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## ARTICLES

# RUSSIAN FOUR-HANDED CHESS: MYTHS AND MISCONCEPTIONS 

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#### Abstract

The only comprehensive and reliable descriptions of four-handed fortress chess were published in 1850 and 1862 by the Russian master A. D. Petrov, who had first-hand experience with the game. An earlier source omits numerous details regarding the rules; later sources digesting Petrov's description contain misconceptions and outright mistakes. The article attempts to refute the errors accumulated in the literature and accentuate the few minor points in the rules left uncovered by Petrov. An adaptation of the four-handed game for two players is provided.


Keywords: Four-handed chess; chess history; chess variants

## Introduction

In 1850 , Schachzeitung published a comprehensive description of four-handed fortress chess by the Russian master Alexander Petrov, translated in German by Carl Jaenisch ( $\overline{\text { Petroff }}(\overline{1850)})$. Twelve years later, a nearly identical text in Russian appeared in Shakhmatny Listok (Petrov (1862)). Fortress chess had been mentioned in literature before: in his $O$ shakhmatnoi igre, the first Russian chess manual, Butrimov (1821) provided a brief account of the game and a sketch of the board but did not go into detail.

Fortress chess was apparently known at least as early as the beginning of the 19th century but its origins are shrouded in mystery. In the late 18th century, Coxe (1784) reported that "Russians have also another method of playing at chess, namely, with four persons at the same time, two against two; and for this purpose the board is longer than usual, contains more men, and is provided with a greater number of squares": this might or might not relate to the game described by Butrimov and Petrov. The editorial following Petrov's 1862 text (pp. 185-187) which quotes his letter to the journal says that, according to Petrov's grandfather, this chess variant used to be played by Catherine the Great (1729-1796).

The two articles by Petrov are the only detailed descriptions by an author having a first-hand experience with the game. Later sources, while ultimately based on Petrov's evidence, have added inaccuracies and outright mistakes. Below, I will attempt to provide a synopsis of what is actually known about four-handed fortress chess, draw attention to the few details concerning the rules that remain unknown, and refute some of the misconceptions that have accumulated in the century and a half following Petrov's publications.

## Rules

Game played on a board with 192 squares: a 128 -squares four-handed chess board as used in some German variants (with four 2 x 8 rows on each side of a normal chess board) enhanced with four $4 \times 4$ fortresses in the corners (Figure 1). All kings are on the right; each player has an extra rook, bishop and knight, positioned randomly (contra Machatscheck (1987)) in their fortress. Partners sit opposite each other, move clockwise. Pieces move and capture as in FIDE chess, with one detail to be kept in mind: since the fortress walls are impenetrable for all pieces, the knight's move needs a precise definition. From the description by (Petroff, 1850, p. 379), it is obvious that the knight's move was understood as one square orthogonally and one diagonally in any order; i.e. not L-shaped but also not necessarily orthogonally first as in xiangqi or janggi, contra (Pritchard, 2007, p. 324). [Incidentally, this is exactly the way that the knight's move is described in some Russian literature of that period: the 1843 Pravila shakhmatnoi igry by "V. D.", a loose translation of Krupski's Strategika szachowa (Anonymous-V.D. (1843)), or the 1869 Russian translation of Neumann's Leifaden für Anfänger im Schachspiel (Anonymous (1869))]. Needless to say, the precise definition of the knight's move is only relevant when negotiating the fortress wall.

The wall was represented by a simple line in Petroff (1850) and Petrov (1862), who mentioned that it should be made "a finger high". Glyazer (1962) and Machatscheck (1987) provide a more elaborate structure but this seems to be an invention - probably Glyazer's, or his illustrator's (cf. the fanciful depictions of xiangqi and shogi boards for example). According to (Machatscheck, 1987, p. 64), a board is kept at the Russian Chess Museum in Moscow; my repeated attempts to contact the museum and obtain information on the actual look of the board have been fruitless.

