has enhanced, because it can symmetrically pass over the neutral polar squares and cross the invisible border between the **a)** and **h)** files. The bishop moves in an „S" pattern over the polar squares.

The path of the bishop from c1 to the **right** is as follows: □c1-d2, **e3,** f4, **g5**, h6, **a7**, b8, Y, f8, **e7**, d6, **c5**, b4, **a3**, h2, g1, X, c1. The bishop always steps diagonally to the next square to the right. This way it reaches **b8,** symmetrically passes over square Y to the **f8** square and turning to the right it continues to **g1**. Its path seen from above resembles a big **S** letter.

The second option is going to the **left** from **c1** to **g1:** ▢c1 – b2, **a3**, h4, **g5**, f6, **e7**, d8, Y, h8, **a7**, b6, **c5**, d4, **e3**, f2, g1, X. Over square d8 <u>symmetrically passes over the neutral square</u> to the **h8** square and continues to the left. Its path seen from above resembles a big inverted **S** letter.

The two routes cross each other on 6 squares and meet on one square: e3, g5, a7, e7, c5, a3, g1. Starting from the first rank they diverge left and right, on the **3., 5.** and **7.** rank they cross each other in a right angle and meet again on g1.

These intersections appear where the two big S letters cross each other. Attacking, reinforcement and checking (double check) is possible only on a free diagonal.

In the opposite direction the route passes over the neutral square X to the g1 square, here the route splits left and right and reaches the named squares from the opposite direction. This way it is possible to deliver **quadruple check (or checkmate)** at the same time on the highlighted squares of the **3., 5.** and **7.** rank.

Attention: A piece of the opponent can be captured only once. If three of four diagonals are closed by other pieces, it is still **possible to attack or defend on the remaining diagonal**. The only option in classic chess turns into four on the chess – sphere!

The ability of the bishop to attack a square using four different diagonals is a revolutionary concept in the history of chess, the grasping and utilization of which is the alpha and omega of the new game.

The queen

The queen moves on the sphere like the **bishop** and the **rook** combined. From the first rank it exerts its influence over 21 squares if it moves like a rook, but the queen can reach 23 additional squares moving like a bishop. This way the queen is the piece with the greatest power. **In case of ▢d1 the powers of rook and bishop are combined in one piece and the route meets on 3 middle squares (besides the neutral squares): d5, Y, h5, h1, X.** For the queen on d1 these squares are of a strategical importance. Naturally, depending on the movement of the queen, these meeting points vary.

The knight)

The knight on b1 can reach the following six squares: a3, c3, **h2**, d2, **g1, e1**. The power of the knight has also increased on the chess – sphere, because on the classic board it couldn't reach **h2** and over the neutral squares **g1 and e1.** For example ⬜b1 – X – e1, ⬜b1-X-g1.

Figure 30 a, b: The knight on b1 symmetrically passes over the polar square (in the direction of the opposite file) as follows: 1: **X,** 2: **f1,** 3: **e1 or g1.** These two possibilities provide the knight great defensive capabilities. Even though its a short – range unit, **its strength (near the polar square) lies in the fact, that it can be captured only by a piece of a higher value**. The knight can close down gaps in the defence before the enemy queen, bishop or rook.

The king

The king can move to any adjacent square, if it's not occupied by another piece of the player or is not attacked by an enemy piece. The king can move one square in any direction. It can **pass over the neutral X and Y polar squares** , if they're not attacked by enemy units.

The king cannot move to the polar square, so from the starting square it moves to the first rank of the opposite file, for instance ⬜e1 – X – a1. It goes to a1 without castling, so he can also escape in a vertical direction. He can reach the opposite vacant square with a **move equal to castling**. This variation of Globe – chess gives optimal capabilities to the king.

Castling

A new option is, that if the knights, bishops (and the queen) leave the first or the eighth rank, the position after castling occurs automatically (on the free annular rank). The position is then ⬜**a1,** ⬜**e1,** ⬜**h1.** This natural annular position gives the king protection from both sides.

On the annular first rank the king can castle either side, with either of the rooks. (On the left or right side with a rook that hasn't moved yet).

The pawn

If the pawn reaches the last rank (for white it is the eighth, for black the first rank), it is promoted to a chosen piece of the same color, except for the king. This new piece is immediately ready for action. The pawn cannot step on the X and Y polar squares, nor can it pass over them.

Summary:

Beginner players should learn the simple version of the game first. Then I recommend the optimal version of the game with the **use of the neutral polar squares.** In this version the pieces can pass over squares X and Y, but cannot be positioned on them. The left, right, upper and lower edges of the board disappear. The ranks horizontally, the files vertically and the diagonals diagonally become endless. The traditional disadvantages are eliminated (corners, edges and short diagonals). Very important is for the pieces to be positioned favourably as soon as possible. It is recommendable to put a piece to a protected square, which is especially important for an attacking piece. Pushed pawns should be protected. A needless loss of a pawn is hard to recover in the endgame.

