GET OFF, MOVE ON or STAY PUT!

By Chris Tylor

An investigation into chess variants arising from different effects of a move to an occupied square

Version 4: October 2020

Outline of Contents.

Introduction.

In the late 1970s, I circulated among the members of the now defunct *Fairy Chess Correspondence Circle* some ideas and illustrative problems for variants arising from different effects of a piece moving to an occupied square. By 1987, many of these ideas and problems had appeared in a series of articles in George Jelliss's magazine *Chessics* (issues 10-12, 17 and 29/30) under the name of 'Chess Reactions'.

Encouraged by the response to these articles, I began work on a more detailed account to be published as one of George's *Chessays*, but abandoned it when this hope of publication failed to materialise, and when the appearance of the first edition of David Pritchard's *Encyclopedia of Chess Variants* (henceforth referred to as '*ECV*') revealed that several of the supposedly new variants already existed in one form or another. However, I later returned to work on the account on my own, completing a first version of it in February 2000. Its introduction acknowledged the contributions of others in the past, thanking especially Erich Bartel, W H Duce, George Jelliss, Cedric Lytton, Tom Marlow, Frank Moralee, Roger Musson, Mark Ridley and Ivor Sanders, who had between them provided much information and encouragement, made many suggestions and tested many problems. In it, I noted the variants described in *ECV* but did not not attempt to bring my own ideas into line with them.

The first version of my account was in the form of a 24-page A5 booklet. It did not produce the response I had hoped for, and I soon lost interest in it, switching my attention first to other fairy variants and then to orthodox helpmates. However, my interest in Fairies began to revive in the mid 2010s (thanks largely to Andrey Frolkin and Ravi Shankar, with whom I have been privileged to collaborate on different projects), and in February 2014 I decided to revise the account, rewriting the text wherever it seemed necessary. Further revisions in March 2017 and October 2020 followed, the general aim being to produce something to be read on-screen rather that printed out. This involved switching word-processor programs from Lotus SmartSuite 97 to Microsoft Word 2000, and later changing from Linares font diagrams (which not everyone might be able to read) to the more accessible bitmap ones. These changes allowed me to use to a more open and hopefully more readable layout, and also to include a few additional problems that had originally been left out for space reasons (although I retained most of the labelling system of the first version); they also involved abandoning some explanatory part-board diagrams, besides changing the way of showing positions with more than one piece on a single square. In making these revisions I did not attempt to update the set of problems by composing new ones or by locating and including any that might have been published since 2000, the main exception being the replacement of two Bicolores helpmates that computer-testing showed to be cooked. (Unfortunately the website which I used to produce my first diagrams later closed down, so that my two new diagrams on page 5 do not match the earlier ones.)

The present version of this account contains 105 problems belonging to 17 distinct variants (4 of them established ones, the others my own) plus another 12 more miscellaneous problems in an appendix. Almost all the problems have positions that are 'fairy-legal' from the normal game array; 76 of them are CT originals/corrections of variable quality, some being mere sketches to illustrate possibilities. Only a few are computer-testable, but although the majority have been looked at by someone other than myself, in the very nature of things it is likely that some will prove to be unsound. It is hoped that any defects in the problems will neither detract too much from their interest nor discourage composers from tackling some of the variants described.

Reactions and Variants.

In the series of *Chessics* articles, variants were defined for almost every possible combination of effect and colour applicability; over thirty such variants were described, each being illustrated with one or two problems. In this account, I concentrate on the 17 variants that seemed at the timeof first writing to be the most promising ones, increasing the number of illustrative problems accordingly and generally adding 'fool's mates' as examples of characteristic play. (These fool's mates are not necessarily the shortest possible, and are seldom if ever unique.) I attempt to give complete rules for each variant covered, but where appropriate suggest possible modifications, so that my rules should be regarded as being merely experimental.

To aid the classification and description of the following variants I introduce some technical terms, the majority proposed by George Jelliss and used in the *Chessics* articles. Thus a move by a piece (the '**active piece**') to a square occupied by another piece (the '**passive piece**') will result in an effect called a '**reaction**', of which normal captures are a special case. Any particular type of reaction will normally be taken to apply to all pieces, though kings sometimes need special treatment.

The reactions considered here can be divided into three general classes, the names of which I have linked with the title of this account. The three classes are: '**destructive**', where one or both of the pieces involved disappears from the board ('gets off'), '**transitive**', where one of the pieces moves to another square as part of the same turn of play ('moves on'), and '**combinative**', where both pieces somehow remain on the same square ('stay put'). Other possible reactions include modified captures in which a capturing piece changes colour or powers (e.g. Andernach) or in which a captured piece is reborn on another square (e.g. Circe), but these are not considered here.

In all my three classes, the specific reaction involved can apply to pieces of either or both colours. If active and passive pieces are of the same colour, the term '**auto**' will be used both for the reaction itself and for the variant in which it occurs. The term '**oppo**' will be similarly used where a characteristic reaction only applies to active and passive pieces of opposite colour, while the term '**free**' will be used for a variant where both auto- and oppo-reactions can take place. A complication here is the possibility of normal captures; unless otherwise indicated, these can be taken to be freely allowed as an alternative to other possible oppo-reactions.

A. Destructive Reactions.

These are the most straightforward of all reactions, and involve the simple removal of pieces. There are three general possibilities:

- removal of the passive piece (a **capture**, written normally as 'x'),
- removal of the active piece (here called a '**surrender**' and written as '*'),
- removal of both active and passive pieces (here called a '**cancellation**' and also written as '*').

The auto, oppo and free forms of these three reactions could give rise to at least nine different destructive variants; however, auto and free surrenders and cancellations are discounted on the grounds that they combine two unconnected illogical elements (though see problems Z9 and Z10 in the appendix).

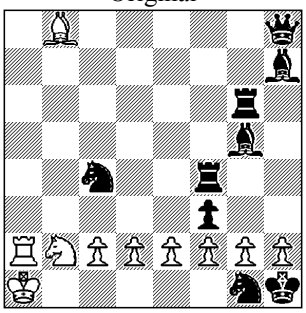
In all these variants apart from **Oppo-Capture Chess –** which is none other than normal chess! – pieces are in danger of removal on moves by their own side, and kings may need special treatment. Some variants treat kings as normal, but in others they are 'sensitive' and regarded as being in check if a removal move is possible, i.e. are subject to '**auto-check**' as well as to normal '**oppo-check**'. This concept of **sensitive kings** is an artificial one going against the normal idea of mate in that the hypothetical king-capture following a mate could not be forced and can never actually take place; it nevertheless enriches the play of the variants that use it. Some sensitive king variants have the potential defect is that in the normal **game array** both kings are in auto-check from their queens. *ECV* notes that the originators of the concept had solved this problem by interchanging Qs d1/d8 with Ss b1/b8. My solution (incorporating a suggestion by Mark Ridley) keeps the normal array by using the analogy of the right to castle being lost if either the king or the rook has moved; it stipulates that auto-checks do not come into operation until either the king or the potential checking piece has made a move (other than castling itself, which does not in itself result in auto-check). Thus with wK and wR previously unmoved and no other pieces within range, Kf2, Rh2 or 0-0 could be played, but not Kd1, Kf1 or Rg1.

A1. Oppo-Cancellation ('Kamikaze') Chess *(four problems).*

This is considered first as being a well-established variant derived from the individual pieces invented by B G Laws in 1928 (though the name 'Kamikaze' was not used until 1965). In it, kings capture and are checked normally, but all other pieces disappear from the board when capturing – i.e. are cancelled; this means that legal positions are limited by the inability of pawns to leave their original files. (The alternative 'total Kamikaze' form, not considered here, in which kings are also subject to cancellation possibilities, further limits legal positions to those with equal numbers of black and white pieces). The normal fool's mate works in this variant; a Kamikaze mate is 1.e3 g5 2.Qh5 ~ 3.Be4 ~ 4.B*f7#. An interesting tactical point is that occupying a square threatened by an enemy piece may defend against the threat. This variant is now supported by the solving programs Popeye and Jacobi (and probably by other also). Note that the problems given here are not a representative sample of recent work, and I am quite unjustified in including one of my own among them!

A1.1 CT

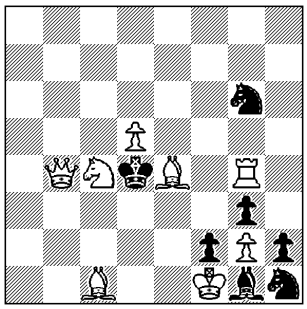
Original



Series-H#7 C?

