Chapter 33
Other objectives of play

[This final chapter on two-player games considers objectives other than the capture of a king and the reaching of a fixed goal. A section at the end lists games whose nature is unknown or unclear.]

33.1 Blocking and annihilation : games with jump captures

Jeu Militaire (Proprietary game, d'Hautancourt, 1818). Map board; armies comprise 1 x General, 4 x Officer, Portable bridge, 12 x Soldier. General moves one or two squares as queen, officers as king, soldiers one square orthogonally, capture by draughts-leap. Aim is to render opponent immobile or decimate his army (general + one soldier loses). Bridges are used to cross indicated water channels. (Photocopy of booklet *Jeu Militaire Sur Un Plan Topographique*)

QuatrArmes (Proprietary game, c.1910). Claimed as 'more amusing than draughts, simpler than chess'. Board of 55 points equivalent to the black squares of a 10x11 chequered board (a1 black); each side has 2 aircraft, 3 cannons, 5 cavalry, 10 infantry; aim is annihilation. Infantry are draughtsmen in manner of move/capture, promote to aircraft; cavalry as Turkish draughtsmen (move one space straight ahead or sideways, capture by leaping), promote to cannon; cannon and aircraft akin to rook and bishop respectively. Capturing is compulsory. Array (ranks 1-4): CACAC, infantry (5), cavalry (5), infantry (5). (Photocopy of proprietor's rule sheet)

Chesica (Frederick Copley, pre-1930). Pieces are placed on black squares of 8x8 board: ranks 1/8 4xQ, ranks 2/7 4xR, ranks 3/6 4xB. Pieces have normal chess move, but one square only, in addition to that of draughtsmen. Capture as draughtsman or chess piece. Forward moves only. On reaching back rank piece assumes full chess powers but also retains right of jump capture. (*Chessmen*)

Checkers Chess [Parton] (V. R. Parton, 1950s). Usual board and set-up, but the king is a commoner and the object is to exterminate the opponent's men or otherwise leave him without a move. Non-capturing moves as in orthochess. Q, R, B capture by leaping over a single man (not necessarily on an adjacent square) and landing on any empty square beyond, K by leaping over an adjacent man and landing on an empty square immediately beyond. Pawns take as K but diagonally forward only. The knight is considered to move as R+B or B+R as preferred, so Ne4-f6 can involve a capture on e5 or f5 but not both. A succession of captures by the same man is permitted, but the men jumped over are not removed until the end of the turn. Capturing is compulsory, and the greatest possible number of pieces must be taken on a turn. [David gives a reference to 'Dix-sept Jeux de Dames Fantaisistes', which I haven't seen, and he gives two additional rules concerning promotion: a sequence of captures by a pawn ends on promotion, and promotion may be to king. The same title is used for chapter 50 of *Les Jeux de Dames Non Orthodoxes* by Boyer and Parton and this game appears as section XVII of this chapter, but these particular rules are not to be found there. They are of course entirely reasonable, and even if they do not appear in print they may well have been dictated by practical experience. Boyer and Parton also mention **Losing Checkers Chess**, which they describe as very attractive. The game **Chess-Checkers**, referred to in *Nostalgia* 189, would appear to differ only in minor detail if at all.]

Damate (V. R. Parton, 1961). Board 10x10, 20 men a side (2 x K, Q, R, B, 12 x P, no knights), array (a1-j1/a10-j10 and inwards) PBRQKKQRBP, 10xP. K, Q, R, B as in

Checkers Chess above. P as K but orthogonally or diagonally forward only (whether capturing or not), and a P moving across the central line into the enemy side or half is promoted (no apparent specification as to what). Capturing is compulsory, including multiple captures if available, and the aim is to take all the opponent's men; the K has no special role. (*Challenge and Delight of Chessical and Decimal*)

33.2 Blocking and annihilation : other games

Le Jeu de Stratégie, also known as **Military Chess** (Count A. C. de Firmas-Périés, 1808). The inventor's intention was to make chess, a war game, more realistic. The board is assembled from cubes with faces of different colours representing terrain features; maximum 40x66 (2640 squares), minimum 33x49 (1617). Pieces consist of infantry, cavalry and artillery. All pieces move as queens but over different distances (dragoons 12 squares, infantry 8 squares, mortars 6 squares etc). Hussars have the additional move of the knight. The game concludes either by annihilation of one side's pieces or by a 'peace treaty'. (Author's book *Le Jeu de Stratégie ou les Echecs Militaires*, second edition 1815, also *Le Palamède*, September 1846)

