

Simple Chess Variants

by G. P. Jelliss

Contents: 1. Introduction. 2. Varieties of orthodox chess. 3. New opening positions. 4. Movement variants. 5. Capture variants. 6. Pawn variants. 7. Alternative pieces. 8. King and check variants. 9. Combined variants.

1. Introduction

This concise account of chess variants is aimed at introducing players of the orthodox game to the pleasure of trying out an occasional change in the rules. The games are suitable for arranging a tournament in which a different variant is played in each round. For fairness the players should use some random process to decide who plays first, or who plays who in the next round.

In most of the variants selected here the aim is checkmate of a royal piece. In my view it is questionable whether games with other objectives are chess at all! Games for more than two players, or on special boards, or requiring other equipment are mostly excluded, as are variants that appear to me to be entirely arbitrary. Also described are rules and pieces that might be used as elements to put together a new variant of your own. Finding elements that work together is part of the art.

Conventions: A chess diagram is customarily arranged to show the position from White's point of view, with its sides parallel to the sides of the page and with the White forces initially at the bottom and the Black forces at the top. The left of the diagram is the queenside and the right the kingside. References to left and right on the board may be confusing, since Black's left is White's right.

1a. *Standard Rules*

The assumption is made that all of the rules of orthodox chess apply except where variant rules are specifically given. The orthodox rules are laid down by the International Chess Federation (known by the initials FIDE of its French title: *Federation Internationale des Echecs*). Apart from this it may be safely assumed that anything is allowed that is not specifically prohibited.

Situations may arise in variants that are not seen in normal play and so are not covered by the orthodox laws. The consequences of a simple rule-change are often more far-reaching than may appear at first sight, and a single rule may need to be supplemented to account for new situations that can arise as a consequence, that are not covered by the orthodox canon. It is preferable that new rules are followed through to their logical conclusions, since the strange results they may lead to are part of the attraction of variants. Making special exceptions to avoid such results defeats the object. However there is no one 'right' answer. Each interpretation leads to a new 'subvariant' or 'variety'.

It is helpful to have standard rules for common cases that are not covered by the orthodox laws. So I offer the following code, designed to apply to most cases. If other rules are required then they must be specified. By a **man** we mean any chessman. A **pawn** is any man whose powers are directional. A **piece** is a man whose powers are the same in all directions. If you prefer a more restricted definition of pawn then men who are neither pawns nor pieces might be called **bits**.

(1) The **promotion rule**: Pawns promote to any non-royal piece used in the game.

(2) The **drop rules**: A man entered on the board may not be placed to give check, or mate. Pawns may not be entered on the first or last ranks.

(3) The **non passant rule**: Royal pieces may not pass through check. This is an extension of the rule that already operates in castling. If the powers of the royal piece are expanded, say to a royal queen, this rule helps to keep it under control. However, a royal queen attacked by a bishop, rook or queen can capture it provided it passes through no other check on the way.

(4) The **royal privilege rule** (or rex exclusive, RE): Any new rules that apply to all men, do not apply to the king or other royal piece unless specifically stated. This may sound undemocratic, but chess is a royalist game! The reason for this standard is that complications often arise when the rules extend to the royal piece. The alternative rule is rex inclusive (RI).

SIMPLE CHESS VARIANTS

Related to this is the principle that new rules do not extend beyond the hypothetical capture of the king. When rules do extend beyond the capture of the king this is sometimes called **consistent** play, though it often leads to convoluted logic requiring consideration of several subsequent hypothetical moves (complex examples have been composed in checkless chess and maximuming).

(5) The **change rule**: It is important that a turn of play must make a definite change in the position. This is implicit in orthodox chess, but needs to be made explicit in variants where a player can, say, reverse moves of the opponent's pieces. If null moves are allowed they must occur only under special conditions (e.g. when a rook stands on a clear rank in cylinder chess, or when a hamster is next to a hurdle). A player must move even if all the moves available to him are to his disadvantage; this is the situation known as **zugzwang**. If no move at all is possible the game must end.

(6) The **seriesplay rules**: Some games allow two or more moves in series in one turn of play. The rules developed for seriesplay problems are the ones we take as standard. A piece may move more than once in a series, and these moves may be captures. The series may be of less than the full number of moves allowed. Check may be made only on the last move of the series; thus if check is given this ends the turn. When in check you must escape check with the first move of your series. You cannot place your own king in check in the course of the series.

2. Varieties of Orthodox Chess

Orthodox players do not always realise that they already play variant chess when they choose to play according to different time limits. **Rapid-play chess** for example is a variant. If there is no checkmate then the game may be won purely on the speed with which one player can play sound defensive moves, while the other, who has an overwhelming material advantage, but cannot checkmate within the time limit, loses. In any form of play, even a friendly game, there is an assumption that moves will be carried out within a reasonable time. If a player walks out in a huff, it must be permissible after a sufficient lapse of time to assume that he has resigned, unless he comes back three years later to resume play, claiming kidnap or amnesia!

Any variant designed to even up the balance between an experienced and less experienced player is **Handicap chess**. The only really fair way is to allow the weaker player more time and perhaps access to reference or computing aids. The time factor is what evens up the odds in a simultaneous display. In the nineteenth century the **Giving of odds** was popular; that is the stronger player does without one or more pawns or pieces, or the weaker player is allowed two moves to start, for example. In this collection I have excluded games in which the players begin with different forces.

The FIDE Laws require the board to be square and its cells to be 'equal squares', but on measuring a standard roll-up plastic chessboard I found it to be 16.8 by 16.3 inches, so the cells differ noticeably from squares, and these boards therefore contravene the FIDE Laws. However as far as I am aware no one has yet claimed a foul on these grounds. It is perfectly possible to play chess on boards where the cells are circular or oblong; the exact shape is really immaterial.

The FIDE Laws specify further that the cells of the chessboard be 'alternately light and dark.' However chequering, or indeed any colouring, of the board, is not an essential part of the game. In the original Indian and Arab games the cells were marked out by lines and were all the same colour, though some cells were occasionally distinguished by a mark such as a diagonal cross. According to the FIDE laws the near right-hand cell of the chequered board must be a light cell. So if the board is set up with a dark cell there you are not considered to be playing legal chess, even though it makes not the slightest difference to the play! So we must count **Reverse-chequered chess** as a variety.