A1.2 R Ruppin

The Problemist Nov 1983

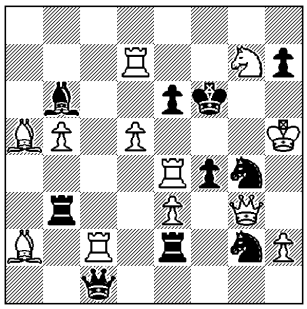


S#4 C+

A1.3 A Davaine

1st prize *La Clé* 1970

version P Trillon

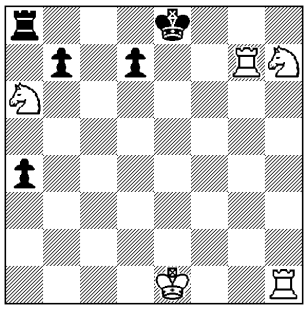


#2 C+

A1.4 H Schiegl

Special Mention

La Clé 1970



#2, (b) –bPd7, (c) +bSa3

A1.1 shows a straightforward series of cancellations to clear the second rank for the mating move. It could not be computer-tested completely, but is C+ from move 3 onwards.
1.f*e2 2.R*f2 3.B*d2 4.R*g2 5.B*c2 6.Q*h2 7.S*b2 Rh2#.

A1.2 has a quiet key leading to five defences by the free bS, after each of which the wS first moves parallel to this bS and then forces it by a check to eliminate itself, allowing a final cancellation to clear the mating square.
1.Bg5! Sh8/f8/e7/f4/h4 2.Sd6/b6/a5/b2/d2+ Ke5 3.Sf7/d7/c6/f3/d3+ S*S 4.R*g3 Sg3#. (Other defences lead to short mates.)

A1.3 has a cancellation key move unblocking e6 for the threat, with six cancellation defences on e3 which in turn allow a variety of mates. 1.d*e6! (threat 2.Re6#) Rb*e3/B*e3/e3/S4*e3/S2*e3/Q*e3/Se5 2.Rf7/Bd8/Qd6/Qg5/Qh4/Rc6/Qg5#.

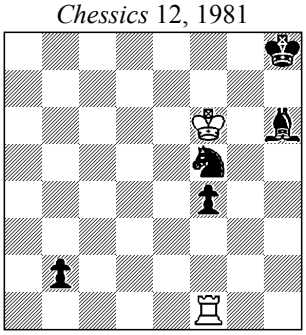
A1.4 is a castling retro. In (a) there are equal numbers of Black and White pieces, so neither K need have captured, allowing 1.0-0! (threat 2.Rf8#) 0-0-0 2.Rc1#.
In (b) Black has one piece fewer than White, which could only result from a normal capture by the wK, so that White cannot castle; therefore 1.Rf1! (threat 2.Rf8#) 0-0-0 2.Rc7#.
In (c) White has now one piece fewer than Black, so that the bK must have captured and cannot castle; therefore 1.0-0! ~ 2.Rf8#.

A2. Free-Capture Chess *(four problems)*.

Two established variants allow auto-captures as well as normal oppo-captures. The **'Bicapture'** form (Romer Bedoni, France, 1958) applies the free-capture principle equally to all pieces, kings being sensitive as described above. However, the strangely named **'Reform'** form (L Tabi, Hungary, some time before 1971) excludes kings from auto-capture, making checks normal; it appears to be the less interesting of the two. In both, the possibility of auto-captures increases the general number of available moves, but tends to blur the distinction between White and Black which is so vital to chess; it also means that squares cannot be blocked, thus making mating positions hard to construct. A Reform fool's mate takes 3 moves; 1.Kxf2 Qxd7 2.Kg3 ~ 3.Kh4 Qg4#; however, applying the game-array principle described above to the Bicapture form allows a fool's mate even shorter than in normal chess; 1.Sf3 Kxf7 2.Se5# (the bK, having moved, would be in auto-check if it moved again). The Bicapture form is now supported by the solving program Jacobi (and possible by others also).

A2.1 CT

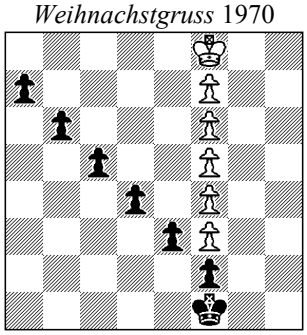
Chessics 12, 1981



'Bicapture', H#2, 2 solutions
C+

A2.2 H Schiegl

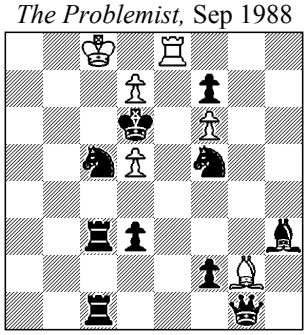
Weihnachstgruss 1970



'Bicapture', H=5
C+

A2.3 A Frolkin and L Lyubashevsky

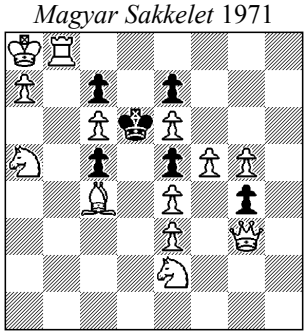
The Problemist, Sep 1988



'Reform', H#2, 2 solutions

A2.4 G Bakcsi
2nd prize

Magyar Sakkelet 1971



'Reform', #2

A2.1 includes both auto- and oppo-captures as well as both auto- and oppo-checks. The two solutions are not very well matched – the second having started life as a cook! 1.Sxh6 Ra1 2.bxa1B Kg6#. 1.Bxf4 Rxf4 2.Se7+ Rh4#.

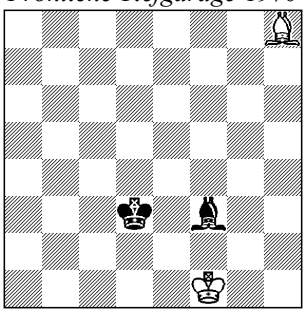
A2.2 shows a light-hearted series of auto-captures, in which the wK's route is determined by the need to avoid auto-check. 1.axb6 Kxf7 2.bxc5 Kxf6 3.cxd4 Kxf5 4.dxe3 Kxf4 5.exf2 Kxf3=.

A2.3 shows a Reform AUW with reciprocal promotions with and without auto-capture. However, of the four pieces auto-captured, only the wR has a separate positive function in the alternate solution. 1.fxg1B d8S 2.Bxc5 Sb7#. 1.f1R dxe8Q 2.Rxf5 Qe7#.

A2.4 was reported by W H Duce as being honoured in a 'Reform' tourney in which the other major awards went to studies. All the moves are auto-captures, resulting in a star-flight, but several of the pieces (including the wQ) appear to have no other function than to be so captured. 1. Sxg3! (waiting) Kxc7/Kxc5/Kxe5/Kxe7 2.axb8Q/Sxe4/Sxc4/Sxf5#.

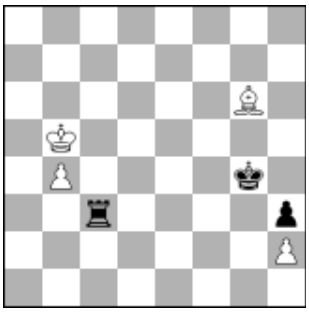
A3. Free-Check Chess ('Bicolores') *(six problems)*.
This variant (invented by Gabriel Authier, France, 1958 – though the name 'free-check' is mine) applies the free-capture principle to checks but not to actual captures, making it the complete opposite of the Reform variant, and is in effect normal chess with sensitive kings. It thus avoids the disadvantages of the two Free-capture variants, and to me seems more interesting and promising than either of them (in spite of not strictly being a 'reactions variant' at all!). With the above game-array rules the standard fool's mate (1.f4 e6 2.g4 Qh4# with variations) still works in it, but there is also 1.f4 Sf6 2.Kf2 Se4# (the wK being now liable to auto-check). A more complex example is that after 1.e4 e5 2.Bc4 Sc6? White has a *forced* mate by 3.Bxf7+ Kxf7 4.Qh5+ g6 5.Qf3+ Sf6 6.Qf6#. This variant is now supported by the solving program Popeye (and probably by others also). A short account of the variant, written by Petko Petkov, appeared in *The Problemist Supplement* of September 2019.

A3.1 E. Bartel, *Caissas Fröhliche Tiefgarage* 1970



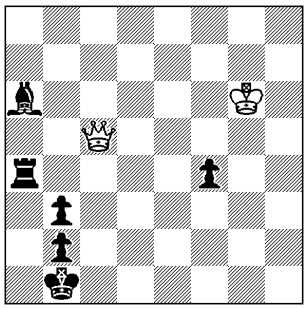
H#2, duplex C+

A3.2 M Cailaud 3-4 prize Andernach TT 2009



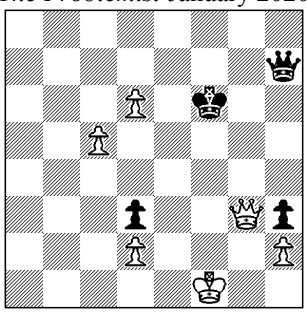
H#4½

A3.3 H. Schiegl *Main-Post Silv.* 1970



#2 C+

A3.4 CT F3556 *The Problemist* January 2020



#2 C+

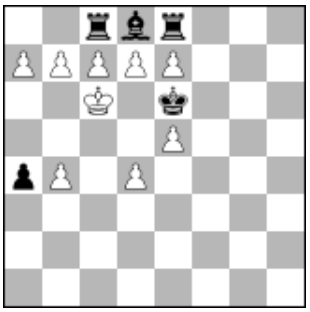
A3.1 is a simple helpmate, showing the mated side's bishop guarding and blocking squares, while the other bishop gives the fatal check. Black: 1.Kd2 Kg1 2.Ke1 Bc3#. White: 1.Bd4 Bg4 2.Bf2 Bh3#.