Atomic Chess [Taher] (Nassah Bey Taher, 1947). It was reported (*Chess*, December 1947) that King Abdullah of Transjordan had an atomic set, and the bey, when in London that year, confided to the author that the inventor of the game was in fact the king. (Taher may or may not have been following the ancient tradition of crediting the master with all things sublime.) An attempt to modernise chess. Board 12x12; each side has additionally 2 x Tanks and Aeroplanes. Tanks are knights which can take a second step in the same straight line (so if c3 is empty, Tb1 can move to c3 or carry on to d5); aeroplanes move like queens and can pass over any number of pieces but can only capture if there is a vacant square beyond the target piece. Pawns promote to atomic bombs which move like aeroplanes and can be detonated at the choice of the player when they destroy all men, friendly as well as hostile, within a radius of six squares. If the king is destroyed, the next highest value piece surviving replaces him. Aim is destruction rather than mate. The first to promote a pawn is almost certain of victory.

Dawson's Chess (T. R. Dawson as amended by C. A. B. Smith and R. K. Guy, c. 1949). Board 3 x *n*. Rows of pawns face each other with empty rank between. Capturing is compulsory so promotion is impossible. Last player to move wins. [Date added editorially. The game has acquired a major role in the branch of mathematics known as 'combinational games theory'. As originally conceived by Dawson, it was a problem in Losing Chess (*The Problemist Fairy Chess Supplement*, December 1934) with the usual Losing Chess objective of leaving yourself without a move. Dawson thought he had found a systematic solution specifying the winner for all values of *n* and showing how to force the win, but by the time he came to write *Caissa's Wild Roses* in 1935 he realised he had made an error, and to the best of my knowledge no such solution has yet been discovered. Smith and Guy proposed a simpler version in which the last player to move won, and solved it for all *n*. The game therefore became, and may still remain, the simplest example of a game which has been completely solved under 'normal' rules (last player to move wins) but remains unsolved under 'misère' rules (last player to move loses). For further discussion, see *Winning Ways for your Mathematical Plays* (Berlekamp, Conway, and Guy, second edition 2001-4). Dawson's game with *n* pawns on each side can be shown to be equivalent to a simpler game in which the players start with a single row of (*n*+1) objects and the move is to remove two adjacent objects, and it is usually presented and discussed in this form.]

An-Qi (origins unclear). Xiangqi variant. The pieces are reversed and mixed, then one each is placed face down on the 32 squares of a half-board. A player on turn either exposes a piece or moves an exposed piece. All pieces move one square orthogonally. Pieces only capture men of the same rank or below, the sequence being king-chariot-horse-cannon-

elephant-guard-pawn-king (only a pawn can take a king). Annihilate the opposition to win. (*Xiangqi Review*, volume 2 number 5)

Explosion Chess (origins unclear). Usual array and moves, but no displacement capture. When a move is completed, all men then under attack from the man moved are captured. If there is a simultaneous mutual attack, the attacker is also removed. The kings are without royal powers and the object is to annihilate the opposition. (Addison, *100 Other Games to Play on a Chessboard*)

Pentaplane Chess (Proprietary game, Geo Games; George Marino, 1986). Five 5x5 boards arranged vertically. Two players, each having 2 x R, 2 x B, 1 x N, 5 x P. No kings: object is to annihilate opposition. Pawns promote to Presidents (=Q). White men set up on bottom board, Black on top; vertical movement between boards. According to Jochen Corts, plays well with interesting strategy. (*Die Pöppel-Revue*, March 1989)

Latrel (Proprietary game, Millenium 2 Games; Richard Morgan, 1993). Board 8x8; 8 attackers per side, 2 x Trident (move as B, capture by occupying vacant square immediately beyond victim), 2 x Warrior (ditto as Q), 4 x Sabre (ditto as R), and 8 defenders (move one square orthogonally, cannot capture, promote on back rank to previously captured attackers). Array (a1-h1/a8-h8 and inwards) SSTWWTSS, 8xD. Multiple captures permitted as in draughts, objective is to capture all the opponent's attackers. An advanced version replaces two of the defenders by blockers with additional powers. (Proprietor's instruction booklet) [Text revised. The cover of the instruction booklet announces the game as 'The ultimate lateral thinking board game' and on the very next line says '8 years - adult'!]