The new attacking strategy of the bishops enabled by the structure of the chess – sphere is to be put into practice. When using bishops, their ability of using the two adjacent diagonals in order to effect the opposite diagonals has to be taken into account. The same goes for the rooks, which can enter the opposite file through the polar square, and for the queen, which combines the advantages of the mentioned pieces.

In order to acquire material or positional advantage it is necessary to pay more attention to development along the **a)** and **h)** files, contrary to the classic game. The main direction of the attack can be quickly shifted to these files (for instance a double – direction opening: 1) e2-e4, 2) a2-a4...). The plan has to be chosen according to our ability to create a harmonic cooperation between the pieces starting from their base rank, also having regard for support from the opposite files and ranks.

In defence it is useful to ensure multiple protection of the pieces (depending on the current position). This requires stronger concentration and stamina from the players. The players must count with the new three – dimensional possibilities given by the neutral polar squares X and Y during the whole game, and this is rewarded with un unseen increase of the pieces's effectivity.

The 64 equally central squares give opportunity - for the first time in the history of the game – **to use the traditional pieces in optimal circumstances** (in a perfect environment for the pieces, because they have adjacent squares in every direction at disposal) **so that they exert their maximum potential on the chess – sphere with its innovations and beauty.**

János Boholy

3. The ultimate version of Globe – chess

The game flows on annular ranks, annular diagonals and annular files, as well as on the two polar squares. The two polar squares are of an increased value (66 squares are used fully). The pieces can pass symmetrically over squares X and Y, and can be positioned on these squares!

In this third version of the game the polar squares (X, Y) behave as **squares with a higher value**. <u>A piece positioned on one of these polar squares is able to influence all files and diagonals</u>. Its influence can only be lessened - neutralized by other pieces on the board. In this version is also true, that the pieces doesn't have to run into edges and corners of the board, so the potential of the pieces is at their maximum in all directions (horizontally, vertically and diagonally). <u>Negative influences of the classic chessboard are eliminated also in this variation.</u> <u>The neutral polar squares known from the optimal version of the game</u> **become maximum – value squares** (from the polar squares every square on the boards can be reached). So the opponent's pieces can be **harassed from any direction, first of all from the X and Y polar squares**.

In the opening the pieces have few opportunities to switch files and diagonals through the polar squares, because the pieces around the polar squares represent an impenetrable wall.
To open a corridor it is necessary to have a vacant polar square and vacant squares behind it. The pieces symmetrically pass over the corridors, for example ⬜d8-**Y**-h8-h4, ⬜h1-

X-d1-**d6**. With the opening of a corridor the more demanding (harder) version comes into play.

With the opening of files and ranks a **piece positioned on a higher - valued polar square** exerts <u>total coverage</u> and this way the maximum version of the game is achieved. In the endgame pieces will be usually positioned on these squares and exert all their positive and negative influence (total coverage). **This requires strong combinating capabilities and maximum concentration of the players!** To successfully play this version of the game it is necessary to have practice in the simpler versions, otherwise failure is probable. It is also necessary to practice the skill of spatial visualization! (to imagine the position of the squares in space).

The rook

The rook can move both on files and ranks. The rook on a1 can reach **23** other squares (7+1+8+1+7=24-1=23), **from both directions.** Similarly to the optimal version, though its capabilities are enhanced here with the use of the polar squares (the X and Y active squares). Over the polar squares the rook can travel (on an empty board) to all of the 65 other squares, which means that **the rook totally covers the files.**

The bishop

The bishop moves on diagonals and polar squares. Its possibilities already known to us are widened with the use of **two additional squares (X,Y).**

<u>An innovation:</u> In this version the player can choose to switch the colour of squares on which the bishop moves when the bishop is on a polar square. Thereby the term „bad bishop" known from classic chess theory loses its justification, because from now on the player chooses on which color will his bishop operate after it leaves the polar square. For example: **the bishop is capable of holding the opponent's pawns on squares of any color.** On the other hand, it <u>can follow the march of the player's own pawns</u>, or it can defend the square before the pawn from the polar square. This way it is always possible for us to acquire a bishop of the needed color using the polar squares. At the same time the player can even have two bishops moving on the same diagonal, that reinforce each other. The **bishop's value has considerably**

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increased this way. The option of building a „**battery of bishops**" (similarly to a battery of rooks in classic chess) enables new combinations in this version.

By stepping on a polar square the bishop is **behind the pieces in their starting position**. This way the bishop not only strenghtens the defence in critical moments, but it's also ready to lash out on a diagonal once it becomes free and prepared to harass the pieces of the opponent. Standing on a polar square the <u>bishop can help in the attack of the other bishop that has been moving on a different color until now</u>. For example the bishop on X (□X) reinforces the bishop on c1.