A3.2 is another helpmate demonstrating a superb double reciprocal realisation of the "Bicoloured Indian theme" using only two pieces, which create first a bR/wB battery and then a wB/bR battery. 1…Ba2 2.Rb3 Kc4 3.Rf3+ Kd4 4.Rf8 Bf7 5.Kf3 Bh5#. (This problem was taken from the Petkov article to replace an unsound CT helpmate in my first document.)

A3.3 is a directmate with a threat in which the mating piece is 'guarded' by an enemy pawn, and Grimshaw variations in which the interfering piece cannot block the final check without giving check itself. The key avoids a later white auto-check, and there are thematic tries 1.Kf6/f7? Bc4! and 1.Kg7? Rc4! 1.Kh6! (threat 2.Qc2#) Bc4/Rc4 2.Qf5/Qg1#. (This problem was quoted both in the Petkov article and in my first document!)

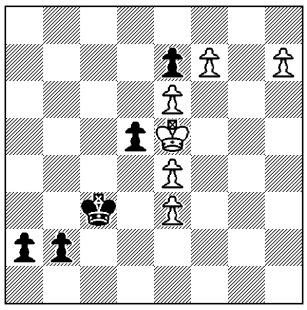
A3.4 has variations in which the bQ can only take squares away from her own K, while the wQ mates on what would normally be doubly-guarded squares. It shows that in this variant a piece strong in attack can be poor in defence.
1.d7! (waiting) Qxd7/Qg8/Qh5/Qe4/Ke6 2.Qg7/Qg5/Qe5/Qg6/Qd6#. (This problem was an original in my first document, but later published after the appearance of the Petkov article.)

A3.5 CT F3566 *The Problemist* March 2020



Series auto-stalemate 7

A3.6 R. Bedoni *La Clé* 1970



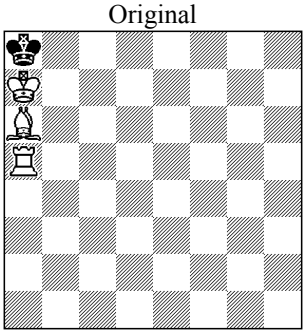
H==4 C+

A3.5 is based on the same K/Q geometry as was the previous problem. It shows White stalemating himself by queening four pawns – a situation inconceivable in normal chess! 1.a8Q 2.Qa7 3.bxc8Q 4.Qcb8 5.cxd8Q 6.Qda5 7.d8Q auto =. (This problem replaces an unsound version of this theme from my first document.)

A3.6 is an allumwandlung, with the four promotions determined by quite different factors. Only a wQ on f8 could reach c4 without checking on the way, only a wS could not move from h8 without auto-checking, while only bR and bB on b1 and d1 could set up an 'autopin' to complete the double-stalemate. 1.b1R f8Q 2.Rb2 Qf1 3.a1B Qc4+ 4.dxc4 h8S==.

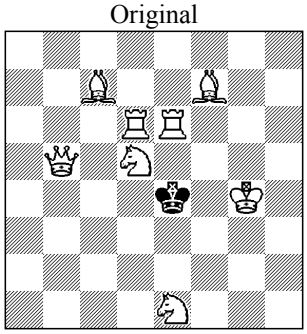
A4. Auto-Capture Chess *(seven problems).*
In order to be distinct from free-capture variants, this one must allow auto-captures but not normal oppo-captures, an apparently barren concept. G Leathem's 'Cannibal Chess' (1928) in which kings capture normally (and presumably are checked normally) is described in *ECV*, but my version given here does without oppo-captures altogether by using the previously described sensitive kings with their associated game-array rules. It is extremely limited, with auto-captures difficult to force and 'auto-checks' only possible by discovery; nevertheless, reasonable problems ending in mate or stalemate can be constructed. Fool's mate takes 5 moves; 1.Bxg2 ~ 2.Bh3 Bxb7 3.Sc3 Bg2; 4.Se4 Bf1 5.Rxg1 Bg2#.

A4.1 CT
Original



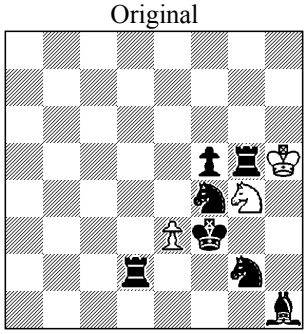
H=3

A4.2 CT
Original



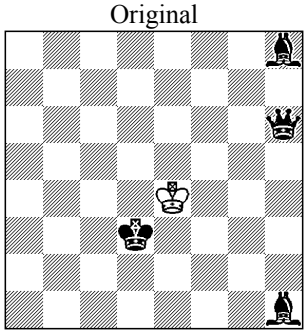
Series =8

A4.3 CT
Original



H=3

A4.4 CT
Original



H#2½, 2 solutions

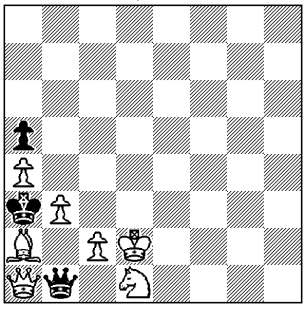
A4.1, in which the kings are not initially in check, has bK executing a simple rundlauf, with White showing that the only way to stalemate a bare king is to surround it with enemy pieces while avoiding auto-check. 1.Kb7 Kb8 2.Ka7 Bb7 3.Ka8 Ra7=.

A4.2 is another example of the above theme, showing a more intricate series of white moves.
1.Sd3 2.Kf3 3.Se3 4.Rd4 5.Bf4 6.Qf5 7.Re5 8.Bd5=.

A4.3 shows three self-pin auto-captures on the same square, demonstrating that stalemate here is actually easier to achieve with more pieces to be immobilised. 1.Sxg2 Sxe3 2.Rgxg2 Kg5 3.Rxg2 Kf4=.

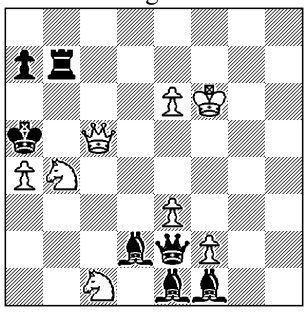
A4.4 shows that mate is possible in a problem. It has simple chameleon echoes, with the wK discovering auto-check and also blocking a flight-square. 1...Ke5 2.Kd4 Kf6 3.Ke5 Kf5# and 1...Ke3 2.Qh3 Kf3 3.Ke4 Kf4#.

A4.5 CT
Chessics 12, 1981: version



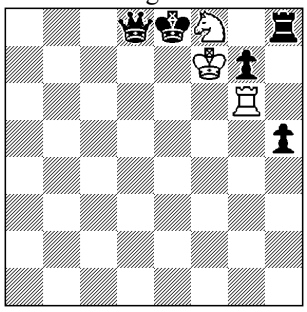
#2

A4.6 CT
Original



#2

A4.7 CT
Original



May White (to move) #1?

A4.5 illustrates that mate is not only possible but can actually be forced. The mating moves both discover auto-check and block in the bQ to prevent it from releasing the check. (In the original version, only the bK was sensitive.)
1.Qb2! (waiting) Qa1/Qc1 2.Bb1/Qb1#.

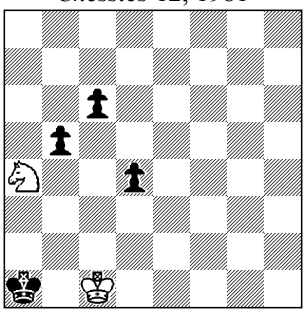
A4.6 has an auto-capture key (is this a good feature or a defect?) introducing a more complex set of variations, with square blocking by both sides. However, the need for three bBs highlights the difficulty of achieving such effects.
1.Qxb4! (threat 2.Qb6#) Rb6/Rc7/Rd7 2.Qb5/Qc5/Qd6#. Tries are 1.Qb5? Ka6! and 1.Qb6? Rd7!

A4.7 is a simple retro based on my game-array legality rules. Neither bK nor bQ can have moved, since if they had, the bK would now be in auto-check. Black's last move must therefore have been made either by the R or else by the P from h6 or h7; however, in the latter case that P can never have captured, and so one at least of the missing black pieces must have been captured by the bR. Either way, the bR must have moved, and so 1.Sh7 is mate.

A5. Oppo-Surrender Chess *(six problems)*.