The aim of the game is to checkmate both opponents. A mated player's pieces are removed from the board. [Petrov is explicit on that point, comparing fortress chess to the "German game" (without fortresses) where mated pieces are left immobile on the board and the player passes turns until the mate is lifted - which Petrov found "illogical" and "completely against the spirit of chess". Later sources, however, provide a clear example of Chinese whispers: in a brief entry on fortress chess, Glyazer (1962), speaking of four-handed chess variants in general, mentioned the different treatment of mated pieces in the Russian and "western European" games; Machatscheck (1987), clearly relying on but misunderstanding Glyazer's text, spoke of two different ways of playing fortress chess: "Russian", with mated pieces removed, and "west European", with pieces remaining on the board. The latter, though, seems to have never existed].

It seems obvious that if the remaining solitary opponent was stalemated the game was a draw. What is not clear is what happened if a player was stalemated with his partner still in play. There are two theoretical possibilities - either the stalemated player passed turns, similar to west European four-player variants, or the game was immediately declared a draw. There is no way to know with certainty which was the case but I feel that the second option - an immediate draw - would be more consistent with the spirit and logic of Russian fortress chess.

Yet another detail which is not entirely clear concerns pawn promotion. Petrov says that a pawn is promoted to any piece when reaching the home rank of either the opponents or the ally. What he doesn't explicitly mention is what would happen to a pawn that has entered a fortress by capturing (a situation that, admittedly, must have occurred rarely in actual play, if at all). Perhaps in that case one should take Petrov's description literally and forbid promotion on any square apart from c5-c12, o5-o12, e3-m3, or e14-m14. Indeed, this would leave a pawn reaching the last rank in a fortress immobile and useless - but so would a move by e.g. White e11xd12.

Speaking of pawns, Petrov clearly said that allied pawns meeting on the same file blocked each other's way (see also Pritchard (2007)) so Machatscheck (1987) is obviously wrong in his assertion that allied pawns (and pieces!) could leap over each other.


Figure 1: Four-handed fortress chess, initial position with pieces in the fortresses placed at random. Modified after Butrimov (1821), Petroff (1850) and Petrov (1862). Note that diagonals touching fortress walls or board angles (e.g. n2-m3, $\mathrm{n} 4-\mathrm{m} 5$, or $\mathrm{m} 4-\mathrm{n} 5$ ) are forbidden.

## Play

Petrov briefly discussed the actual play, suggesting a few useful opening moves. From his description, it is evident that - in his time at least the queen in fortress chess had the usual FIDE move, even though Coxe (1784) reported earlier that Russians played (two-handed) chess with the queen having "in addition to the other moves, that of the knight". This custom was apparently losing ground in the following decades, with the first Russian chess manuals promoting the modern moves: (Butrimov, 1821, p. 26 ), wrote that "some, in addition to these moves, allow it to move as a knight as well" but advised against it, his entire book being written with the FIDE-like queen move in mind, and (Petrov, 1824, p. 35) was rather categorical: "the queen moves in all ways except as a knight".

In his 1850 Schachzeitung article, Petrov had observed that by the end of the game, a solitary knight or bishop could mate the opponents' bare kings, adding that "such cases are very entertaining". (Verney, 1885, p.74) apparently failed to realize that this is only possible with the two allied kings operating together, and re-interpreted Petrov's original comment as "If at the end of the game a King is left with only a Bishop and a Knight, even if he has no Pawns, he could checkmate his adversaries' Kings if they had no Pieces left". (Understandably, the "very entertaining" comment was left out).
(Pritchard, 2007, pp. 324-325) says that "sometimes Fortress Chess was played with the Ks on the left of the Qs, a harder game since it increased the difficulty of removing the king from danger". More precisely, in a footnote, (Petroff, 1850, p. 378) advised against playing this way: in his opinion, castling long decreased chances of moving the king into the fortress and gave white too much of advantage.

## Game popularity

It was by readers' requests that Shakhmatny Listok published the rules of fortress chess, so the game must hardly have been a well-known pastime. Indeed, Petrov's letter to the journal states that four-handed fortress chess was not particularly popular, with only a few players in St. Petersburg (I. Butrimov being among the five listed). It's impossible to know if the 18th century four-handed game mentioned by Coxe was the same as the one described by Butrimov and later Petrov; thus, we can only guess if the limited knowledge of fortress chess in Petrov's time was because this was a game once more common but becoming obsolete, or because it was never particularly widespread anyway.