By present custom, the first player has the lighter colour pieces and is conventionally known as **White** and the second player has the darker pieces and is called **Black**. In practice the colours of the pieces may actually be other colours than white and black, though usually easily distinguishable as light and dark respectively (e.g. in *Alice through the Looking Glass* the two sides are White and Red). If we set up the pieces with the usual opening position but with colours reversed, and give Black the first move, we have **Reverse-coloured chess**.

However, there is an ambiguity here. If we reverse the colours and then rotate the board (or rotate the board and reverse the colours) so that White is at the bottom again the effect is to reflect the position from left to right; the kings and queens change places. It is implied by the diagram of the opening position in the Laws that both queens are on the same side of the board, which is to the left when standing behind the White forces or to the right when standing behind Black's forces. So, again, if the queens are on the right and the kings on the left the game is illegal, even though any game played from this position is isomorphic to an orthodox game. This variety may be called **Reflected chess**.

The requirement that each player's pieces are on a certain side of the board is expressed rather curiously in the FIDE Laws in the form that the board is 'placed between the players'. This would seem to imply that a congress player cannot get up and walk around behind his opponent, unless his opponent also goes on perambulation round the other side of the board!

The American chess humorist Frank Maus proposed the game of **Bystander Chess** (in *Chess Amateur* September 1927) in which the initial position is rotated 90° clockwise so that the players sit with their pieces on the left, and the pawns move along the ranks. The idea of this is that it gives a new perspective on the game. It is well known, he claimed, that bystanders see more of the game than the players often do. Incidentally, the opening position for Bystander chess, as given in the original article and in the *ECV* actually shows Reflected Reverse-chequered Bystander chess!

By rotating the board 180° I propose an even more radical variety, which might be called **Backseat chess**, in which White stands, or sits, at Black's side of the board, and vice versa. White now moves his pawns towards himself. The combined variant **Backseat Bystander chess** is just the right-handed version of Bystander chess, where the initial position is rotated 90° anticlockwise.

3. New Opening Positions

Reversing the colours is equivalent to reflection of the board end to end. This type of symmetry is assumed to be the case for any variant unless otherwise specified; they always have queens to left of kings, when seen from White's point of view. If the Black king and queen are interchanged in the initial position however, this results in a genuine variant, which may be termed **Rotary chess**, on the grounds that a half-turn of the board is equivalent to reversing the colours of the pieces. Any variant has a Rotary version. Interchanging the White king and queen instead gives Rotary Reflected chess.

Other simple changes to the back row involve **Transpositions**. Experiments, dating from 1857, are described in *ECV2*. For instance, transposition of knights and bishops RBNQKNBR, or of rooks and bishops BNRQKRNB. There is a unique arrangement of the pieces that results in all the pawns and pieces being guarded in the initial position. I call this **Guardian chess** (GPJ, *Chessics* 1982). The sequence is NQRBBRKN. As I noted in the same article there are also two positions in which all men except the king are guarded: BQRRSBKS and SQRRBBKS.

The choice of the back row sequence can alternatively be left to chance, leading to various types of **Randomised chess**. Usually both players use the same sequence and one mirrors the other. In **Fully randomised chess** however both arrays are chosen at random. In 1998 (*VC* #33) I organised a tournament in **Symmetric fully randomised chess** in which the back-row sequences used were all symmetric between the queen and king sides. There are 24 ways of arranging the back-row pieces symmetrically, with Q to left of K, and in a tournament with 4 players, playing 2 games against each opponent, there are 12 games and therefore 24 back-row-arrays. The idea was to assign these 24 at random. In addition the player of Black could choose whether to play with his king on right or left.

Another way of varying the back row is to allow the players to place the pieces where they choose, either separately or step by step. In **Fischerandom** (R.Fischer 1995), which would really be better named **Fischer placement**, the back ranks are initially clear: White places a piece and Black copies him, Black places a piece and White copies him, and so on. Bishops must stand on opposite colour cells. Kings must stand between the rooks and in castling the the king and rook end up in their usual orthodox positions regardless of where they start. The result is not strictly random.

SIMPLE CHESS VARIANTS

An extreme form of this type of variant is **Free-placement chess** in which the board is initially empty and the first 16 moves on each side consist in the placing of the men on the board. Many varieties of this are possible. The tendency in such a game is for the kings to be the last-placed pieces, since otherwise the opponent will line up his men against the known king position. However, in **Free-programme Chess** (Gela Guraspashvili, 1995), where each player places his pieces on his own half of the board, kings are placed first; one bishop on each colour; pawns not on the first rank, and having the double move only from the second rank; White not capturing at the first move. In the games as played in the original experimental tournament in Tbilisi the kings were always placed on the back rank and no piece was ever placed so as to give check, but these were not explicit rules.

In **Screen chess** the players set up their men on their side of the board as they choose, out of sight of the opponent (e.g. on paper or behind a screen set across the board). A version of this is **Prepared chess** (Stone 1982) where the men are freely arranged on the first three ranks. Several pawns may stand on a file or on the back rank. There are no pawn privilege moves or castling. Both bishops may be on the same colour.

Placement chess games could also allow play to begin before all the pieces are placed, the others being available to place later. A simple case of this is **Pocket-knight chess** where the players start with one or both knights off the board. At any turn of play during the game the player may enter a pocket knight on any vacant cell instead of moving a man already on the board. Similar games can be played by pocketing other pieces. It is usually allowed for a knight to be placed where it gives check (or possibly mate) contrary to the standard rule proposed above.

4. Movement Variants

4a. *Restricted movement*

In **Grid chess** (Walter Stead, *FCR* 1953) the board is covered or marked by a grid of lines dividing it into 16 areas 2 by 2. Every move must be across at least one grid line.

In **Monochromatic chess** moves are only allowed between cells of the same colour. Thus the kings are reduced to ferses, the rooks to dabbabariders, and the knights to dummies. To avoid the latter try Monochromatic chess with **double-move knights** (A.J.Stone *Chess Variants* 1982). In **Bichromatic chess** every move is between cells of different colour. In this Bishops could never move; to avoid this replace them by **elephants** which move one step forward. Checks are considered to transcend the chromatic limitations.

In **Maximummer chess** players must make one of the maximum-length moves available. In the opening position only knight moves are possible, and this remains so until there is a capture. Example game: A. von Wilpert v Erich Bartel 1964: 1.Nc3 Nf6 2.Nf3 Nc6 3.Ng5 Ne5 4.Ne6 Nfg4 5.Ne4 Nxf2 6.Nxd8 Nxf1 7.Rxf7 Ne3 8.Rh1 Rxf1 mate. In **Minimummer chess** the moves are confined to the shortest possible. In this it is difficult to get the knights to move at all.