The queen

The queen moves on the sphere like the **bishop** and the **rook** combined. <u>On an empty sphere the queen can reach all of the remaining 65 squares</u> if it moves like a rook from the X square, and the same 65 squares moving like a bishop. This way the queen is the piece with the greatest power in this version of the game, because it can bypass an obstacle or neutralize it from behind, moving at the same time like the bishop and the rook, **from both directions!** Going in the other direction (through the Y polar square) the number of possible moves is doubled, $130 + 130 = 260$. The white queen on a polar square delivers checkmate to a lonely black king.

The knight

The knight can reach **16** squares from the polar squares. For example the knight on **X** can exert influence over ranks 1 and 2 (a1, a2, b1, b2, c1, c2, d1, d2, e1, e2, f1, f2, g1, g2, h1, h2). This means that he can reach **X** from the listed squares in a single **L – shaped move**, e. g. □c2-X, □e1-X or can leave X: □X-c2, □X-e1. The knight on b1 has the following squares within his reach: a3, c3, **h2**, d2, **g1**, **e1**, **X**. His effectivity is enhanced on the chess – sphere as well, because until now he couldn't reach **h2** (□b1 – b2 – a2 – h2), **g1** (□b1 – X – f1 – g1), **e1** (□b1 – X – f1 – e1) and **X** (□b1 – c1 – d1 – X). **By moving to the polar square the knight gets behind his own pieces**. This way the knight not only strenghtens the defence in critical

situations (an it itself is thereby defended). Sometimes sacrifice is required in order to trade off the knight.

The king

The king can move to any adjacent square, if it's not occupied by another piece of the player or is not attacked by an enemy piece. The king can move to **the X polar square**, from where it can easily reach the first and last rank of any file. **By moving to the polar square the king gets behind his own pieces.** In certain stages of defence – **in case of a closed defence** – the king strenghtens the defence on the base rank around him. In the endgame the king becomes an active piece and shouldn't be separated from his pawn. The pawn is important also because the king can hide behind him (e. g. a flank attack along the ranks, an attack from behind on the files, on the diagonals over the polar squares and of course directly from the polar square). The distant checks of enemy pieces can be avoided this way.

The pawn

If the pawn reaches the last rank (for white it is the eighth, for black the first rank), it is promoted to a chosen piece of the same color, except for the king. This new piece is immediately ready for action. The pawn **cannot step on the X and Y polar squares!**

Summary:

1.   Beginner payers should learn the **simple**, easier version first.

2.   The **optimal** version of the game is recommended for advanced players, where the neutral polar squares are utilized.

3.   If we are familiar with the simpler versions, we can advance to the **ultimate** version, where **higher – valued polar squares** are used (X, Y). Pieces positioned on these squares provide total coverage on the files and diagonals, so positions can be improved, tactics calculated and matches can be won only under pressure (positive and negative) of such pieces.

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4. Asymmetrical starting position

This option is based on the very structure of the new chess – sphere, which has endless annular ranks, and on a sphere the symmetrical opposition of pieces can be avoided. The kings are positioned on their base ranks, but not in opposition to each other! The other pieces are placed normally around the king. This variation is suitable for players willing to solve new positional challenges. Based on the structure of Globe – chess the resulting position is similar to castling to opposite sides. **Attack on the other side (wing) can lead to interesting positions depending on the degree of displacement, because on the chess – sphere a symmetrical opposition is not a necessity!** The asymmetrical starting position can be used in all three versions of the game!

The bishops operate with variable success in games with an asymmetrical starting position. **Depending on the degree of displacement their path collides with different pieces of the opponent, and the result may or may not be favourable for the bishop. Thus the value or importance of squares lying between these two pieces is always determined by the mutual relation of their power.**

E. g. The black queen is displaced four squares to the right, from d8 to h8. The remaining pieces are also displaced, their position is: ⬜e8, ⬜f8, ⬜g8, **⬜h8**, ⬜a8, ⬜b8, ⬜c8, ⬜d8. **In this situation interesting mirror images are created:**

⬜c1 can attack ⬜b8 and ⬜d8. ⬜b8 can attack ⬜c1 and ⬜a1.

☐f1 can atack ☐g8 and ☐e8. ☐g8 can attack ☐f1 and ☐h1.

The rooks of both players stand in opposition to the other player's king and queen!

☐h1 can attack ☐h8. ☐d8 can attack ☐d1.

☐a1 can attack ☐a8. ☐e8 can attack ☐e1.

The use of an asymmetric starting position is a revolutionary task in all versions of the game (simple, optimal and ultimate), that requires an open mind. For this reason I can only recommend its research and detailed elaboration.

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