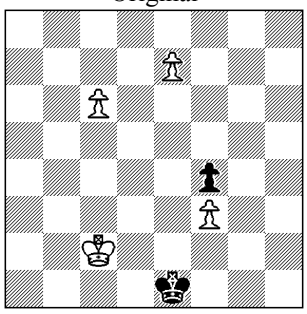
The idea of an oppo-surrender appears as alien as that of an auto-capture, but can actually be linked with Andernach Chess in that an Andernach capture of an identical piece is equivalent to a surrender. *ECV* describes the 'Spite Chess' of David Silverman (1973) in which a piece which could oppo-surrender is immediately removed; this variant uses the surrender principle in a very positive way, but does not have mates. My variant has straightforward surrenders without normal captures but with sensitive kings, which here cause no game array difficulties. In it, an active piece attempting what in normal chess would be a capture will itself disappear from the board, leaving the passive piece unaffected (and perhaps not even identifiable). It is perhaps even more limited than Auto-Capture Chess, with surrenders difficult to force and pawns unable to leave their original files. However, Oppo-Surrender mates are relatively easy to force, since a king is in check if it stands next to any piece of the opposite colour, and the only escape from check is to move the king away. Fool's mate is easily achieved; 1.d3 e6 2.Bg5 ~ 3.Be7#.

A5.1 CT
Chessics 12, 1981



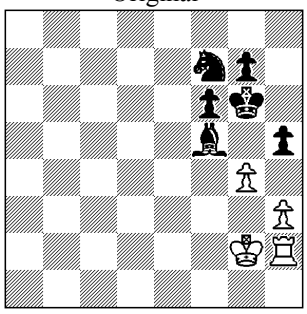
H=3, (b) normal chess

A5.2 CT
Original



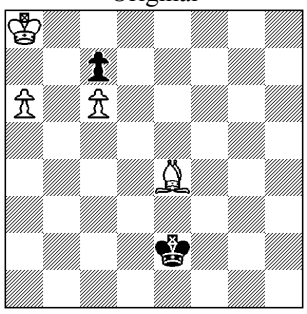
Series H#16

A5.3 CT
Original



H#3

A5.4 CT
Original



#6

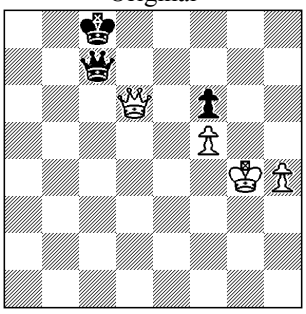
A5.1 It illustrates the differences between surrenders and captures and between surrender and capture stalemates, the bPs being eliminated in both parts.
(a) 1.b*a4 Sc3 2.d*c3 Sb5; 3.c*b5 Sa3=. (b) 1.c5 Sxc5 2.d3 Sxd3 3.b4 Sxb4=.

A5.2 shows a simple king march, followed by an even simpler mate.
1.Kf1 2.Kg1 3.Kh2 4.Kh3 5.Kh4 6.Kg5 7.Kf5 8.Ke5 9.Kd4 10.Kc4 11.Kb4 12.Ka5 13.Ka6 14.Ka7 15.Kb8 16.Kc8 c7#.

A5.3 shows three surrenders (two clearing a line and one clearing a square); the bB executes a switchback after accepting the final surrender. 1.h*g4 g*f5 2.Bg4 h*g4 3.Bf5 Rh6#.

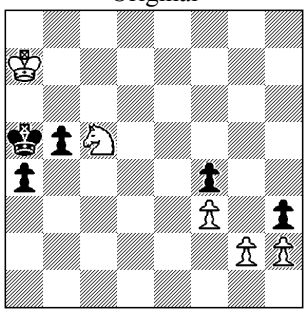
A5.4 is in effect an endgame, with a lone wB forcing mate against the lone bK, aided only by wK waiting moves.
1.Ka7! Ke1! (1...Kd1/f1? 2.Bd3/f3 and mates next move) 2.Bd3 Kf1/f2 3.Be2+ Kg2 4.Bf3+ Kh3 5.Ka8 Kh4 6.Bg4#. Black's other defences all lead to similar mates on g4, g2 or e2.

A5.5 CT
Original



#4

A5.6 CT
Original



#2

A5.5 is another ending, with a duel between wQ and bQ+bK. 1.Qd7+? Kb7 gets nowhere, while if 1.Qc6? Qf4+ and Black mates. So the wK must get out of the way by 1.Kh5! (waiting). There follows 1...Kb7 2.Qb6+ Kc8 3.Qc6 Kb8/Kd8/Q~ 4.Qb7/Qd7/Qc7#, or else 1...Kb8 2.Qa6! Kc8/Qb7 3.Qc6/Qb6 and mates as before.

A5.6 is a genuine if simple problem, with a surrender key which deprives Black of a surrender defence.
Tries are 1.Kb7? h*g2! and 1.g4?, f*g3 e.p.! The key is 1.g*h3! (waiting) b4/a3 2.Sa6/Sa4#. Note that the first defence fails by blocking b4 to Black, while the second fails by opening a4 to White.

B. Transitive Reactions.

I define these as occurring when the arrival of the active piece on a square occupied by the passive piece is followed not by a removal but by one of the pieces moving on as part of the same turn of play; this 'moving on' may be to another occupied square, so producing an indefinitely long '**chain**' of reactions. A complete move or turn of play will thus consist of two or more '**sub-moves**'. In written moves, the squares visited by a single piece will be linked by '-' (or 'x' if a capture occurs), while sub-moves of different pieces will be bracketed together by '{}'. With chains allowed, an individual move may be a very complex affair. Even without chains, transitive variants appear to open up exciting possibilities for chess problems, allowing the production of effects going beyond those achievable in other ways. But by the same token they introduce difficulties beyond those of other variants, allowing considerable possibilities for cooks and other defects and requiring much resolution of rules.

Four types of transitive reaction can be defined in terms of the normal moves of pieces. (For an example with *both* pieces moving on simultaneously, see problem Z11 in the Appendix). As with the destructive reactions, all these may be auto- (applying to pieces of the same colour) or oppo- (applying to pieces of opposite colour), and so give rise to auto, oppo and free variants. The four types and the names I give them are listed below.

- The passive piece remains on the key square, while the active piece moves normally; this is a '**skip**' (the word being used in the sense of a flat stone skipping over the surface of water).
- The active piece remains on the square, while the passive piece moves normally; this is a '**tag**' (as in the children's game, also called 'tig', in which a person chased and touched takes over the chasing).
- The passive piece remains on the square, but moves the active piece on according to its own power; this is a '**pass**' (in a loose footballing sense, if the active piece is taken to be the ball).
- The active piece remains on the square and moves on the passive piece; this is a '**kick**' (in the obvious sense).

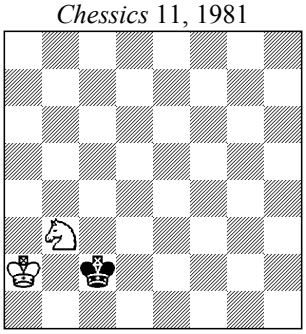
When I first wrote down my ideas, no established problem variant used any of the above transitive reactions; however, the recent 'Take & Make' variant uses moves equivalent to passes, and the even more recent 'Anti-Take & Make' variant uses tags. Apart from these two, the closest parallels are the Circe and Antipodean 'rebirth' variants, but in these the rebirth square is pre-determined rather than being under the control of the mover. *ECV* describes 'Replacement Chess', in which a captured piece is replaced on any square chosen by the capturer; a modification of this, Bruce Trone's 'Transfer Chess' (1991) uses oppo-kicks as replacements (but unlike my version has no actual captures). *ECV* also lists three other variants ('Teleport', 'Nuclear' and 'Parton') that contain a transitive element of one sort or another; it also notes that the name 'tag' has been used as a variant name in a quite different sense. However, my variants were worked out without reference to these, and are based largely on my own ideas. They form a much more closely related family than the destructive variants, but there are many ways in which their detailed rules may be varied. I give below the general principles used in my variants which allow doubtful points to be resolved in a consistent way, following these with notes about alternative possibilities.

- All reactions may result in chains, a chain counting as a single move and not a series of moves; thus a sub-move in the middle of a chain may leave either king in check (provided that the mover's king is out of check at the end of the chain). The chain must have a definite completion, and may not result in the original position being restored. *Other possibilities:* forbidding chain reactions would considerably reduce the difficulties of the variants while retaining much of their interest; the term '**single**' could be incorporated in the variant name to indicate this. Alternatively, chains amounting to 'null moves' could be allowed (as was my original intention).
- Normal captures may be made; in oppo and free variants, the side to move has a free choice between a capture and an oppo-reaction. (This is different to destructive variants, where the type of reaction automatically defines the possibility or otherwise of a capture.) A reaction or chain of reactions may only end in a capture (or threaten check) if the final piece is controlling its own move; thus skip and tag chains may end in captures (or threaten check), while pass and kick chains may not. *Other possibilities:* Captures after reactions could be disallowed in all cases, the name '**non-cap**' being used to indicate this. Alternatively, captures could be allowed *only* after reaction or chains of skips, the name for this could be '**only-cap**'.
- Pawns initiate transitive reactions by diagonally forward (i.e. capturing) moves. A pawn will promote on moving or being moved to its 8th rank at the end of a chain, but in the middle of a chain will only promote on its 8th rank if promotion is necessary to continue the chain. A pawn may be left on its 1st rank (if passed or kicked), but will then have no normal move. *Other possibilities:* pawns on the 1st rank could either be given power to move or disallowed altogether.
- In an oppo-reaction, control over a move or promotion is exercised by the side owning the key piece or pawn rather than by the side initiating the move. An oppo-reaction is illegal if there is the possibility of ending the move to leave the mover's king in check. *Other possibilities:* control could be retained by the side initiating an oppo-reaction (as is the case with both Take & Make and its anti- form, both of which are essentially oppo variants).

