

THREE LARGE CHESS VARIANTS FROM INDIA AND GERMANY: A NOTE ON THEIR RULES

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This paper deals with three historical large chess variants, Hyderabad Decimal Chess from late 18th century India and the 19th century German games Kaiserspiel (or Emperor’s Game, played on a 10x10 board) and Sultanspiel (Sultan’s game, 11x11), and their treatment in the literature. For each game, a set of rules is suggested and discussed.

Keywords: Chess history; chess variants; Hyderabad Decimal Chess; Kaiserspiel; Sultanspiel

Introduction

Research on historical chess variants has been greatly facilitated in recent years by the opportunities provided by the Internet: websites with information on the subject, software and platforms allowing playtesting of various games, and – most important of all – access to a large number of archived original sources. Importance of the latter can hardly be overemphasized – the latest, or the best known, or the most accessible sources are not necessarily the most reliable ones.¹ At the same time, insufficient information in an original source necessitates educated guessing in order to have a playable game. An example is provided by three large chess variants, all available on the Jocly board game platform, with rules

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¹ See e.g. Markov (2015, 2017), Markov and Härtel (2020).

following the latest work on chess variants, *A World of Chess: Its Development and Variations Through Centuries and Civilizations* (Cazaux and Knowlton 2017).²

Hyderabad Decimal Chess

Originally described in a 1790s manuscript from the (former) state of Hyderabad, India, the game was mentioned in Murray's *History of Chess* – as “a modern [Indian] variety of Decimal chess” (Murray 1913, pp. 346-347). The brief description contains setup (Fig. 1), names and moves for the additional pieces (Wazir: B+N, Zurāfa: Q+N, and two Dabbābas: R+N), and the rule forbidding a double initial step for pawns. This leaves a number of rules unaccounted for, and Gollon (1968) – who described the game as “Turkish Great Chess Variation One”³ (?) – had to invent some of his own so that it could actually be played: pawns promoting to Qs only, win by stalemate and barring the opponent's king. Those rules, taken from shatranj

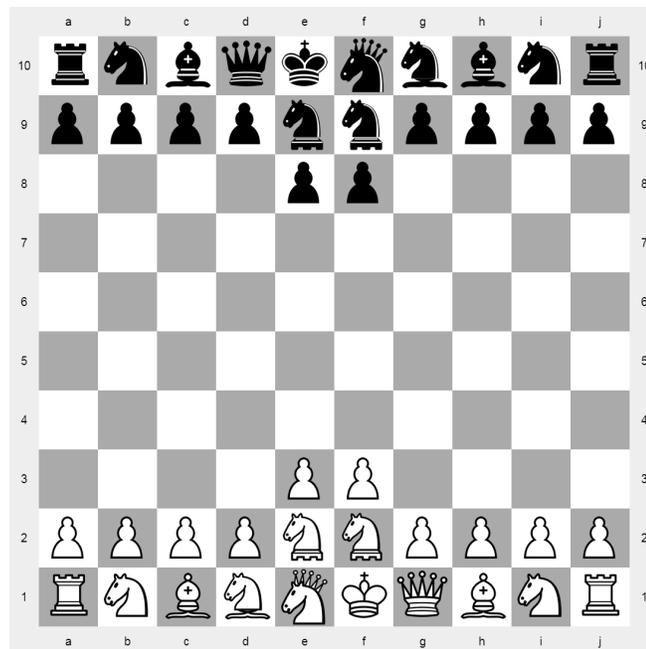


Figure 1: Hyderabad Decimal Chess, initial array.

² More precisely, following an earlier book by Cazaux (2010), *L'odyssée des jeux d'échecs* (J.-L. Cazaux pers. comm. 29.11.2021); the present paper will refer to the text of the later English book.

³ For real Turkish Great Chess and its rules see Markov and Härtel (2020).