In **Imitator chess** a marker, neither white nor black, that imitates length and direction of every move, and prevents any move that it cannot imitate, is placed on a central cell at start of play.

4b. *Expanded movement*

In **Cylinder chess** (A. Piccininni 1907) the left and right sides of the board are considered to be joined, and men may cross from one side to the other. A bishop on a4 attacks e8 from two directions, so could give double check. A feature often missed is the possibility of Q-side castling with the KR, or K-side castling with the QR (noted by K. Hannemann 1976).

In **Mobius Chess** the left and right sides of the board are supposed joined after a 180° twist. This can result in pawns that capture round the bend moving opposite to their usual direction.

In **Billiard chess** line-moving pieces are allowed to reflect from the board edges. This only really affects the diagonal movers, bishops and queens. More elaborate games of this type allow knights to reflect off the board edges, but it is not always clear where they will reflect to. In **Bouncy chess** the knights are allowed to bounce back in any direction (but not to where they started).

SIMPLE CHESS VARIANTS

In **All-in chess**, or **Free-for-all chess** (C.M.B.Taylor *Chessics* #1 1976) each player is allowed to move the opponent's men as well as his own, however, a player may not simply reverse the move just made by the opponent. The opposing king may be moved into check, or a pinned piece moved to expose the king to check.

In **Stacking chess** (Stone 1982) more than one man of the same colour may occupy a cell. A capture takes all the men on the cell. Of course this is easier to play using small pieces on a large board. Version: No more than two men per cell.

In **Alice chess** (V.R.Parton, FCR 1954) an extra board is used, initially empty. After every move the moved man is transferred to the corresponding cell on the other board. The move must be legal on the board on which it is played. A check must come from the board that the king is on, but the king's escapes can be covered on either board.

In **Castling chess** (from an idea by G.F.Anderson *Adventures of my Chessmen* 1924) castling is allowed whenever king and rook of the same colour are suitably placed on the same rank or file with no man intervening. The king moves two steps towards the rook which then hops over the king. This feature can be added to other variants.

In **Knight-relay chess** (Mannis Charosh 1972) a man guarded by a knight temporarily acquires the added power of the knight. The knights themselves do not capture and cannot be captured.

In **X-ray chess** (T.R.Dawson 1913) line pieces are able to pass through a single obstructing piece; but a second obstruction will stop them.

4c. *Multiple Moves per Turn*

The FIDE Laws specify that the two players 'move their pieces alternately' but castling or promotion involve moves of two pieces in the same turn of play, so what is meant by 'move' here is actually 'whatever is allowed in one turn of play'. This reveals the statement as tautologous: How else can two players play but alternately? Many interesting games allow more than one simple move per turn. The seriesplay rules stated earlier are the ones that usually apply.

In **Double-move chess** also known as **Marseilles chess** or **Marseillais chess** (Albert Fortis *Le Soleil* 1925) each player makes two moves (the second not the reverse of the first) at each turn of play. In **Balanced Marseilles chess** White begins with a single move and Black makes the first double move. This is considered to be fairer on Black.

In **Double-move capture chess** (Fred Galvin 1957) different series rules are used: the object is to capture, not checkmate, the opposing king. Here is a short game in **Balanced Double-move capture chess** (VC #21) 1.Nc3; e6,Nc6 2.e4??,Nf3 (e3 is needed); Nd4,Qg5 and the white king falls next move. In effect this position is 'checkmate' since the WK is threatened with capture in four different ways by double moves.

In **Progressive chess** the number of moves played per go increases by one at each turn, thus white plays one move, black two, white three, black four and so on. Under **Italian rules** the exact number of moves due must be played, thus where a player can escape from check but in doing so is forced to give check before completing his full quota of moves, this counts as mate. Under **Scotch rules** fewer moves than the full series may be played. Under **Logical rules** there is no castling and no double pawn move; this can be combined with the Italian or Scotch rules.

In **Triplets** (Adam Sobey, c.1980) the first moves of White and Black must be with a pawn, the second moves must be with a piece (not the king) and a pawn, in either order, thereafter every move is a triple move of king, piece and pawn in some order. Castling counts as a king move. The game ends if a player is unable to make all three moves. The king may be left in check during the move but not at the end.

In **Avalanche chess** after each normal move a player must move one of his opponent's pawns forward one step, never two or with capture. If this puts the player's king in check he loses. If there is no pawn that can move there is no penalty.

In **Refusal chess** (Fred Galvin 1958) you may refuse your opponent's move if you don't like it! He must play something else, and you can't refuse that, unless there is only the one legal move.

SIMPLE CHESS VARIANTS

In **Compromise chess** (Fred Galvin 1958) the player offers two moves and the opponent chooses which he will allow (unless of course there is only one legal move). This is similar to Refusal chess but more suitable for correspondence play.

In **Push chess** (GPJ version) a man may move to, or through, a cell occupied by a man of its own colour and push that man ahead of it according to the move power of the pushing piece. Thus in the opening position White could play 1.Nc2(Pc2-f3) or 1.Be3(Pd2-g5). Captures are normal. In the RI version kings are more difficult to mate since they can barge obstructing men out of the way.

5. Capture Variants

5a. *Restrictions*

In **Captureless chess** no captures are allowed. This sounds rather dull and drawish! Version: Capture allowed if it is the only move that will save the king (Stone 1982).

In **No-swap chess** (GPJ) a piece may not be captured if the opponent can reply by capturing a like piece. This may be seen as an extension of an agreement not to swap off queens.

In **Face-off chess** (GPJ) no piece may capture a piece that is attacking it. Thus with orthodox pieces only N can take Q, Q can take R bishopwise or B rookwise, and like cannot take like. Thus Ks can stand adjacent, and a K may defend itself by attacking its assailant. Q, R or B do not check when close up to K, and if two squares away the intervening space must be independently checked.

In **Madrasi chess** when opposing pieces of the same type (e.g. white and black rooks) observe each other they are paralysed, losing all powers except the ability to paralyse.

In **Patrol Chess** a man cannot capture or check unless it is guarded by another. (This rule is more of a problem variant since it is difficult to play consistently in over the board conditions.)