The Game of Nemoroth (Ralph Betza, 2002). A complicated game in which the ordinary men are replaced by Basilisks (petrify friend and foe alike), Ghasts (cannot be approached, and cause men within their ambit to flee), Leaf Piles (engulf anything they land on, and leave mummies of hideous and terrifying aspect), Go Aways (can make adjacent pieces move away), Wounded Fiends (move like rooks, but ooze copious amounts of fetid ichor which drench every square they land on or cross), and Humans (who seem to have a fairly limited outlook on life but may eventually promote to Zombies, which feel no fear, can destroy all other men, but are dissolved by ichor). The game is won by leaving the opponent without a legal move. Published on the Chess Variant Pages, and received with apparent enthusiasm. [Text editorial]

33.3 Point scoring

The Game of Ramparts (1893). Board 11x11; 11 squares on each side are marked and represent ramparts. Both sides start with 11 men on their own baselines. All men move and capture as pawns, including the initial double-step. Pawns have increased powers when on own ramparts, diminished powers on opponent's ramparts. Pawns reaching 11th rank do not move again. When all moves are exhausted, the winner is decided by a points system. There is said to be an infallible draw for one player (presumably the second, by imitating White's moves). 'Players', say the rules, 'should have a mutual understanding not to play like this.' (Sheets or booklets identified only as 'Bodleian Library 38491 f.6(13)' and 'British Library CUP 900 g.1')

Numericron (Bruce Trone, 1986). After making his move, a player totals the number of his opponent's men under attack. These are his attack points for the turn. A check earns a bonus of 5 points and checkmate (which does not end the game, the king being simply removed from play) a bonus of 10. Turn points are accumulater and the winner is the player who has maintained an agreed lead (say 20 points) for five consecutive turns or has the highest total after 30 moves have been played. (Inventor's rule sheet)

Benighted (Maureen Hiron, 1987). Board 5x5. Each player has 11 markers of his own colour and two knights which start initially on a3/e3 (White) and c1/c5 (Black). The object of the game is to capture more squares than your

opponent. A player moves one of his knights either to a vacant square, in which case he puts his marker on it, or to a square he already owns, which includes his two start squares. A player may never move to a square owned by an opponent, nor to a square attacked by an opponent's knight whether owned or not. The first player to control 13 squares is the winner. (Information deriving from personal correspondence)

A related game is sggested in *Brain Muscle Builders* by Marco Meirovitz and Paul Jacobs. A white and black knight are placed at opposite corners of a 5x5 grid and markers are placed on the remaining 23 squares. Aplayer landing on a square with a marker on it takes it. A knight may not move to a square attacked by the opponent's knight. First player to collect 12 markers wins.

Re (Reiner Knizia, 1993). Board 5x5, empty at start of play. The players have the usual eight pieces plus two pawns. The K can be captured like any other piece and pawns do not promote (so P on 5th rank is immobile). White starts and puts one of his men on any empty square when Black does likewise. From now on, a player on turn may either (1) enter a man on any empty square; or (2) make an orthochess capture on the board; or (3) pass his turn, but only if he has entered all his men. Bishops may be placed on the same colour. Notice that no man may move except to capture.