(Gollon apparently missing the Indian origin of the game), are most probably incorrect.⁴

The description of Hyderabad Decimal Chess (a name adopted here as well) by Cazaux and Knowlton (2017) is a decisive improvement to Gollon's – taking into consideration its origins, the authors suggested applying the pawn promotion rules of Indian chess (pawn promoting to file piece,⁵ and only if already captured) to that game as well; their additional suggestion – promotion to dabbaba on the K square, while conjectural, merits consideration.

However, their rule, supposedly based on Indian variants on 64 squares, “[i]f the piece of the promotion file has not yet been lost, the Pawn must wait on the promotion square until such a piece becomes available” (Cazaux and Knowlton 2017, p. 67 and elsewhere) is debatable. In Indian chess (or rather Indian chess variants, since uniform rules never existed), a pawn that cannot yet promote stays on the penultimate rank, nevertheless giving check: see e.g. Murray (1913), or Saxena (1998).⁶ Further, the Indian rule that “Pawn that promotes to a Horse leaps immediately from that square as a Horse without waiting for the next turn” (Cazaux and Knowlton 2017, p. 55) could have been valid for Hyderabad Decimal Chess as well; note, however, that rules regulating this move vary between Indian regions and variants. It could be optional or compulsory, forbidden if the newly promoted N gave check from the square of promotion; allowed if the N, while giving check, had another square to leap to, including capturing an opponent's piece; in some but not all variants, if the promotion square was under attack, the new N should stay on it, etc. (Murray 1913; Saxena 1998; K. R. Banerjee pers. comm. 2012; E. Satyendranath pers. comm. 2012);

⁴ Pritchard's entry on Indian Great Chess (Pritchard 2007, p. 265) repeats Gollon's “P promotes to Q”.

⁵ Understood as “to the piece that starts in that file on the player's side” (Cazaux and Knowlton 2017, p. 67) and adopted here as well; however, in the original game the file might have been just as easily defined from the opponent's point of view – compare the description (for the 8x8 game) “to the type of piece which starts on that square” (ibid., p. 54). On an 8x8 board, and with pawns on both central files promoting in the same way, both descriptions have equivalent results; not so on a larger board with crosswise arrangement of pieces.

⁶ It seems that at least one Indian variant (J.-L. Cazaux pers. comm. 2021) has the pawn staying on the last square indeed. Still, the former rule (pawn on penultimate rank) seems preferable.

finally, the rule might not be followed at all (Murray 1913; Kapoor 1998).⁷ Practically the opposite rule was apparently followed in Bengal, all pawns except the one promoting to N moving immediately in their new capacity – with some restrictions (Singha Hunday 1909, p. 294; Murray 1913, p. 81). Murray was sceptical of Singha Hunday’s account but a report by another Bengali informant quoted in the *Chess Player’s Annual and Club Directory* (Rowland and Rowland 1890) is similar to the latter in a number of details and demonstrates the existence of a separate Bengali tradition differing from both “Hindustani” and “Parsi” chess in Murray’s terminology.⁸

Usually, a pawn could not promote to bishop if the remaining bishop was of the same colour, although at least one source (Saxena 1998) permits it. Further Indian rules, some of them mentioned by Cazaux and Knowlton (2017) for the 8x8 Indian chess but not explicitly for the decimal game discussed here, and thus not implemented by Jocly, are:

K’s privileged move: Once in the game, K is permitted a N leap before the first check. Again, rules vary – it can or cannot use the move to escape that first check; can or cannot use it to capture; can or cannot cross check. In the latter case however, according to Singha Hunday (1909), the leap cannot be prevented by B or N: obviously, with the N move understood as consisting of one diagonal and one orthogonal step in any order, the king, moving as a knight, simply sidesteps the (single) square attacked by N, B or, for that matter, Q with its diagonal move. On the other hand, a rook (or any R+ compound) controlling the entire file or rank leaves the king no other way but through check.