In **Must-capture chess**, or the Maidens game, (Alfonso MS, 1283) you are obliged to make a capture if one is available, though you may choose if there is more than one.

In **Madcap chess** (by Mannis Charosh c.1950) you are obliged to make a capture and to carry on capturing as long as one is available.

5b. *Transforming Men*

In **Protean chess** and **Frankfurter chess** men transform into the types of men they capture. When a king captures it retains its royal properties. Example Frankfurter game: Erich Bartel v. Otmar Gansler 1964; 1.e4 b6 2.Bc4 Bb7 3.Bxf7=P+ Kxf7=P 4.Nf3 Nf6?? 5.Ng5 mate. In the Protean version a captured pawn continues in the same direction, so a captured black pawn becomes a backward-moving white pawn, but in Frankfurter it moves according to its new colour.

In **Mutation chess** when a capture is made (except by a king) the capturing piece changes its powers (but not its colour) to those of the captured species; queens may not give direct check; a pawn capturing on the 8th rank does not promote.

In **An-nan chess** (Masazumi Hanazawa, *Chessics* #4 1977) a man takes its powers of move and capture from any man of its own colour that stands immediately behind it. Otherwise it has its own normal powers. Thus first moves might be 1.dxd7+ (moving P as Q) 2.exd7 (moving P as K). If this is too lively a variant try **An-nan Piece chess** where the rule applies only to pieces not pawns.

5c. *Reuse of Captured Men*

In **Replacement chess** or Putback chess (J.E.H.Creed, *FCR* 1940) when a man is captured the capturer replaces it on any vacant cell, bishop on same colour, pawn not on first or last rank. In **Optional replacement chess** (J.D.Beasley *BCM* 1992) The replacement is optional, not compulsory.

In **Circe Chess** captured men are replaced on their home cells if vacant, otherwise they are removed from the board as usual. In **Strict Circe chess** the players should keep note of where the rooks, knights and pawns have come from so that they can be replaced on the correct home cells. A promoted pawn is demoted as well as sent home! However in **Loose Circe chess** they can be replaced on any home cell that happens to be vacant (if one of these happens to check the King then the capture is illegal). In **Problem Circe chess** a pawn's home cell is reckoned to be the one in the file where it is

SIMPLE CHESS VARIANTS

captured, and the rook and knight home cells are reckoned to be those of the same colour as the capture cell. There are many elaborate problem variants of Circe.

In **Malefic Circe chess** a captured unit is reborn as though it belongs to the other side, though it does not change colour. (e.g. WB captured on white cell reappears c8 if vacant instead of f1).

In **Antipodean chess** (GPJ, *Chessics* 1976) a captured piece reappears at the 'antipode', a {4,4} leap away, if vacant.

In **Chessgi**, a cross between Chess and Shogi, captured men change colour and are held in hand for replacement on the board. This can be played using extra men from another set.

In **Hostage chess** (John Leslie, 1997) captured men are kept hostage in a prison. Instead of a normal move a player may reclaim one of his captured men in exchange for a man of equal or higher value that he has captured previously. (B and N are reckoned of equal value.) The released man must then be immediately dropped back onto the board. The exchanged man is kept in reserve by the opponent ready to be dropped back on the board at any time.

5d. Other Methods of Capture

The term **baroque chess** is applied to any variant in which the method or methods of capture are unorthodox. The pawn's en passant capture is the only baroque capture in orthodox chess. There are also various fairy pieces that capture in unorthodox ways.

In **Free capture chess** (or Kiev chess) men may capture allied men.

In **Berkelian chess** men not observed by other men cease to exist. This is a type of capture by non-observance. If the orthodox opening position is used then the rooks vanish at once, followed by the knights and the rook pawns. A safer arrangement is the Guardian chess array NQRBBRKN, or to play Cylindrical Berkelian.

In **Kamikaze chess** (P. Monreal *Problème* 1965) a capture results in the loss of the capturing piece as well. In the RI version kings cannot capture. In the RE version they capture normally.

In **Rifle chess** (W. B. Seabrook 1927) the capturing piece does not itself move. In **Shoot Chess** capture is compulsory. An example by David Pritchard shows a hazard: 1.d4 e5 2.xe5 Bb4+ and White must give up his Q to let K escape to d1 since anything put in the way of the bishop gets shot down. A game between Patrick Donovan and Ray Brooks (1986) began: 1.e4 c6 2.Qf3 d5 3.xd5 xd2 4.xf7 Be6 5.xf8 xa2 6.xa7 xa1 7.b4 Qd6 White won on move 32 (VC#2, 1990).

In **Push(-off) chess** (Fred Galvin 1967) and its relative **Dynamo chess** (Hans Kluver and Peter Kahl 1968) which uses pulls as well as pushes, there are no normal captures, instead captures are by pushing or pulling pieces over the edges of the board. A piece can only push or pull one other piece at a time (two constitute a block). Pawns do not pull, and they act diagonally on enemies, orthogonally on allies. The kings are allowed to push and pull (RI version), but this makes them difficult to trap. In the RE version checkmate may be easier to reach.

6. Pawn Variants

Although often disregarded as mere cannon-fodder by players, or as mere square-blockers by problemists, the pawns, considered in terms of the rules that govern their powers, are the most complex of all the orthodox chessmen. Consider the rules applying to them: (1) they are barred from the first rank, although in some variants other pieces can move them there, in which case their powers need to be newly specified; (2) on the second to seventh ranks they have separate move and capture powers, which are restricted to forward action; (3) on the second rank they have an extra two-step move available; (4) on the fifth rank they acquire the power of en passant capture against an opposing pawn making the two-step move, provided this power is exercised immediately, otherwise it lapses; (5) on the eighth rank they have the power to promote to Q, R, B or N at the choice of their player.

6a. *Pawns with Changed Move or Capture*

By giving the board a 180° turn one can interpret the resulting position as one in which, as usual, the White pawns are moving up the board and the Black pawns moving down, but this means the pawns are on the brink of promotion. This is the Backseat version of **Upside-down chess** (GPJ, *VC* #5 1991). From the usual opening position it can be seen as equivalent to replacing the pawns by **upside-down pawns**; the White pawns move down the board and the Black pawns up. Either player can only begin with a knight move. The opening needs careful play since there are some easy mates by knights. 1.Nc3 forces 1...Nf6 and 2.Nb5 forces 2...Ne4.