The game ends when one player loses his last man or both players pass consecutively. In the latter case, the winner is the player whose remaining men have the higher point count (K=Q=3, R=B=N=2, P=1). A variant, **Re-2**, requires all men to be entered before any capture is made. Both games are fast and dramatic. Black appears to have a slight advantage. (Inventor's rules pamphlet, also *Spielbox*, April 1994)

Monochrome Chess (Proprietary game, Looney Industries; Andrew Looney, 1996). Usual men and array but pieces are all of the same colour. A man is controlled by the player in whose half of the board it stands. Thus after e4-e5, the pawn changes sides and reverses direction. When you capture (by definition, in the opponent's half) there can be no recapture as the piece has changed sides. You may not immediately reverse an opponent's move. The king has no royal powers but can castle. The men are allocated points and the object is to have the most points (in pieces captured) when the game ends, which is usually when the players agree or when one half of the board is empty. Values: King=10, Queen=8, Rook=5, Bishop=4, Knight=3, Pawn=1. A related game **Martian Chess** is described in chapter 38. (Proprietor's rule sheet, *Variant Chess* 39)

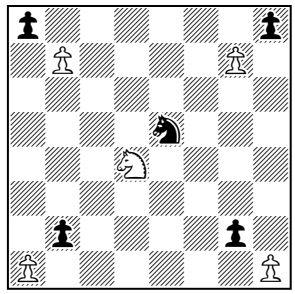
Proteus (Proprietary game, Steve Jackson Games; Francis K. Lumière, 2001). Board 8x8. Sixteen cubic dice, eight each of black and white. Symbols are identical on all dice: 1 x Q, R, B, N, P, triangle (notice there is no king). Pieces and their values are Q 6 points, R 5, N 4, B 3, P 2, triangle 0. To start, the dice placed on the black squares of the first two ranks, pawns uppermost. The turn player moves a man and rotates a second man up or down one step according to point value. The triangle is a block; it cannot move or be captured. Capture by displacement. Two unique rules: pawn has two-move option on any starting square even if it has previously moved, and the queen can be captured (stabbed in the back) by any hostile piece occupying the square immediately behind it. Game ends when one player is reduced to a single man. Player with the most points is the winner. Amongst variants suggested is **Trade-off**, in which a player can forgo move by rotating any die two steps up or down. (*Variant Chess* 43)

33.4 Achieving a pattern or alignment

Bingo Chess [Connect-Four]. The game Connect-Four, which has no connection with chess, has been marketed under this name.

Twixt (Proprietary game, Avalon Hill; Alex Randolph, 1972). For 20 years one of the world's top-selling strategy games, Twixt has but one link to chess: the aim is to deploy pegs that will eventually be linked across the board in a succession of knights' moves. [Information presumably deriving from a set in David's game collection]

Chessboard Morris (Peter Fayers, 1976). An attempt to enliven alignment games by adding a chess element. Board 8x8, N and 4xP a side :



Pawns move as kings; no capturing. Object is to manoeuvre four of one's own pieces adjacent to one another in a straight line, orthogonal or diagonal. A well-balanced game. Can be played with other pieces instead of knights. Bishops will draw easily unless permitted to leap; queens make for a very complex game. (*Games and Puzzles* 51)

Knights And Crosses (Trevor Truran, 1981). The players agree a board of any dimensions (an irregular board makes for more interesting play). Each player has a knight and a pile of markers of his own colour. First player puts his knight on any square, second player does likewise on any vacant square. Moves alternate, players putting their markers on vacated squares. Knights may be moved to vacant squares or squares containing their own markers. First player to get four markers in a row wins. (*Games and Puzzles* 81)

Big Horse Chess (Veli Toukomies, 1986). Board 8x8; each player has eight knights which move and capture as in orthochess. The object is to move one's own knights so as to form squares of any size (e.g. a1/a8/h8/h1 or d4/d5/e5/e4). A piece can be part of more than one square. The game ends when one player has no more moves or further play is purposeless. The winner is the player with more squares, and if squares are equal then the player with more pieces. If again equal, the game is drawn. An earlier version also scored three points on a line. (Manuscript notes presumably deriving from personal communication)

Chess Addresses (Veli Toukomies, 1988). Each player sets up his opponent's men at random (i.e. White sets up Black's men on ranks 7 and 8). Each payer in turn moves one of his own men in a straight line without touching any other man or the sides of the board. Moves take no account of the powers of the various pieces. If a block (another man or board edge) is reached, the piece being moved stops on the nearest square. The object is to be the first player to assemble his own men in the orthochess array. (Author's rule sheets)