K’s last piece: In different Indian variants, capturing the opponent’s last non-royal piece (regardless of pawns) was known as *burj* (*burd*, *boord*, etc.) and could be a (lesser) win, half-win, or draw;⁹ sometimes if both players

⁷ The latter option – not followed at all – is adopted in the suggested rules below.

⁸ The 1890 *CPACD* text sheds additional light on two of Singha’s “trick endings”, *Piloorie* and *Aswachakra*, naming them (p. 19) “the highest victory” and “an elegant finish to a won game”.

⁹ Regarding *burj* rules, note that in several problems of “Parsi” chess (Murray 1913, pp. 93–94) the game does not end immediately in *burj* when the last piece is captured but continues, evidently because there are pawns on the 7th rank able to promote on the next move (problems 15 and 16); with no pawns promotable (17, V a17 and 16 at a later stage), *burj* occurs even though there are other pawns in the game. Cf. “if the oppon[e]nt has a pawn on the seventh square of any rank, and has no other move, it is compuls[o]ry that, immediately after his last piece is captured, he must move the pawn to the eighth square and revive a piece of the same rank. The game then continues till its end.” (Karmarkar

had only one piece remaining (again, “piece” does not include pawns) the game was a draw (Murray 1913), and according to rules reported by Dalvi (1998), one pawn must remain in addition to the last piece. A more complicated rule was followed in at least one variant: Capturing the last piece if pawns still remained was allowed but then the king could not be checked until a pawn was promoted; capturing the last piece with no pawns remaining was forbidden but that last piece could not be used to prevent a checkmate if unprotected (K. R. Banerjee, E. Satyendranath pers. comm. 2012). Conversely, a bare king in the Bengali rules described by Singha Hunday (1909) seems to be understood as bereft of all pieces including pawns, judging from the examples provided on pp. 294, 6,¹⁰ and, above all, 70 (where the pawns are not on the 7th rank, cf. note 8 above). Thus, Murray’s comment (Murray 1913, p. 83, footnote 20)¹¹ is not entirely accurate: a solitary K in Singha’s rules is a draw (see Singha Hunday 1909, p. 294) but, in contrast with the variants previously discussed, a king is apparently not ‘solitary’ as long as there is even a single pawn remaining, and regardless of its position.

Pawn mate: Indian chess variants regarded a checkmate with a pawn an especially prestigious or even superior win (see e.g. Forbes 1860, p. 252), and this was obviously the case with Hyderabad Decimal Chess as well, judging from a problem contained in the original manuscript (Murray 1913, p. 346).

Stalemate and perpetual check: In different Indian variants, both of these could be either a draw or simply not permitted; according to the 1890 *CPACD* text, stalemate was regarded as “a form of winning, inferior, however, to the checkmate” (Rowland and Rowland 1890, p. 19).

Except for the apparent significance of pawn mate, it is hardly possible to guess which variants of those rules were valid in Hyderabad Decimal Chess. The rules suggested and discussed below contain conjectures and choices that most probably (and sometimes deliberately) deviate from the original game. For example, in some Indian variants (including Murray’s

1968, p. 19). In the suggested rules, capturing the opponent’s last piece, regardless of there are any pawns left and regardless of their position, results in a draw.

¹⁰ There are two technical errors in examples 2 and 3 on p. 6: “Kt.Q1” in example 2 should be “K.Q1”, and the black R on h8 on Diagram 3 should be a white Q.

¹¹ In the same footnote, Murray quotes Singha as giving “the term *Fakir* as meaning a solitary King”. I could find no such statement on either of the five pages of Singha’s work, nor Singha saying that “there is no stalemate ‘because it is a draw’” (ibid., footnote 21).