In **Opting chess** (GPJ) the pawns retain the option of a double forward step wherever they are on the board. Thus a pawn on the 6th rank can move to promote if the way is clear.

In **Advanced pawn chess** (Anthony V. Paletta 1980) all the pawns are moved forward one rank in the opening position. In **Advance chess** (P. M. Cohen 1982) all men begin one rank forward. In **Pawn-Snatcher's Delight** (*Nostalgia* 1982) all pawns are moved two ranks forward!

In **Backward pawn chess** (T.R.Dawson) pawns are allowed to move one step backwards, but not to the back rank; this can often be useful for defensive purposes. In **Sidewise pawn chess** the pawns can move one step along the rank. (T.R.Dawson *Bolton Football Field* 1913).

In **Superpawn chess** (W. Speckmann *Die Schwalbe* 1967) the pawn powers are extended in length to any distance, thus on a clear file a superpawn can travel to promote at once. A less extravagant version of this is to give only the centre pawns superpowers.

In **Berolina chess** (E.Hebermann, Berlin 1926) the pawns move diagonally forwards, one or two squares, and capture by a single forward step. If a pawn a2 moves to c4 and there is a Black pawn on b4 it is subject to en passant capture by b4xb3. In **Berolina Plus chess** (K. Ursprung *FCR* August 1936) the Berolina pawns have the added power of capturing sideways.

6b. *Pawn Promotion Variants*

Because of the promotion rules, up to eight extra queens, rooks, bishops, and knights each may theoretically be needed (more in games on wider boards), but in games practice even one extra queen seldom occurs. Various different promotion rules have been adopted from time to time. In **Promotion only to captured men**, this may involve the pawn either waiting on the 7th rank, or standing on the 8th rank as a dummy, until a piece is available for promotion. The simple **Promotion only to queen** rule gives rise to the alternative term of **queening** the pawn.

In **File-promotion chess** (Shastri 1814) pawns promote to the piece of the file of the promotion square (but Q in K-file), i.e. a/hR, b/gN, c/fB, d/eQ. This was used in some Indian varieties of chess.

In **Mecklenbeck chess** (Eikenscheidt and Schwarzkopf *feenschach* 1973) pawns may promote on reaching ranks 6, 7 or 8. In **Fast-track chess** (P.Cohen *Nostalgia* 1986) pawns may promote to N on the 5th, N or B on the 6th, N, B or R on the 7th, N, B, R or Q on the 8th.

In **Double-guard promotion chess** (E. Letzen *FCR* 1952) pawns are allowed to promote if they are doubly guarded (except in the initial position).

In **Triple-guard promotion chess** (GPJ) a pawn newly triple-guarded by pieces other than pawns promotes to the combined value of the guarding pieces. Thus after b3 in the opening position a3 promotes to amazon, R+B+N, from triple guard by Ra1, Nb1, Bc1.

In **Doubled-pawn promotion chess** (GPJ 1977) whenever there are two pawns of the same colour on the same file, the rear pawn immediately promotes.

In **Excess (XS) chess** (GPJ *Chessics* 1982) on promotion a new pawn appears on the home square in the same file, if vacant.

In **Reincarnation chess** (A. F. van Beneden *L'Echiquier* April 1925 'Revenants') a pawn that reaches the 8th rank returns to its 2nd rank, if vacant, instead of promoting.

7. Alternative Pieces

Variants using unorthodox men are sometimes called **fairy chess**. I use the term **generalised chess** or **chessics** to include the wider field of mathematical recreations that use chess elements, such as, knight's tours, arrangement puzzles, grid dissections, and step-by-step transformations.

7a. Ways of Involving New Pieces

In problems with unorthodox pieces the convention is usually followed that they have appeared by promotion of pawns, though this is not sufficient in some cases (e.g. alfil and equihoppers may not be able to get to the required square from the promotion rank). However players will probably prefer to have them on the board at the start, since the chance to promote a pawn may never arise.

The simplest way of introducing new pieces is to use them in place of the existing pieces. In **Medieval chess**, from which the modern game evolved, the piece occupying the queen's place was a fers and the piece occupying the bishop's place was an alfil. (There were also other variations from the modern rules, but too many to go into here.)

Another method is **Substitution** where new pieces (as agreed beforehand) are allowed on the board to substitute for a captured piece. It is probably best for this substitution to count as a separate move on its own, and to be made at any future turn of play rather than immediately after the capture. It is also less disruptive for the substitute to enter on a cell of the back row than for it to be placed anywhere on the board.

Another method of introducing variant pieces is to use the pocket knight principle, where the piece can be dropped on the board at any time. However, it is usually necessary to specify that a placement move may not check. For instance in unrestricted **Pocket Giraffe chess** White can play 1.Gd4 mate.

A variant of this type, usually called **Coin chess** uses a coin as a blocking piece. White places it on the board after his first move and each player can thereafter move it anywhere. It simply blocks the cell to entry by any piece, though riders may pass over it (otherwise checkmates become difficult, since the coin could be used to block any distant check by a rider).

In changing the rules governing the pieces it is probably best to alter each of them in a similar way, though there are variants in which all the pieces are substituted by others radically different.

We now examine what types of new pieces are possible.

7b. Leapers

The chess knight is just one example of a class of pieces called **leapers** whose move patterns can be specified by coordinates, an $\{r,s\}$ leap taking the piece r steps along rank or file and s steps at right angles, ignoring any men in the way. All possible leapers with coordinates up to 4 have acquired special names, as follows: **Dummy** $\{0,0\}$, **Wazir** $\{0,1\}$, **Dabbaba** $\{0,2\}$, **Threleaper** $\{0,3\}$, **Fourleaper** $\{0,4\}$, **Fers** $\{1,1\}$, **Knight** $\{1,2\}$, **Camel** $\{1,3\}$, **Giraffe** $\{1,4\}$, **Alfil** $\{2,2\}$, **Zebra** $\{2,3\}$, **Lancer** $\{2,4\}$, **Tripper** $\{3,3\}$, **Antelope** $\{3,4\}$ and **Commuter** $\{4,4\}$.

The mobility of these pieces varies considerably. The knight is a **free-leaper**, able to reach any cell on the board from any other, and there are four others with this property on the 8 by 8 board, namely the wazir, zebra, giraffe and antelope. The fers and camel can reach all the cells of one colour. The others are more restricted; the dummy cannot move at all, and the commuter can only move back and forth between two cells.