33.5 Other objectives

Rhythmomachia or **Rithmomachy**, also known as **The Philosophers' Game** (12th century). The 'battle of numbers' is a medieval strategy game probably inspired by chess though not strictly a variant. Rhythmomachia vied with chess as the pursuit of the wise and for several centuries appears to have occupied the intellectual high ground in the way weiqi was considered superior to xiangqi in China. Played on a double (8x16) chess board, White has 29 men, of which six form a pyramid, and Black 28 men (pyramid of five). The men are numbered tiles in three shapes which determine movement. The pyramids are made up of men of all three shapes. The W pyramid comprises 1, 4, 9, 16, 25, 36 (91) and the B 16, 25, 36, 49, 64 (190). Capture is by equation (equality, adding, subtracting etc.) and the object is to take the pyramid which can be captured as a unit or piece by piece. When this is achieved, the player proceeds to the triumphs in which men are required to be arranged in certain numerical progressions. The pyramids move up to three squares in any direction, the individual pieces having more restricted moves. The link to chess is established by privileges that permit movement as a 2-1 leaper (knight) or 3-1 leaper. There are two main forms, an early version and a later one to which Selenus devotes a whole chapter. Many minor rule variations have been recorded. The game died out in the 18th century.

Rhythmomachia has an extensive literature

and has been researched in recent years by Boutin (*Jeux et Stratégie* 26), Lewin (*Games and Puzzles* 16) and others. It is outlined in a modern collaborative work, *Rhythmomachia* (Illmer, Gädeke, Henge, Pfeiffer, Spicker-Beck, 1987), and in a recent research paper, *Rithmomachia* (Stigter, 1990). There is a proprietary version, **Rhythmo** (Quantum Games), with simplified numbers, that is essentially the same game.

Bottle Chess. Name used by Thomas Hyde to describe the Chinese game of backgammon.

Wuterich's Game (Proprietary game, Emil Wuterich, 1899). Board 9x9 with a further rank of five positioned centrally at either end. Each side has 26 pieces comprising the letters of the alphabet. The vowels are arranged IAEUO on the extra rank, respectively a knight, queen, bishop, king, and rook. The consonants are arrayed in order B-L and M-W on the next two ranks, with XYZ spaced evenly in front. Consonants move one square forwards or sideways and can only capture straight ahead. The game is won by checkmate or the king (U) gaining the back rank of the enemy's camp and there, with pieces of either colour, spelling out a pre-arranged five-letter word which, of course, has to contain a U. A player forming a word of four or more letters orthogonally or diagonally, the men being of either colour, can claim back a captured man. (U.K. patent 1239 of 1899)

Monopoly Chess (Michael Solomon, 1970). Chess and Monopoly played simultaneously, the turn player deciding which game he wishes to move in. The aim is to be the first to win either. There is some cross-fertilization but it seems that few players have been tempted to pass Go. (*Neue Chess* 12)

Pool Chess (James A. Gutzwiller, Michael Juhasz, David Moeser, 1970). Coupling of chess with 8-ball pool. The chessboard is set up in the middle of a pocket billiards table. Five chess moves each, then White breaks; when White misses, Black plays; when he also misses, five more chess moves. Various rules control the interactions. First to win either game wins. (*Neue Chess* 7)

Chessplexity (Dave Thomas, 1989). Codebreaking game. One player places K, Q, R, N, B on a 6x6 board; the other player nominates squares and the first player then provides certain information. Object of second player is to deduce placings in minimum time. Roles are then reversed. **Detective Chess** (Gerry Quinn, reviewed on the Internet in 1999) is a computer version using an 8x8 board. (*Games Monthly*, January/February 1989, also *Nost-algia* 347 and later)

Chebache (Proprietary game, Pardee Games; Scott D. Pardee, 1997). Claimed to be a marriage of chess, backgammon and draughts (checkers), hence the name, but basically a backgammon variant. The main thrust of the game is to bear off all pieces as in normal backgammon, but one of the pieces is a king, and if the opponent manages an inverted V-formation facing it the king is checkmated and the game is over. The chess element is however minimal. (*Variant Chess* 42)

33.6 Games with different objectives for each side

Siege Chess [von Pillsach] (Senfft von Pillsach, 1820). 160-square board (8x8 with four 8x3 extensions) with citadel covering an area of 6x6 squares. The game is a precursor of the Siege of Paris (board 16x12, also 6x6 citadel), with one side besieging, the other defending. (Faidutti, also *Le Palamède*, September 1846)

War Chess [Richardson], also known as **Game of Battle** (Proprietary game, Col. Charles Richardson, 1866). Played on a map board with infantry, cavalry and artillery. One side is defending a city and the other a supply train, the capture of either ending the game. (*Chess Player's Magazine*).