“Parsi” chess), each player began the game by a series of moves of varying number¹² in one turn and a similar rule could have existed in Hyderabad Decimal Chess (especially considering the larger board); nevertheless, in the rules suggested below moves alternate as in orthochess. Similarly, in “Parsi” chess, and subsequently in a 19th century decimal variant, Baroda Chess (Pritchard 2007, p. 265), Q, K and R pawns could move two squares on their first move (provided that the pieces behind them had not moved); yet, Murray’s “[p]awns have no initial double step” (Murray 1913, p. 347) is taken literally here and followed in the suggested rules. Automatically applying the “Parsi” rules to Hyderabad Decimal Chess only because of Hyderabad’s geographic location might be unwise, since the original manuscript containing the game’s description was written in the Persianate court of a dynasty of Turkic origin. The “no double step” rule, if correct, is more in line with the northern, “Hindustani” rules but that should not necessarily apply to Hyderabad Decimal Chess in general, especially if bearing in mind that the “Parsi” vs. “Hindustani” distinction is probably somewhat arbitrary (Pritchard 2007, p. 262) – not to mention that it leaves out the Bengali rules discussed above. The suggested rules that follow are more similar to the “Hindustani” ones (while deviating from them in several aspects) merely because both are simpler than those for “Parsi” chess, not due to a deliberate attempt to apply “Hindustani” rules to the decimal game.

Suggested rules for Hyderabad Decimal Chess: Played on a 10x10 board with 22 pieces per side (Fig. 1). Viziers (d1, g10) move as orthochess B+N, giraffes (e1, f10) as Q+N, dabbabas (e2/9, f2/9) as R+N. Pawns move and capture as in orthochess except no double initial step, promote to file piece only¹³ and only if that piece is already captured, to dabbabas on e1/10 and f1/10 (rule originally suggested by Cazaux and Knowlton 2017); no two same-coloured Bs allowed. If the piece to which a pawn should promote is still in play making promotion impossible, the pawn stays on the penultimate rank; even though temporarily immobilized, it still

¹² Two to eight or nine in different variants, without crossing into the opponent’s half of the board, capturing an opponent’s piece, or giving check; some variants may prohibit moving the same piece twice (Pritchard 2007, p. 263).

¹³ From player’s own viewpoint, as suggested by Cazaux and Knowlton (2017), i.e. to V (not Q) on d10/g1, to Q on g10/d1.

gives check.¹⁴ K allowed a N leap once in the game regardless if already moved but not to capture and not if crossing check;¹⁵ privilege lost after first check (but can be used to escape that first check). Capturing the opponent's last piece (regardless if there are any pawns left) results in a draw. Stalemate is a draw, and so is perpetual check.¹⁶ Checkmate with a pawn counts as a double victory.

While each has a precedent in *some* Indian variant, the suggested set of rules could easily be an artificial amalgamation of various traditions; when choosing between different options, the less complicated variations were preferred. Thus, double step for the central and rook pawns, multiple moves at start, immediate N move for a pawn promoting to N (“Parsi”), or “*bāzi qā'im*” draw (both players left with a single piece, “Hindustani”) were omitted; stalemate, forbidden in “Hindustani” chess (Murray 1913, p. 82) is a draw here. Also, while *burj* in the “Hindustani” game was a half-win (*ibid.*), here a draw occurs when capturing the opponent's last piece regardless of pawns (and their position, omitting the rule on immediately promotable pawn discussed above).

Kaiserspiel (Emperor's Game) and Sultanspiel (Sultan's Game)

The 1819 *Archiv der Spiele* (Anonymous 1819) describes das Kaiserspiel, a game invented “several years earlier” by a Prussian official named Peguilhen and played on a 10x10 board with two additional pieces: “Feldherr”, translated by Verney (1885) as general and as commander by Cazaux and Knowlton (2017), moving as Q+N, and “Adjutant” (B+N). The inventor was considering an 11x11 variant with an additional R+N piece (“Admiral”) but apparently abandoned the idea. Tressau¹⁷ (1840)

¹⁴ For example: white pawn on b9, White still having both Rs, Ns and the white-coloured B. Pawn cannot move to b10 and promote (no captured N), it cannot capture an opponent's piece (and thus promote) on either a10 (no captured R) or c10 (no two same-coloured Bs allowed); nevertheless, black K on a10 or c10 is in check.