Machatscheck (1987), followed by Pritchard (2007) claimed that Russian fortress chess spread in the west, and that in 1855 there was a London club especially devoted to the game. This is certainly a mistake, Machatscheck once more misreading Glyazer (1962). What (Glyazer, 1962, p. 32) says is that four-handed chess (in general, not the fortress variant) was spread in "many countries of Europe, Asia and America" (which might be an overstatement), adding that in 1885 (note the correct date) there was a club in London dedicated to four-handed chess. This obviously refers to the London Four-handed Chess Club presided by G. H. Verney which had its first meeting in 1885, playing after Verney's rules initially and later after those modified by M. E. Hughes-Hughes.

## Summary and conclusions

Two mid-19th century articles by A. Petrov are the only reliable descriptions of four-handed fortress chess, providing a thorough explanation of the rules and leaving out only a few fine points which probably occurred only rarely in actual play. Butrimov's 1821 brief account is valuable as an independent source predating Petrov's publication in Schachzeitung by nearly thirty years (one might recall that Lange (1856) seemed to believe that Petrov was describing a newly invented variant) but the information therein is insufficient to actually play the game. Later sources, while ultimately based on Petrov, omit - or invent - various details, creating some confusion about the rules of a rather enjoyable game.

## Appendix 1

Four-handed chess variants, or at least those played in Europe, have been met with anything from keen enthusiasm to open scorn. Petrov's descriptions of fortress chess raised mostly mild interest, several mentionings in later literature and then oblivion - in my opinion, undeserved. I tend to agree with Petrov that this variant, with its simple rules and logic closer to the traditional two-handed game, is indeed more playable than the rest. Also, I find the idea of fortresses and extra pieces rather charming, and too good to be confined to a four-handed game only. Below, I suggest a version of fortress chess modified for two players (designed in 2011). The resulting game is both "new" (in terms of theory studies) and quite familiar, with no new pieces, moves or rules to memorize. Indeed, as in the original fourhanded game, one should keep in mind the definition of the knight's move as not L-shaped:

## Two-handed fortress chess

Two-handed fortress chess is played on a board with 96 squares ( 8 x 8 plus two fortresses of $4 \times 4$ each: Figure 2). Each player has the usual 16 pieces of orthochess, plus an additional rook, bishop and knight placed at will inside the fortress. Pieces can enter and leave the fortress only through its gate: moving horizontally along the third and fourth (or ninth and tenth) ranks, or diagonally along the 11-b10 (b3-112) or h3-i4 (i9-h10) diagonals. This necessitates defining the knight's move: as in four-handed Russian fortress chess, it consists of one diagonal and one orthogonal step in any order: a knight on i 3 can move to g 4 (via h3 or h4) and to h5 (via h4: diagonal step
is first), and from i4 to g3 (via h3 or h4) or g5 (via h4: orthogonal step is first) but not to h6 (because of the fortress wall, the diagonal step to h5 is impossible, and the knight's move is not L-shaped). Pawns are promoted on the opponent's home rank (rows 3 and 10) outside the fortresses, or on the farthest rank inside the fortress, row 1 or 12.


Figure 2: Two-handed fortress chess.

## Appendix 2

Moving the fortresses towards the middle results in an almost identical game on a more compact 12 x 8 board (designed in 2012):

## Two-handed fortress chess II

In this variant, the position of the fortresses is changed to fit a $12 \times 8$ board (Figure 3). Same rules apply, including the knight's move, pieces enter and leave the fortresses by moving horizontally along the first, second, seventh and eighth ranks, or diagonally along the h1-14, i1-b8, b1-i8, or h8-15 diagonals. Pawns are promoted on the opponent's home rank (rows 1 and 8) outside as well as inside the fortress.

Both two-handed variants can be played without the extra pieces, resulting in games that are slightly different tactically.


Figure 3: Two-handed fortress chess II.

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

Alex de Voogt


## To the authors

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

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