Burglar and Policemen (T. Sturgeon, 1890). Board 5x5; all pieces are knights. One side has the Burglar (initially on c3) and the other the Policemen (on a1, c1, e1, a5, c5, e5). The burglar moves first; no capturing; the burglar loses if he cannot move (there appears to be no rule saying how he wins). A forerunner of

several such games. (U.K. patent 514 of 1890) [The game is mentioned under 'Patents' in the appendix. The reason for the absence of a rule saying how the burglar wins appears to be that he cannot; if the policemen play properly, they can always trap him. They can do this even if there are only five of them, whatever the starting position and whoever has first move.]

Prairie (Proprietary game, Pelikan; Alex Randolph, 1975). Board 7x11. Game in which 11 buffaloes (pawns) face four dogs (queens) and an Indian (king). The dogs can only block, not capture. The king captures by displacement. The aim of the buffalo player is to get one piece to the end rank, that of the Indian player to paralyse the buffaloes. Two rivers on the board may not be crossed by the Indian player. Game slightly favours the buffaloes. (Inventor's rule sheet)

Rugby Chess [Beasley] (John Beasley, 1979). Board 8x8; each side has one or more men, and there is a ball. White has the ball and his object is to carry it to the 8th rank. Black wins if he can capture the ball-carrier (he may not capture another man), block White, or repeat a previous position. There are no draws. White on turn can move the man with the ball one square diagonally in any direction, or pass the ball backwards to the second man. The man without the ball cannot move. The Black man also moves one square diagonally and is immune from capture. The natural game is two-against-one, all on the back ranks. Possibilities are limited and have been analysed by the inventor. (*Chessics* 18)

Peasants' Revolt [Koch] (Karl Koch, 1987). Dice game. White has a single knight at g1; black pawns on b7, c7, d7, e7, f7, g7, equating to 1-6 on the dice. Black throws two dice and moves corresponding pawns (pawn-2 permitted; if double thrown, pawn is moved twice). Knight may not move to an attacked square; pawn blocked by knight forfeits its move. Aim for White is to crush the revolt by capturing all the pawns, for Black to get a pawn to end rank when, if it cannot be captured on next move, the revolt succeeds. Koch offers some alternative rules. (*Spiele für einem Allein*)

33.7 Games of unclear or unknown nature

Limb Chess (10th Century). Board 7x8; 6 pieces a side named after the senses ('limbs') and the heart. Rules unknown. (Murray)

Celtic Chess, also known as **Fidchell** and **Gwyddbwyll**. An ancient game, believed to have died out about 1000 A.D. Wrongly referred to by some writers as a form of chess. Boards of many sizes are known: 7x8, 9x10, 10x13, with the 8x8 board being the most common. Fidchell is also the name of a 1990 proprietary game played on a circular board, imaginatively created from early Celtic sources by Nigel Suckling. [In the first edition, David referred to 'fragments of literature quoted by Murray, Forbes and others' from which it appeared that the game was 'either the Roman latrunculi or a modification of it', but while Forbes does indeed conjecture such a link Murray does not, and I have to say that I find it implausible. However, all that matters here is whether the game was a form of chess, and everyone seems to be agreed that it wasn't.]

Merlaro (16th century). Game on 8x6 chequered board (a1 white) mentioned, without rules, in *L'Institutioni Oratorie* (Venice, 1558). [In forwarding a photocopy of the relevant page, David's correspondent wondered whether the game might have been a chess variant, but there seems to be no evidence of this.]

Chemical Chess (Toyohiko Kagawa, 1940). Played with 92 men. The patent states that the game is 'Designed to inculcate an understanding of the order of the universe and hence the spiritual and systematic nature of the divine order'. (*Chess*, December 1941)