¹⁵ Note that, as pointed out by Singha Hunday above, K can circumvent a single attacked square, e.g. K on f1 can leap to h2 via g2 if only g1 is under attack, or via g1 if only g2 is attacked but not if both are.

¹⁶ Obsolete in orthochess due to the threefold repetition and fifty-move rules, it could be useful in Hyderabad Decimal Chess.

¹⁷ Font used on the title page of Tressau's book has resulted in that author's name being variously quoted as “Tressau” or “Tressan” by numerous later sources (Walker 1846 has both “Treffan” on p. 366, an obvious mistake at least as far as the double long s is

revised the rules of the Kaiserspiel, modifying the initial array and mode of castling,¹⁸ and introduced a fully developed 11x11 game based on Peguilhen's initial idea, das Sultanspiel, changing the name of the R+N piece from admiral to marshal.¹⁹ Thus, it is Tressau's rules for Kaiserspiel and Sultanspiel that should be taken as definitive; later descriptions are either incomplete or involve errors and cannot be used as complete instructions for playing Tressau's (or Peguilhen-Tressau's) games.

Tressau's rules for das Kaiserspiel: Game played on a 10x10 board with 20 pieces per side (Fig. 2). Commanders (d1/10) move as Q+N, adjutants (g1/10) as B+N. [The original rules (Anonymous 1819, p. 66) had Q on d1/10 and C on f1/10; Tressau (1840) suggested exchanging their places for a more balanced array.] When castling, K moves three or four squares depending on the direction²⁰ – not, as Verney (1885) erroneously claimed, “as may be desired”. [In the original rules (Anonymous 1819), K moved three squares in both directions.] Pawns can move two or three squares initially, and, although this is not explicitly mentioned, can still move two squares from the third rank (e.g. e3-e5),²¹ subject to *en passant* capture in all cases.

Tressau did not discuss pawn promotion rules in the part dealing with Kaiserspiel and Sultanspiel but his rules for “the usual game”, based on those in *Archiv der Spiele* (Anonymous 1819, pp. 25-26), list three options (Tressau 1840, pp. 51-52): First, the Berlin manner of playing, apparently endorsed by the authors, allowed promotion to any piece already captured (except, it seems, no two same-colored Bs were allowed). The second way, similar to Indian rules (see above) allowed promotion to (captured) file piece

concerned, and “Tressau” on p. 369). E. M. Oettinger's *Bibliotheca Shahiludii* (Oettinger 1844, p. 43) has “Tressau”, and provides the author's first name in full (“Ludwig”, the original 1840 book's title page featuring only the initial “L.”): this additional information, and Oettinger's work being printed in Leipzig shortly after Tressau's make me assume “Tressau” is indeed the correct form.

¹⁸ Thus, the differences between Peguilhen's and Tressau's versions of Kaiserspiel are the result of a deliberate emendation and not an error (cf. Beasley 2010, p. 175).

¹⁹ Avoiding the obvious inconvenience of having two pieces with first letters of their names coinciding.

²⁰ In other words, K to b1/10 or i1/10, R to c1/10 or h1/10, same as Janus Chess and *contra* Cazaux and Knowlton (2017): see discussion in text.

²¹ As seen from the example Sultanspiel games provided by Tressau (1840); considering the two games' common rules and origins, it seems safe to assume that the same rule was valid for the Kaiserspiel.