Names for all two-pattern leapers with coordinates up to 2 are: **King** $\{0,1\}+\{1,1\}$, **Wazaba** $\{0,1\}+\{0,2\}$, **Emperor** $\{0,1\}+\{1,2\}$, **Caliph** $\{0,1\}+\{2,2\}$, **Duke** $\{1,1\}+\{0,2\}$, **Prince** $\{1,1\}+\{1,2\}$, **Ferfil** $\{1,1\}+\{2,2\}$, **Templar** $\{0,2\}+\{1,2\}$, **Alibaba** $\{0,2\}+\{2,2\}$ and **Hospitaller** $\{1,2\}+\{2,2\}$.

Any combination of a piece with a free piece is obviously free. It can however happen that a two-pattern leaper is free even though its components are not. I call such pieces **amphibians**. The simplest cases are **Frog** $\{1,1\}+\{0,3\}$, **Toad** $\{0,2\}+\{0,3\}$ and **Newt** $\{2,2\}+\{0,3\}$.

SIMPLE CHESS VARIANTS

Many other two-pattern leapers are possible. Of particular interest, especially to those who know the theorem of Pythagoras are the **Fiveleaper** $\{0,5\}+\{3,4\}$ and the **Rootfiftyleaper** $\{5,5\}+\{1,7\}$, which are the only two-pattern fixed-distance leapers on the 8×8 .

The simplest three-pattern leaper is the **Centaur** $\{0,1\}+\{1,1\}+\{1,2\}$ a combination of king and knight.

7c. *Riders*

The rook and bishop and queen are examples of a class of pieces called **riders**, or **line-pieces** able to move any distance in given directions provided the cells are clear. The **Rook** is a wazir-rider, the **Bishop** a fers-rider and the **Queen** a king-rider. T.R.Dawson expanded this family of pieces to include the **Nightrider** (or **Knightrider**), **Camelrider** and **Zebbarider**. The five riders R, B, Nr, Cr, Zr are all those single-pattern riders that can make a ride of at least two steps on the 8 by 8 board. Dawson also composed elegant problems in **Five-rider chess** where the pawns promote to these five values (but not to Queen).

As in the case of leapers, we can form **composite riders** that combine the powers of two or more line-pieces. By far the best known is of course the **Queen**, which is rook + bishop. Names for the nightrider combinations R+Nr, B+Nr and Q+Nr are **Raven**, **Banshee** and **Queen of the Night**.

In **Coronation chess** (F.Maus *Chess Amateur* May 1925) after losing the Q a player may move B to R or R to B and replace them with Q. Promotion is to captured pieces only.

Dawson also introduced the **Dabbabarider** and **Alfilrider**, but these do not visit all the cells in their line of movement. Alternative names for them are **Skip-rook** and **Skip-bishop**, since they leave out every other cell in a rook or bishop line.

Another type of partial line pieces are **Slip-pieces** which derive from a line-rider by passing over the 3rd, 5th, 7th, etc cells in the ride. The **Slip-rook** was introduced by David Parlett under the name **Panda**. It is a rook that moves only to squares of opposite colour to that on which it stands.

The earliest known example of a partial rider is the **Talia** (meaning scout) which occurs in the Great Chess of Timur. It is a transition piece between the mediaeval alfil and the modern bishop, able to move like the bishop without being blocked by a pawn standing in front of it. This piece gave me the idea for the family of **Ski-pieces**, which I introduced in my first published chess problem. A ski-piece can be derived from any path-rider by omitting the first step in its ride: it makes a little 'ski-jump' before setting off on its ride. In **Ski Chess** all the line-pieces become ski-pieces, **Ski-Rook**, **Ski-Bishop** and **Ski-Queen**. If played from the usual opening position there is a short fool's mate: $1.Q\times d7 Nc6/Na6$ $2.Qb5\ddagger$ so it may be better to start with all the pawns forward one rank.

In **Skip-chess** similarly the riders are replaced by skip-pieces, i.e. rooks become dabbabariders, and bishops alfilriders. In **Slip chess** they are replaced by slip pieces.

In **Rider chess** the knights are replaced by nightriders, thus all the pieces except the king are now riders. The nightriders in the opening position already attack the opposing king and queen pawns.

Another type of rider is the **Mao** which is the knight in Chinese chess. It makes its move in two steps, a noncapturing wazir move followed by a fers move, so the cell moved through must be vacant. The **Moa** (W.Speckman) is a knight that moves as fers followed by wazir.

7d. *Hoppers*

In castling, the king moves two steps towards the rook and the rook occupies the cell passed over by the king. This rook move is the only example of a Hop in orthodox chess. Pieces that can move only by hopping over other pieces are termed Hoppers. It should be noted that hoppers capture in the usual way by eviction, they do not capture the hurdles over which they hop.

The most popular hoppers are: The **Equihopper** (G. Leatham *FCR* 1938) which hops to the same distance beyond the hurdle as it is from it. The **Grasshopper** (T.R.Dawson *Cheltenham Examiner* 1913) which hops along queen lines to the first cell beyond the hurdle. It also has lateral and diagonal

versions, known as **Rookhopper** and **Bishop(hop)per**. The **Lion** which hops along queen lines to a cell any distance beyond the hurdle. Its lateral and diagonal versions are known unimagatively as **Rooklion** and **Bishlion**.

I have also investigated various types of bifurcating hoppers, which have two choices of move once above the hurdle. The **L-hopper** (GPJ *Chessics* #10 1980) is like an equihopper but moves at right angles, to left or right, both halves of the move being the same length. The **Moose** (GPJ *Chessics* #1 1976), **Eagle** and **Sparrow** (GPJ *Chessics* #9 1980) are like the grasshopper but turn 45°, 90° or 135° above the hurdle. C.M.B.Tylor, in the same issue, added to these the **Hamster** which moves up to the hurdle and just stops: it can make a null move by attempting to hop and falling back!

7e. *Composites and Hybrids*

We can also have **Composite pieces** combining various types. Particularly popular among variant chess players are **Knighted men**: thus we have **Amazon** = Q+N, **Empress** = R+N, **Princess** = B+N, **Dragon** = P+N, though these pieces are also known under many other names.

The simplest form of **Knighted chess** is to replace the queen's rook by R+N and the king's knight by B+N, so that the eight baseline pieces are all different, and each possible combination of R, B, N occurs: R+B (Q), R+N, B+N. The choice for pawn promotion may as well be restricted to composite pieces as there would be little occasion to underpromote.