Whatever the details of their rules, the four types of transitive reaction listed above may theoretically result in a total of twelve auto, oppo and free variants, six of which are described below. Four of these are **Auto-Skip**, **Oppo-Skip**, **Auto-Kick** and **Oppo-Kick**, the free-skip and free-kick variants being discounted as allowing too many possible moves to be viable (but see appendix problem Z12). For the Kick variants, the uncertain logic of kick-chains will be resolved by stipulating that in Oppo-Kick Chess a kick is followed by a chain of *passes*. The other two variants considered are **Free-Tag** and **Free-Pass**. Both oppo-tagging and oppo-passing involve transfer of control of the rest of the move to the opposition, and probably would only be employed in exceptional circumstances; thus the oppo variants would hardly be viable, making the free and auto variants largely equivalent.

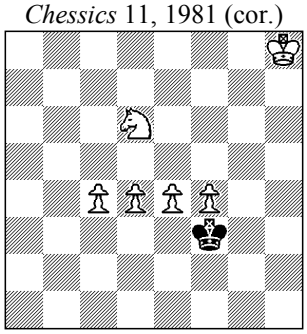
B1. Auto-Skip Chess *(seven problems - but see also appendix problems* Z1 *and* Z2*)*. A piece may move ('**skip**') to a square occupied by another piece of its own colour, and then make a further move (or skip) as part of the same turn of play. A 'chain' of skips may end in a normal capture, so that check can be given through such a chain. Pawns skip by diagonally forward moves, and immediately promote on skipping to the 8th rank. In the solutions, a non-capturing move anywhere in a skip chain is denoted by '-'. This is probably the most straightforward of the transitive variants, resulting in a considerable increase in the mobility and power of all pieces, including kings, in positions with groups of pieces of the same colour. Fool's mate is difficult; in the initial position, each side's Q and Rs attack all squares up to and including its 7th rank, and could capture any enemy piece through which check was given. However, there is 1.c4 Q-c8-b7-b3 2.c5 f6 3.S-d2-e4 Kf7 4.axb3+ d5 5.cxd6e.p.#; in the final position, the BK is in double 'skip-check' from the wSe4 (via d6) and the wQ (via b3).

B1.1 CT
Chessics 11, 1981



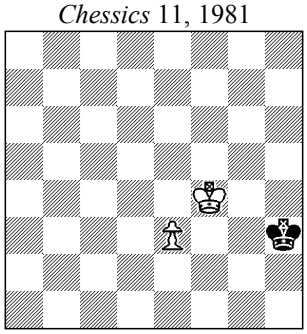
H#2 zp (a) wS>a5 (b) bK>e1

B1.2 CT
Chessics 11, 1981 (cor.)



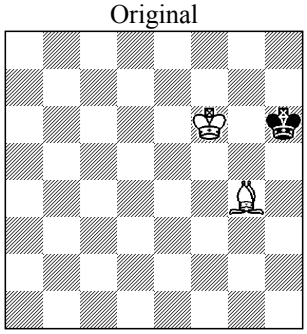
H#2

B1.3 CT
Chessics 11, 1981



H#4

B1.4 CT
Original



#3

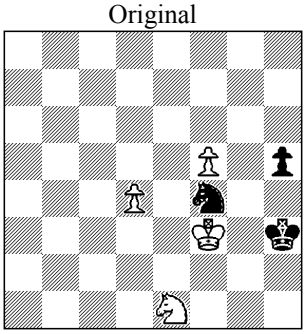
B1.1 (re-drawn as a zeroposition) is really two linked mini-problems rather than a twin. It shows simple skips and skip-mates, with the wS skipping over the wK in (a) and the wK skipping over the wS in (b).
(a) 1.Kc1 Kb3+ 2.Kb1 S-b3-c2# (b) 1.Ke2 K-b3-c3 2.Kd1 Sd2#.

B1.2 has simple play leading to a position where the wS delivers mate through a series of skips over the wPs – which have no other function but to allow these skips. The final move attacks d3 via e4 and c5, while e3 is still guarded via f5.
1.Ke2 f5+ (checking by threatening S-f5-d4xe2) 2.Kd3 Pc5#.

B1.3 features mutual skips by the wK and wP which increase their mobility and enable them to keep up with the bK. 1. Kh4 e-f4-f5 2.Kh5 K-f5-e6 3.Kh6 f-e6-e7 4.Kh7 K-e7-f8#. The final position is mate through 'virtual promotion', since 5.e-f8Sxh7 is threatened, while if 4...Kh8/h6; 5.e-f8Qxh8/h6.

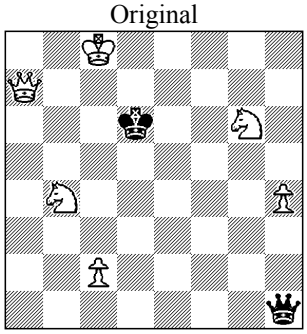
B1.4 is really a simple ending, showing mate being forced in a situation where no mate at all is possible in normal chess. 1.Be6! (waiting) Kh5 2.Kf5 Kh4/h6 3.B-f5-g4/g6#. If 1...Kh7 2.Kf7 and mates similarly. Note that the play contains duals of debatable importance; e.g. White's 2.Kf5 could also have been played as K-e6-f5.

B1.5 CT
Original



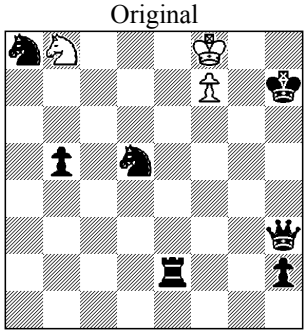
#2

B1.6 CT
Original



H#1

B1.7 CT
Original



Series-#8

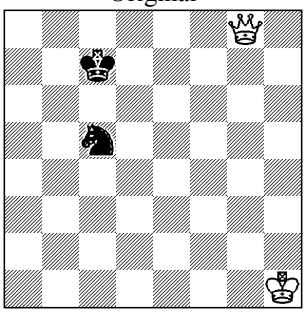
B1.5 shows checks by each K skipping over its S, and vice versa. The key completes a block position in which Black has four checks met by return captures (though there are duals after non-checking moves by the bS).
1.S-f3-d4-f5-e3! (waiting), Sg2+/S-h3-g1+/S-h3-g5+/S-h5-g3+/h4 2.Sxg2/S-f5-d4-f3xg1/S-f5-d4-f3xg5/S-f5xg3/Sg4#. Note that 1...S-h3-f4 would defeat the threat if such a 'null' move was allowed.

B1.6 is a sketch to show how skipping can create long pin-lines. After the simple play 1.Qe4 Qf2=, the bQ stands at the junction of the 'skip lines' f2-c2-g6-d6 and f2-h4-b4-d6, and so is completely pinned by the wQ.

B1.7 is a corollary to the previous problem, showing the weakness of these long pin-lines. The wS is pinned by the bQ on the angled line h3-h2-e2-b5-d5-a8-f8, but can zig-zag along the line and eventually capture the pinning piece.
1.Sc6 2.Sd8 3.Sb7 4.Sc5 5.Sd3 6.Sf2 7.Sxh3 8.Sg5#.

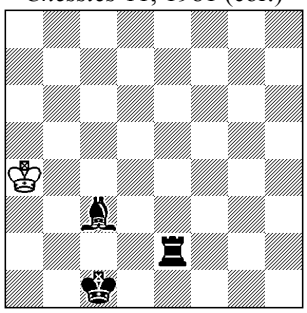
B2. Oppo-Skip Chess *(six problems - but see also appendix problem Z3)*. As Auto-Skip, except that a skip may only be to a square occupied by a piece of opposite colour; such a skip can be made as a free alternative to a normal capture. This variant is is more interactive than Auto-Skip, enhancing the power of a piece in the presence of enemy pieces. In it, fool's mate can be easily *forced* by e.g. 1.Pe4 ~ 2.Qh5#; the wQ now attacks the bK via f7 and along many other lines, interception being completely useless.

B2.1 CT
Original



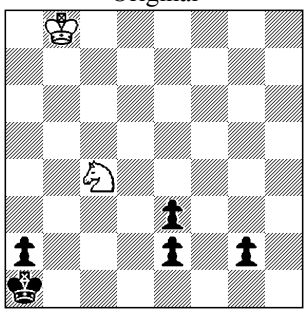
H#1, 2 solutions

B2.2 CT
Chessics 11, 1981 (cor.)