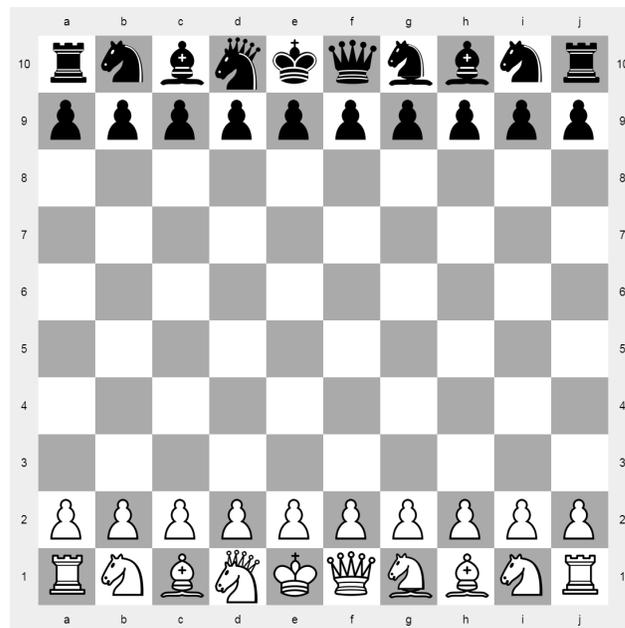


Figure 2: Kaiserspiel (Emperor's Game), initial array.

only, with some exceptions: a white pawn promoting on f8 for example (remember the 8x8 game is described) can only to promote to a bishop. However, if White still has his black-coloured bishop, he could choose a rook or a knight (obviously if already captured as well) but a queen only if this is the only missing piece – or if the pawn promotes on d8 or e8, K's square also allowing for promotion to Q.²² In the rare case, the rules continue, when a player has all his pieces or only misses one to which the pawn cannot promote, e.g. promoting on a white field when only the black-coloured bishop is missing, the pawn must stay on the last rank (not immune from capture) until a piece becomes available. When one does, the pawn must be immediately promoted to it, i.e. a player is not allowed to wait until a more valuable piece becomes available. However, he can choose not to promote the pawn at all and leave it as a pawn until the end of the game. The player (“of course”, both texts say) has the same choice in the more usual situation when a pawn reaches the last rank after the loss of one or more pieces but in that case it cannot be left as a pawn on the last rank only to be promoted several moves later. The third option, the way of playing

²² For very similar promotion rules, see Wahl (1798, p. 226).

“usual in Paris”, allowed for unrestricted promotion, more or less corresponding to present-day rules.

Stalemate, according to both Anonymous (1819) and Tressau (1840) was not a draw but a half-win for the stalemating side in the “usual game” (i.e. 8x8 chess) as played in Germany.

Tressau’s rules for das Sultanspiel: Game played on an 11x11 board with 22 pieces per side (Fig. 3). Marshals (d1/d10) move as R+N. Tressau’s original illustration has the corner squares white but as he himself observed, “if the four corner squares are white or black, [...] is irrelevant” (Tressau 1840, p. 81). He also said that it does not matter if the positions of N and B are exchanged (so that the two Bs are on different colours) on the right or on the left side but, rather confusingly, added two paragraphs below: “For the commander, the place left to K on 115 [e1] is chosen, and the marshal is on its left on 114 [d1]. From that follows that the left bishop must not be on 113 [c1] but 112 [b1] because otherwise, if for example the commander was on 117 [g1] and the queen on 115 [e1], the pawn on 102 [c2] would be without any cover at all”. This might indeed be true for the hypothetical array with C on g1 and Q on e1 but not the actual array chosen by Tressau above, with C on e1 protecting c2. Thus, the above paragraph