We can also have pieces that move one way but capture differently (which is the case with Pawns) such pieces are termed **Hybrids**. For example:

In **Asymmetric Chess** (Michael Howe 1993, *VC* #21)) queens move as kings but capture as Q+N; Rs, Bs and Ns move in usual way but capture like either of the other two pieces (i.e. as B+N, R+N, Q) otherwise orthodox..

The **Leo**, **Pao** (or **Cannon**, a piece from Chinese chess) and **Vao** (Z.Mach *FCR* 1940) are hybrid hoppers that move like a queen, rook or bishop and capture along these lines like a lion. These pieces are sometime called chinese or chinoise. In **Leo chess** the queen is replaced by leo. In **Chinoise chess** the queen, rook and bishop are replaced by leo, pao and vao. In **Akenhead's chess** (J.Akenhead *Fairy Chess Review* April 1947) additionally the knights becomes maos, and berolina pawns are used.

In **Maritime chess** or **Sea chess** (G.Brogi *Chess Amateur* February 1929) the Q, R, B are replaced by **Sea-pieces** which move as normal but capture by hopping over the victim to the first square beyond. Sea-Q is known as **Siren** or **Mermaid**, Sea-R as **Triton**, and Sea-B as **Nereid**. This type of capture is called locust capture. The original problem piece called a **Locust** was in effect a Sea-Q that moves only to capture.

A **Sniper X/Y** is a piece that moves in one way, X, and captures another way, Y. In **Sniper chess** or **Thinktank chess** (Frank Maus 20/September/1927, letter in BCPS Archive) the back-row sequence becomes R/N, N/R, B/N, Q, K, B/R, N/B, R/B. The snipers derived from orthodox pieces are: R/B = **Roobis**, B/R = **Bishroo**, R/N = **Rookni**, N/R = **Kniroo**, B/N = **Bishkni**, N/B = **Knibis**.

A **Hunter X/Y** is a piece that moves forwards as X and backwards as Y. In **Meso chess** or **Falcon-Hunter chess** (Karl Schulz 1943) an R/B-hunter and B/R-hunter are held in reserve and can appear as Substitutes after other pieces have been captured.

8. King and Check Variants

A **royal** piece is one whose loss would end the game. If the king is threatened with capture on the opposing player's next move then he, and his player, is said to be in **check**. If there is no move that will save the king from capture then he, and his player, is in **checkmate**. If the king is not in check but there is no move that will save it from capture then the king is in **stalemate**.

In orthodox chess it is illegal to make a move that results in your king being in check. If such a move is made it must be retracted and something else played. In **Snaffle chess** variants however, it is allowed to capture the king if its player inadvertently exposes it to check.

SIMPLE CHESS VARIANTS

In orthodox chess, stalemate is now considered a draw. However at various times and places the rules of **Stalemate-win chess** or **Stalemate-loss chess** have been played.

Most games can be played in a *misère* form in which a win counts as a loss and vice versa. The aim in **Misère chess** is selfmate, a common problem requirement but not a practical game. In **Reflex chess** (B. G. Laws 1880) either player is obliged to checkmate in one if able.

In the **Losing game** the must-capture rule applies, kings are non-royal, and the objective is to lose all your pieces. A pawn may promote to king and a stalemated (i.e. deadlocked) player wins. In *Vinciperdi* (Italian losing game) a stalemated player loses. I'm not convinced this is chess at all!

8a. *Check Variants*

There are some interesting variants of the rules concerning check, but they do not generally provide much scope for over the board play, since the situations in which the rules come into play do not easily arise. I just mention some examples. In **Checkless chess** (played in Leipzig 1856) no player may check except to checkmate. In **Brunner chess** (by Erich Brunner *FCR* 1939) check of the opposing king is allowed as a defence to check of your own king. In **Pin chess**, also known as the Stevens Principle or Superpins (S.J.Stevens, *Westminster Papers* 1875) pinned men do not check (PMDNC). This is contrary to the orthodox rule.

In **Arrow chess** (GPJ *Rex Multiplex* 1985) a man that checks also guards the two cells of the king's field on either side of the checking line, thus forming an arrow-head. This makes mates a little easier with less force.

In **Extinction chess** (R.W.Schmittberger *Games* 1985) the king and queen are both royal, and any piece can become royal if it is the only one of its kind left on the board. The winner is the first to eliminate one of the six species of men (K, Q, R, B, N, P). Promotion to king is allowed, although if there are two kings on the board neither is royal. Thus a pawn promotion can rescue an endangered species (so long as there is still at least one other pawn on the board).

In **Three-check chess** (Soviet origin) besides the usual finishes, a player who delivers a third check wins. The third check can usually be achieved by a sacrificial attack, but using this strategy for the first two checks is liable to simply weaken your position.

8b. *Alternative Kings*

The orthodox king is the smallest leaper that cannot be stalemated by an opposing leaper of the same type (on a rectangular board). It might be worth investigating other double-pattern leapers with this property as alternative kings. These are: wazaba, caliph, prince, templar, alibaba and hospitaller. Three of these, prince, templar and hospitaller, are enhanced knights and thus very mobile. In **Alibaba chess** a king's moves are doubled in length, but this also confines it to a quarter of the cells of the board making it more catchable. (WK on the dark cells of the odd ranks, BK the light cells of the even ranks). In **Caliph chess** the king's diagonal move is doubled. This seems the most promising variant.

I'm tempted to replace the king with a caliph and the queen with an alibaba (or alibabarider) and come up with **Arabian nights chess!** but perhaps it needs some further exotica, like thieves.

In **Queen chess** it is the queens that are royal instead of the kings. In **Letzen chess**, misleadingly called **King chess**, (E. Letzen c.1940) the kings move like queens.

In **Cripple chess** (D.B.Pritchard 1991) the kings move only to capture. Thus there is no castling.

In **Sting** or **Scorpion chess** (GPJ *Chessics* 1976) the kings are Scorpions, that is Kings with added power of making Grasshopper moves. A shortest game to mate of K by K is 1.Kc3 Nf6 2.f4 Nc6 3.f5 Ne4+ 4.Kxh8. In this variant castling is not necessary.