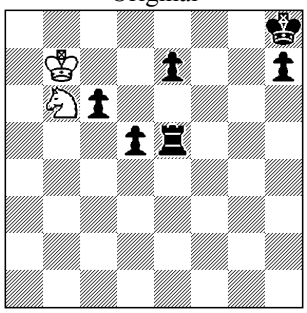
H#2, (b) bBc3>b4

B2.3 CT
Original



H#2½

B2.4 CT
Original



H#2

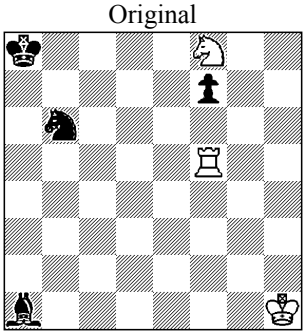
B2.1 is a simple sketch showing that oppo skip-checks can allow a lone Q to mate on an open board.
1.Kc6 Qc8#, guarding the flight squares b5, b6, d5 and d6 via c5.
1.Sb7 Qd5#, checking via b7; the bS cannot move without allowing check via its new square.

B2.2 shows not only that a king can (as in Auto-Skip) deliver check, but that a lone king can actually mate, here by a double skip-check. (a) 1.Bb2 Kb4 2.Rc2 Kb3#. (b) 1.Kd1 K-b4-c4 2.Bd2 Kd3#.

B2.3 makes the point that in this variant (unlike Auto-Skip) flight squares can be blocked. The final position is a normal smothered mate by a knight, but all the moves contain skips, two of them with promotions in the middle of the chain.
1...S-e3-d1 2.e-d1S-b2 S-e3-f1 3.g-f1R-b1 S-e3-c2#.

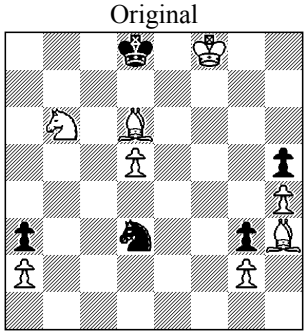
B2.4 again has a normal mate, but the play includes a bR switchback allowing the wK and wS to skip over the same four black units in a different order. 1.Re6, K-c6-d5-e6-e7-f8 2.Re5 S-d5-e7-c6-e5-f7#.
(Note that in both skip variants, skip-chains by knights look more attractive than those by other pieces.)

B2.5 CT
Original



#2

B2.5 CT
Original



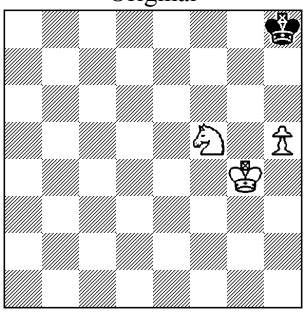
#2

B2.5 is a 2-mover showing 4 mates by a lone wR, and illustrating the impossibility of either side closing enemy lines in this variant.
1.Sh7! (threat 2.R-f7-f8#). Playing ...Sc8 offers no defence on either move 1 or move 2, since the wR will just skip over the bS.
1...Sd7/Bg7/Pf6 2.R-f7-d7-d8/R-f7-g7-g8/R-f6-b6-a6#. (Note that 1...f6 defends by removing the guard on a7 and b7, while the try 1.Sd7? fails by cutting off the same guard.)

B2.6 is another 2-mover, this time showing a set of eight (normal) mates by a wB after a bS wheel.
1.Sa8! (waiting; the apparent threats fail, since 2.Be7?? is self-check and 2.Bc7+ is met by K-c7-b7). 1...Sc5/Sb4/Sb2/Sc1 2.B-c5-b6/B-b4-a5/B-a3-b2-f6/B-a3-c1-g5#. Other black moves lead to similar mates by reflection of those given above.

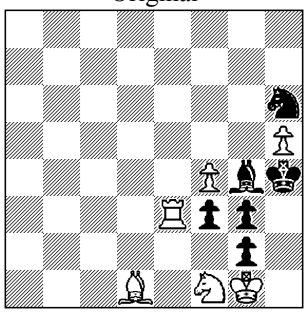
B3. Free-Tag Chess *(seven problems)*. In this variant, a piece may make a move (a '**tag**') to a square occupied by another piece of either colour, remaining on the square while the tagged piece makes its own move as part of the same turn of play. The move by a tagged piece may be another tag, thus producing a chain of tags; the chain may end in a capture, so that check can be threatened through such a chain. Pawns tag by diagonally forward moves. In the solutions, tags are not distinguished from the final move in a chain; all are bracketed together by '{}'. An 'oppo-tag' (one of a piece of the opposite colour) transfers control of the subsequent sub-move to the opposition; such a tag may not be made if it is possible to complete the move leaving the first side's king in check. For a fool's mate, the king must be brought into the open where it cannot escape by tagging. 1.{Kf2, Pf4} {Qd7, Pd6} 2.Kg3 ~ 3.Kh4 Qg4#.
Short tag-chains (unlike skips) enable several pieces to move in a single turn of play, but do not give them any additional squares to move to. However, longer chains may close, allowing individual pieces to move several times, simulating skips. These chains are fascinating, though the checks and mates resulting from them may be hard to visualise.

B3.1 CT
Original



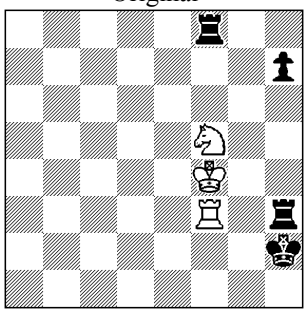
H#3

B3.2 CT
Original



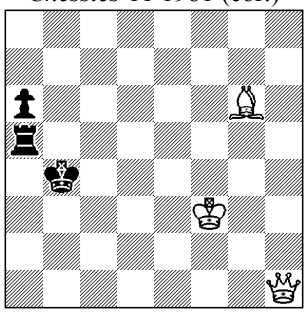
Series-#4

B3.3 CT
Original



H#1½

B3.4 CT
Chessics 11 1981 (cor.)



H#2

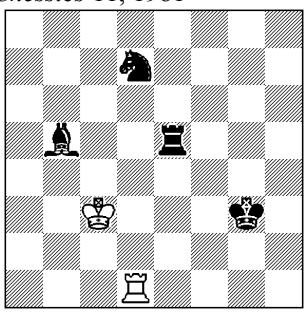
B3.1 shows White making three single tags to bring his forces into a normal mating position. (All but the last of these problems feature normal mates.)
1.Kh7 {Kh5, Ph6} 2.Kg8 {Sh6, Ph7}+ 3.Kh8 {Kh6, Sf7}#. Note that in the second tag both white pieces give check, making the point that it is legal to check in the middle of a tag chain.

B3.2 contains single tags followed by captures; the wS and wR tag each other alternately on the same square in order to clear lines to guard h3 and h5. 1.{Se3, Rxf3} 2.{Re3, Sxg4} 3.{Se3, Rxg3} 4.{Rc3, Sg2}#. The alternative continuation 2.{Re3, Sg4, Bf5etc.} might be considered a dual, but in forced play the tagged bB would choose to move to h3, stopping the mate. (This raises the odd issue of whether or not a series mate *does* count as forced play.)

B3.3 has both sides making tags, two being double ones giving chains of 3 sub-moves. Black has to get his rook out of the way and block it off.
1...{Kf3, Rf5, Sg3} 2.{Kh3, Rh7, Ph6} {Sf5, Rh5}#.

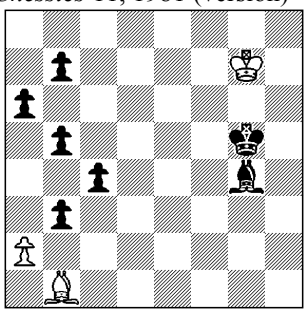
B3.4 is the first of the problems showing 'tag cycles' in which a piece gets the chance to move more than once in the same chain. Here, it results in the wQ appearing to skip over the unmoved wK.
1.{Ka5, Ra4} Be4 2.{Ka6, Pa5} {Qf3, Ke4, Bf3, Qe4, Kf3, Be4, Qb7}#. Note that in the final position a5 is only blocked because the bP cannot move if tagged by the bK.