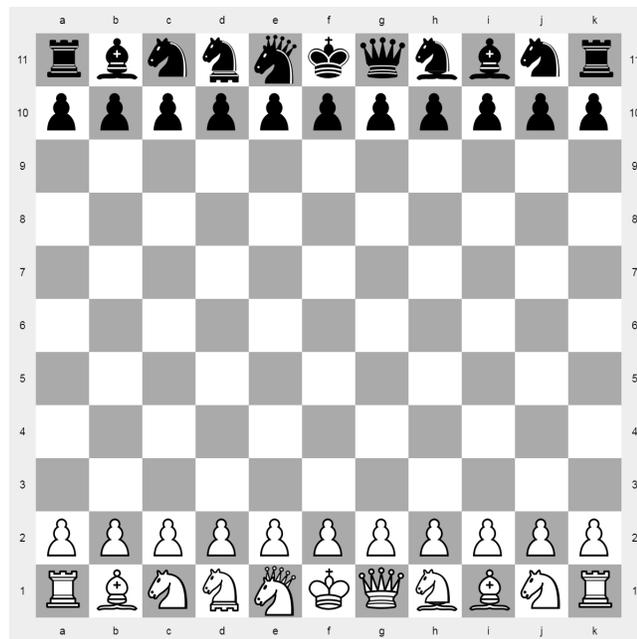


Figure 3: Sultanspiel (Sultan’s Game), initial array.

provides good reasons for the commander's place but has little to do with the switched positions of B and N on either flank. Indeed, as observed by Tressau just before that, with C on e1/10, M on d1/10 (and A on h1/10), any of the two Bs might switch positions with the adjacent N (Fig. 4), so the meaning of "the left bishop must not be on [c1]" is somewhat obscure. Verney quoted this without realizing that in the provided array (Verney 1885, p. 169) the pawn on c2 is protected by the commander anyway.

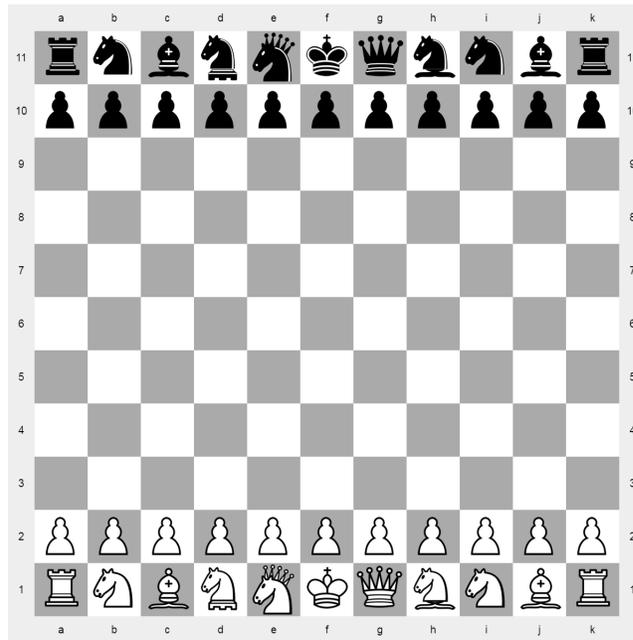


Figure 4: Sultanspiel (Sultan's Game), alternative array.

Pawns can move two or three squares on their first move²³ and can move two squares on their second if on the third rank, as can be seen from several of Tressau's illustrative games, e.g. move 18 in game 1, 7 in game 2, or 14 in game 3 (Tressau 1840, pp. 87-88),²⁴ *en passant* rule applying in all cases. When castling, K moves four squares towards R which lands on the adjacent square (i.e. K to b/j, R to c/i). Again, landing square for R is obvious enough from the illustrative games, namely the mate position in

²³ Pritchard's suggestion "four?" (Pritchard 2007, p. 121) is erroneous, and somewhat absent-minded: on an 11x11 board, moving 4 squares would mean penetrating into the opponent's territory.

²⁴ In which there is a misprint: should be 96 not 94.

game 1 and, above all, move 28 in game 4 (Tressau 1840, p. 89), and the statement that “the Rook steps four squares toward the center line (landing on e1, g1, e11 or g11)” (Cazaux and Knowlton 2017, p. 256) is an error.

As with the *Kaiserspiel*, rules for pawn promotion and stalemate are not discussed in the part dealing with the game but apparently follow those provided for the “usual game” (see above).