In **Emperor chess** (Wayne Schmittberger *World Game Review* 1983) the kings (known as Emperors) are **Universal leapers**, able to move to any vacant cell, or to capture any opposing piece, except a guarded emperor. The emperors must therefore be kept guarded at all times. The piece apparently comes from the Japanese variant *Tai Shogi*.

SIMPLE CHESS VARIANTS

In **Vaulting Kings chess** kings in check have extra powers of movement. This makes them more difficult to hunt or to checkmate. A wide variety of different powers have been experimented with, such as knight, camel or equihopper.

8c. *Multirex*

We can have more than one royal piece, but this also makes possible several different types of checkmate. In **monomate** the aim is to checkmate any one of the royal pieces, ignoring the other. In **groupmate** the aim is to checkmate one or more of the royal pieces collectively. This may for example be accomplished by a fork where the checking piece cannot be captured, or by a skewer where moving one royal out of check places another in check. In **supermate** all the royals have to be checked and mated simultaneously, which may be a difficult task. (I introduced these multirex mate terms in *Chessics* #4 1977, with illustrations dating back to 1914, 1933 and 1875 respectively.)

Why is the king the only royal piece on the board? Shouldn't the queen also be royal? In **Royal family chess** the king and queen are both royal.

In **Double king chess** the queen is taken to be a second king. The second king castles in the usual manner, but reflected. Promotion to queen in these variants is not allowed, according to our standard rules.

The promotion rule has not always been formulated to exclude promotion to king (or to a piece of the opposite colour). *Stratagems of Chess* 1817 has: 'A pawn getting to the head of the board ... may be changed for any piece ...' However this conflicts with the rule that only royal pawns promote to royal pieces.

9. Combined Variants

Some combined variants that have been played successfully are:

A **Progressive Circe chess** tournament was organised by Patrick Donovan in 1989 (VC#1). Sample game: (Ray Brooks v. Patrick Donovan) 1.e3 2.d5, Qd7 3.Bb5, Qf3, Ke2 4.a6, ab(f1), Nc6,h5 5.a4, ab(a7), d4, h4, Nd2 6.Ne5, Qc6, Qxc2, Qxc1, Bf5, Bd3 mate.

Progressive Cylinder chess was played in AISE 1995.

Progressive Leo chess is recommended by Paul Byway.

Progressive Mutation chess is more popular than the non-progressive version.

Randomised Progressive chess (Malcolm Horne, VC #4 1990).

Berolina Grid chess (played in NOST according to Michael Keller VC #7)

Some sources consulted:

"A Guide to Fairy Chess" by A.S.M.Dickins 1969.

"Chessics" 1976-87 edited by G. P. Jelliss.

"Chess Variants" a cyclostyled 10-page booklet by A. J. (Jed) Stone 1982.

"Guildford C.C. Variants Day" a single page leaflet by David Pritchard with 14 variants, c.1990.

"Variant Chess" volume 1, issues 1-8, edited by G. P. Jelliss, 1990-92.

"The Encyclopedia of Chess Variants" by D. B. Pritchard 1994.

"Variant Chess" website: <http://www.mayhematics.com/v/v.htm> by G.P.Jelliss 2002

"The Classified Encyclopedia of Chess Variants" by D. B. Pritchard, edited by John Beasley 2007.

<http://www.fide.com/FIDE/handbook/LawsOfChess.pdf>, July 2009.

Abbreviations for publications: BCM *British Chess Magazine*, ECV *Encyclopedia of Variant Chess*, FCR *Fairy Chess Review*, VC *Variant Chess*.

SIMPLE CHESS VARIANTS

Index of Variants.

Advanced 8, Advanced pawn 8, Akenhead's 11, Alibaba 12, Alice 5, All-in 5, An-nan 6, Antipodean 7, Arabian nights 12, Arrow 12, Asymmetric 11, Avalanche 5; Backseat 3, Backward pawn 8, Balanced double-move 5, Berkelian 7, Berolina 8, Berolina-plus 8, Bichromatic 4, Billiard 4, Brunner 12, Bouncy 4, Bystander 3; Caliph 12, Captureless 6, Castling 5, Checkless 12, Chessgi 7, Chinese 11, Circe 6, Coin 9, Compromise 6, Coronation 10, Cripple 12, Cylinder 4; Double-guard promotion 8, Double king 13, Double-move 5, Double-move capture 5, Doubled-pawn promotion 8, Dynamo 7; Emperor 12, Excess 8, Extinction 12; Face-off 6, Falcon-Hunter 11, Fast-track 8, File-promotion 8, Fischerandom 3, Five-rider 10, Frankfurter 6, Free-capture 7, Free-for-all 5, Free-placement 4, Free-programme 4; Giving of odds 2, Grid 4, Guardian 3; Handicap 2, Hostage 7, Hunter 11; Imitator 4; Kamikaze 7, King 12, Knighted 11, Knight-relay 5; Leo 11, Letzen 12, Losing 12; Mad-cap 6, Madras 6, Malefic circe 7, Maritime 11, Marseilles 5, Maximummer 4, Medieval 9, Mecklenbeck 8, Me-so 11, Minimummer 4, Misère 12, Mobius 4, Monochromatic 4, Must-cap 6, Mutation 6; Nightrider 10, No-swap 6; Odds 2, Opting pawn 8, Optional replacement 6, Orthodox 2; Patrol 6, Pawn-snatcher's delight 8, Pin 12, Pocket-knight 4, Pocket giraffe 9, Prepared 4, Prince 10, Progressive 5, Promotion only to captured men 8, Promotion only to queen 8, Protean 6, Push 6, Push-off 7; Queen 12; Randomised 3, Rapid-play 2, Reflected 3, Reflex 12, Refusal 6, Reincarnation 8, Replacement 6, Reverse-chequered 2, Reverse-colour 2, Rider 10, Rifle 7, Rotary 3, Royal family 13; Scorpion 12, Screen 4, Sea 11, Shoot 7, Sidewise pawn 8, Ski 10, Skip 10, Slip 10, Snaffle 11, Sniper 11, Stacking 5, Stalemate-loss 12, Stalemate-win 12, Sting 12, Substitution 9, Superpawn 8; Thinktank 11, Three-check 12, Triple-guard promotion 8, Triplets 5, Upside-down 8. Universal leaper 12; Vaulting kings 13, Vinciperdi 12; Xray 5, XS 8.

(Names of individual pieces are not indexed.)

This booklet was prepared for a talk to the Hastings and St Leonards Chess Club on 21 August 2010.