B3.5 CT
Chessics 11, 1981



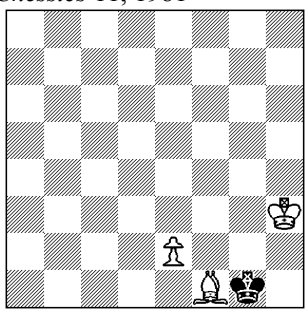
Series-H#5

B3.6 CT
Chessics 11, 1981 (version)



H#1

B3.7 CT
Chessics 11, 1981



H#2

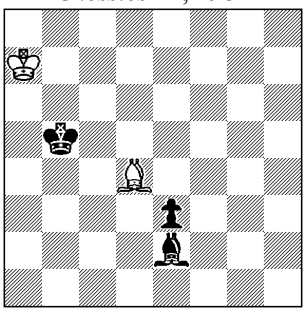
B3.5 is my favourite problem in the whole set. In it, a 3-square tag cycle is played three times (twice in one direction and once in the other) simply to help the bK on its way to the mating square.
1.Kf4 2.{Ke5, Rb5, Bd7, Se5, Ke6} 3.{Kd7, Bb5, Re5, Sd7, Kc6} 4.{Kb5, Bd7, Se5, Rb5, Ka4} 5.Ka3 Ra1#. Note that move 3 involves the bK tagging through check, and that move 5 is needed to stop a 'tag escape'.

B3.6 has one monster move with 19 tags (both auto- and oppo-), in which the wP and wB climb a downward-moving 'escalator' of bPs. Note that the wP promotes in the middle of the chain.
1.Bc8, {Ba2, Pb3, bPa2, Bb3, Pc4, bPb3, Bc4, Pb5, bPc4, Bb5, Pa6, bPb5, Ba6, Pb7, bPa6, Bb7, c8Q, bBb7, Bc8, Qg4}#.

B3.7 has simple play leading to an innocuous looking position in which White is delivering mate through a virtual tag cycle.
1.Kf2 {Bh3, Kg4} 2.Ke1 {Bg4, Kf3}#. In the final position, White has the threat of 3...{Bf3, Ke2, P-f3, Be2, Kxe1}, to which there is no defence.

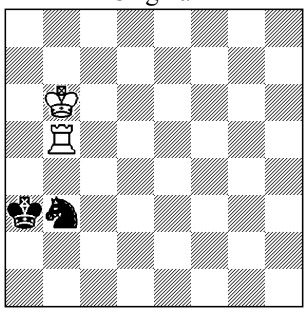
B4. Free-Pass Chess *(seven problems)*. In this variant, a piece may move to a square occupied by a piece of either colour, then, as part of the same turn of play, make a further move (a '**pass**') according to the powers of the *other* piece. The pass may be to another occupied square, but the resulting chain of passes may not end in a capture or threaten check. A pawn pass is a diagonally forward move. A pawn will only promote if it reaches its 8th rank at the *end* of a chain; it may visit its 1st rank in the middle of a chain, but if left there at the end will be immobile. An 'oppo-pass' (one to a piece of the opposite colour) transfers control of the subsequent sub-move to the opposition, and is subject to the same limitations as an oppo-tag. In the solutions, all moves in a 'pass-chain' are linked by '-'. The idea of a pass is more artificial than that of a skip or a tag, but the chains that can result are more varied and hence more potentially interesting than skip chains, while the absence of captures makes them somewhat easier to handle. There is a good fool's mate by 1.d3 K-f8-g7-g6 2.Q-c1-g5#; if the bK attempts to escape to its 2nd rank, the bPs can only pass it back into check!

B4.1 CT
Chessics 11, 1981



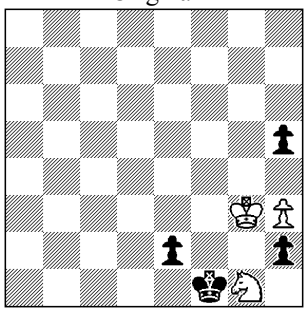
H#3

B4.2 CT
Original



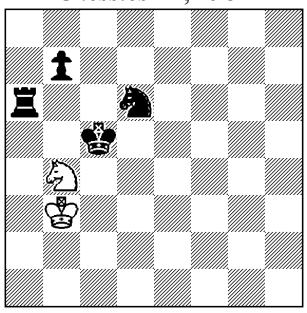
Series-H#6

B4.3 CT
Original



H#2

B4.4 CT
Chessics 11, 1981



Series-H#4

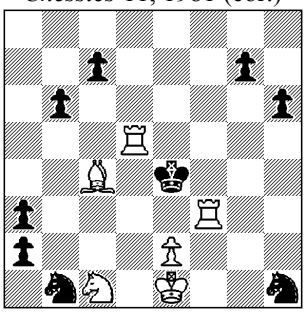
B4.1 shows White's auto-passes echoing those of Black.
1.B-b5-c6 B-a7-b8 2.K-c6-h1 K-b8-g3 3.B-h1-g1 B-g3-f3#. The first pair of moves could have been skips, but not so the rest. Note that in the final position, White must guard all the squares to which the bK could be passed; thus if 2...B-g3-g2+?, Black escapes by 3.K-g1-e3-e2.

B4.2 has the Black pieces circling the White by a series of mutual passes.
1.K-b3-d4 2.S-d4-e5 3.K-e5-d7 4.S-d7-c7 5.K-c7-a8 6.S-a8-b8 R-b6-a7#. Note that in the final position the bS does not in itself block b8 to the bK; the position is mate because White has guarded the 'pass-flight' squares a6, c6 and d7.

B4.3 is an exercise in oppo-pass legality.
1.h-g1-f3 (*not* promoting) Kh2 2.K-g1-h3-h4 Sxf3#. The point is that if Black's first move does not block f3, his second oppo-pass could have been made into illegal self-check by 2.K-g1-f3?? Note that being passed though h3 does not put the bK in self-check.

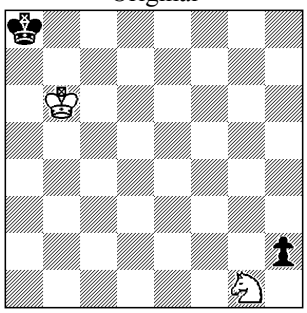
B4.4 features each of the four Black pieces being passed by the other three in turn, giving a sort of 'caterpillar track' effect.
1.K-d6-b7-a6-a1 1.S-b7-a6-a1-b1 3.b-a6-a1-b1-d2 4.R-a1-b1-d2-d1 Sc2#. Note the bP's visit to the 1st rank on move 3, and note also that in the final position the pass-flight square d1 is blocked rather than guarded.

B4.5 CT
Chessics 11, 1981 (cor.)



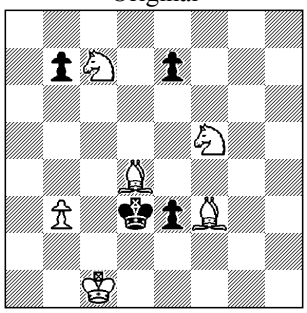
#2

B4.6 CT
Original



H#5

B4.7 CT
Original



#2

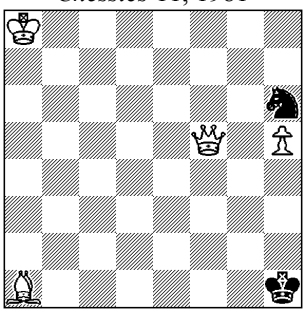
B4.5 is a 2-mover showing 8 direct mates by the wS through a variety of passes. The key is a bad one, stopping the unprovided check 1...a-b1-d2+.
1.Bxa2! (waiting). 1... Sc3/b5/c5 (or c6)/h5 2.S-a2-d5-d2/c5/d6/g5#; 1...Sd2/g5 (or g6)/Sf2/Sg3 2.S-e2-f3-c3/f6/g3/f2.

B4.6 has a series of moves and oppo-passes by the wS guiding the bP to its 1st rank, where it is immobile and so can act as a normal block.
1.h-g1-f3 Se2 2.f-e2-d4 Sc3 3.d-c3-b5 Sa4 4.b-a4-b6-b7 S-b6-a6 5.b-a6-b8 Sc7#.

B4.7 is a 2-mover in which both key and mating moves use oppo-passes by bPs which have no choice of passing square. After tries by the cS, 1...e2! gives a pass-flight on e1.
1.S-e3-e2! (waiting) b6/b5/e6/e5 2.B-b6-b5/S-b5-b4/S-e6-e5/B-e5-e4#. (The key is actually dualled, since it could be played as S-*d4*-e3-e2, but the importance of this defect is hopefully minimal.)

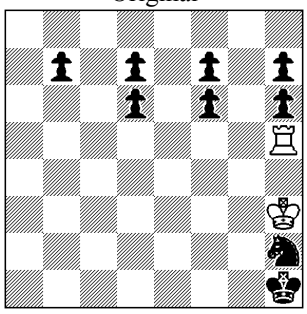
B5. Auto-Kick Chess *(five problems)*. A piece moving to a square occupied by another piece of the same colour will remain on the square, using its own power to 'kick' the second piece. The kicked piece may then kick a third piece, and so on, but the resulting chain of kicks may not end in a capture or threaten check. Pawns move diagonally forward to kick, and use the same move to kick pieces to occupied squares. A pawn will promote if kicked to its 8th rank; it will have no move if kicked to its 1st rank, (though it may subsequently be kicked back into an active position). In the solutions, all moves in a 'kick chain' (including the final non-kicking move) are bracketed together by '{}'. These chains are more artificial and harder to visualise than those of the other transitive variants, though, as with passes, the absence of captures after kicks makes things easier. An example of fool's mate is 1. {Ke2, Pe3} {Qe7, g5} 2.{Be2, Kh5} {Be7, Qg5, g4}#.