Tressau suggested two additional ways of winning the game – by K reaching the board’s central square (f6), or the opponent K’s square. Resembling some early shatranj variants, this idea is ignored by all subsequent sources.

Later sources

Several books in English mention the two games. Verney (1885) introduced them as “the Emperor’s Game” and “the Sultan’s Game”. Description of the former contains an error in the mode of castling, omits pawn double move from the third rank and does not discuss pawn promotion or stalemate rules. These, together with the alternative array and the two additional ways of winning, are omitted from the description of the Sultan’s Game as well.

The two games were recently discussed (as Kaiser’s Game and Sultan’s Game) by Cazaux and Knowlton (2017) as well. The Kaiser’s Game description contains an error regarding castling – while correctly stating that K steps three or four squares depending on direction (*contra* Verney 1885), landing squares for R are wrong and should be c1/10 and h1/10. Promotion to captured piece only is adopted but without the prohibition against two same-coloured bishops, or the option to leave the pawn as a pawn until the end of the game. Stalemate being half-win (part of the same 19th century German rules for the 8x8 game that regulate pawn promotion as described above) is not mentioned. These are the rules currently implemented by Jocly (although it – correctly – allows for a double pawn move from the third rank, even though this is not mentioned by the authors). The same goes for the description of Sultan’s game, which also omits the optional alternative array with Bs and Ns on i/j switching positions, as well as the two additional ways of winning the game suggested by Tressau.

Suggested rules for Kaiserspiel:

A) As formulated by Tressau (1840), with pawns promoting to captured piece only (no two same-coloured bishops allowed), promotion optional (pawn can remain a pawn if so wished), stalemate half-win. This is the ‘conservative’, historically accurate version, with rules on pawn promotion and stalemate following the 19th century German rules for 8x8 chess described in the original source.

B) As above, with modern orthochess promotion rules and stalemate a draw. Unrestricted promotion is one of the options mentioned by Anonymous (1819) and Tressau (1840), and so is stalemate being a draw (although apparently not yet accepted in Germany by that time), so a “modernized” version would not be really anachronistic.

Jocly currently implements a mixture of the two, with an error in the way of castling.

Suggested rules for Sultanspiel:

A) As formulated by Tressau (1840), with pawns promoting to captured piece only (no two same-coloured bishops allowed), promotion optional (pawn can remain a pawn if so wished), stalemate half-win. Two initial arrays (Fig. 3, Fig. 4) are possible – negotiable prior to game’s beginning or, alternatively, chosen by Black (especially if played against computer). Additional ways of winning the game by **K** reaching board’s central square (f6) or the opposite **K**’s square (can also be negotiable or Black’s choice).

B) As above, with modern orthochess promotion rules and stalemate a draw, no additional ways of winning by **K** reaching a specific square. Tressau suggested the additional ways of winning as optional, and none of the provided example games involves that rule.

As with Kaiserspiel, rules currently implemented by Jocly are a mixture of the two, with an error in the way of castling.

Summary and conclusions

Three historical large chess variants from India and Germany are discussed. Quite playable and involving similar pieces that are well known from multiple variants despite their varying names – Q+N²⁵, B+N (all), R+N (Hyderabad Decimal Chess and Sultanspiel), all three are available on a board game platform; implemented rules, however, might be revised. For Hyderabad Decimal chess, further rules are suggested in addition to those by Cazaux and Knowlton (2017); for the two German games, Tressau's original rules, cited incompletely or incorrectly in later sources, are reproduced. The paper is an attempt to provide a complete set of rules for each of the three games, with a discussion for those that are conjectural or deviating from the original ones.

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²⁵ Somewhat of a drawback: see discussion by Markov and Härtel (2020) and their suggestion to replace it with a Mongolian queen (R+K) or, better, with a R+K+N compound in the Reformed Turkish Great Chess rules.

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