B5.1 CT
Chessics 11, 1981



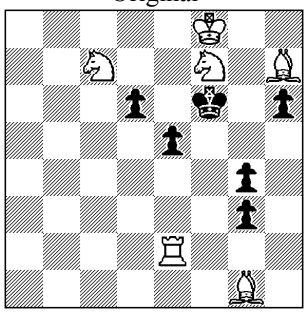
Series-H#11

B5.2 CT
Original



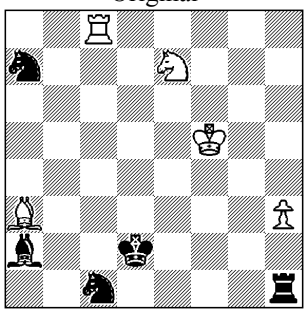
Series-H=10

B5.3 CT
Original



#2

B5.4 CT
Original



H#2

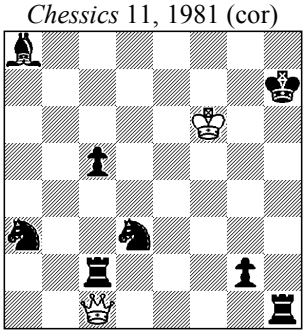
B5.1 features the bS moving on a diagonally symmetrical route, kicking a very sore bK round the board to its original square, where it is then mated. 1.Sg4 2.Sf2 3.{Sh1, Kg3} 4.{Sg3, Ke2} 5.{Se2, Kc1} 6.{Sc1, Ka2} 7.{Sa2, Kb4} 8.{Sb4, Kc6} 9.{Sc6, Ke7} 10. {Se7, Kg8} 11.{Sg8, Kh6} Qg6#.

B5.2 again has a bS does all the work, 'parking' its own pawns on their 1st rank, where they are immobile. 1.Sg4 2.{Sh6, g8} 3.{Sf7, h8} 4.{Sd6, c8} 5.{Sb7, d8} 6.Sc5 7.{Sd7, b8} 8.{Sf6, e8} 9.{Sh7, f8} 10.Sg5+ Rxg5=.

B5.3, like the previous two problems, features single kicks only. In it, wBg1 kicks the wR to four different squares where it can give mate. Two defences fail by unguarding mating squares, another unblocks such a square, while the fourth clears a mating line. 1.Re3! (waiting) e4/g2/h5/d5 2.{Be3, Rf4/f2/h6/b6}#.

B5.4 features chains of kicks, the results of which are hard to visualise. Note that in the final chain the mating check is given on the penultimate sub-move; the final sub-move cuts off the bB from a possible rescue. 1.{Rc1, Sc7} {Be7, Sf6} 2.{Rc7, Sc1, Ra2, Bd2, Kh6} {Kf6, Se7, Bc8, Rh3, e3}#.

B5.5 CT
Chessics 11, 1981 (cor)

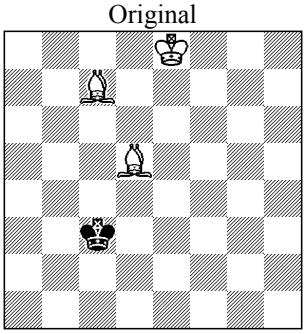


H#1

B5.5 has a position in which the obvious 1.{Rh7, Kh5} Qg5+ fails to 2.{Rh5, Kh1etc}. The solution uses a longer and even more confusing chain of kicks than in the previous problem; this chain starts with a promotion and includes a closed loop, so that two pieces are kicked twice in the one move. 1.{h1B, Ra8, Ba3, Sc5, d3, Sc2, Ra3, Bd3, h7, Kh5} Qg5#.

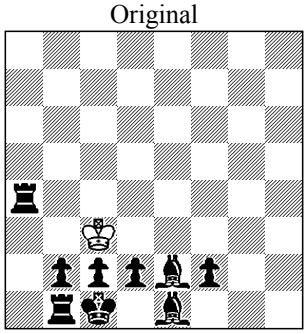
B6. Oppo-Kick Chess *(five problems)*. As Auto-Kick, except that a piece may only kick a piece of the opposite colour (as a free alternative to capturing that piece). This piece may not kick another in turn; however, it may be kicked to a square occupied by another piece of the first colour, which will then use its own powers to 'pass' the kicked piece to another square, possibly an occupied one from which it can again be passed. The resulting chain of kick and pass(es) may not end in a capture or threaten check. A pawn kicked or passed to its 8th rank will only promote if this sub-move ends the chain. In the solutions, '-' is used to link all the squares in a chain of passes. The variant is essentially a kick-pass hybrid, with pieces kicked in exactly the same way as is the ball in my earlier 'Football Chess'. Like the auto-kick variant, this one allows series movers where a single piece does all the work. However, a difficulty with oppo-kicks is that such a kick may be an unwanted alternative to a capture. A version of the normal fool's mate involving oppo-kicks is 1.f4 ~ 2.g4 e6 3.h4 {Qh4, h2}#.

B6.1 CT
Original



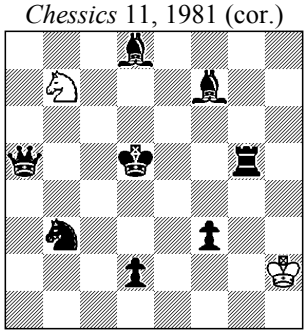
Series-H#8

B6.2 CT
Original



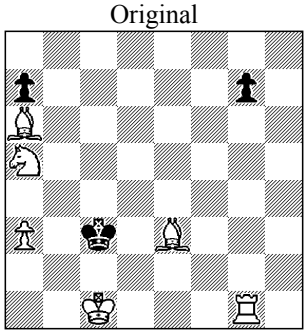
Series-=20

B6.3 CT
Chessics 11, 1981 (cor.)



Series-#9

B6.4 CT
Original



S#2

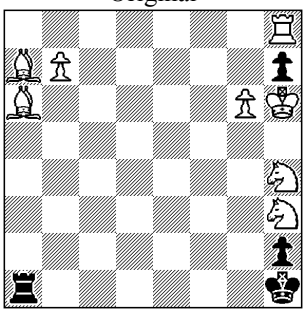
B6.1 is a series mover in which the bK kicks both wBs to squares from which a mate can be set up. Note that the wBs can only be approached and kicked orthogonally. 1.Kd4 2.{Kd5, Bc5} 3.{Kc5, Bc4} 4.Kc6 5.{Kc7, Bc6} 6.{Kc6, Bd6} 7.Kb7 8.Kc8 Ba6#.

B6.2 has a similar series of moves as the last, but in a very different situation. 1.Kb3; 2.{Ka4, Rb3} 3.{Kb3, Ra2} 4.Kc3 5.Kd4 6.Ke3 7.{Ke2, Be3} 8.{Ke3, Bd3} 9.{Kd3, Bc3} 10.{Kc3, Bb3} 11.{Kb3, Ba3} 12.{Ka2, Rb3} 13.{Kb3, Rc4} 14.{Ka3, Ba2} 15.{Ka2, Ba1} 16.Kb3 17.{Kc4, Rd3} 18.{Kd3, Re2} 19.{Ke2, Rd1} 20.Kf1=.

B6.3 is yet another series mover, but one in which the kicker delivers mate, having first moved in a circular path, placing the black pieces in blocking positions. 1.{Sa5, Qc6} 2.{Sb3, Sc5} 3.{Sd2, c4} 4.{Sf3, e5} 5.{Sg5, Re4} 6.{Sf7, Bd6} 7.{Sd8, Be6} 8.{Sc6, Qd4} 9.Sb4#.

B6.4 shows two bPs first kicked and then passed. One is sent to a square from which it controls the wK's flights, the other to squares from which it can only move to give mate. 1.{Ba7, a-g1-c1-c2}! (waiting). Note that the bP does not promote here. 1...g6 2.{Rg6, g-a6-d3} d2#. 1...g5 2.{Rg5, g-a5-b3} b2#.

B6.5 CT
Original



#2

B6.5 is a 2 mover featuring an immobilised bP being kicked and passed to shut off the bR. There is a multiple virtual threat, but the play is accurate, ten of the bR defences forcing five different mates, all from a promoted wQ on a8.
1.{Kh7, h-h8-a8}! (threat 2.bxa8Q/B or 2.{b-a8Q, a~}#. 1...Rg1/f1/e1/d1/c1/b1/a2/a3/a4/a5/xa6 2.Sf2/{b-a8Q, a-a7-f2/e3/d4/c5/b6/f2/e3/d4/c5/b6}#.

C. Combinative Reactions.

This final group of reactions are those in which a move to an occupied square leaves both pieces together on the square, with the possibility of the pair subsequently being able to move off toether. In written moves, a non-capturing move to an occupied square will be indicated by '-', pieces staying together or moving together will be bracketed by '{}' with any component piece controlling a move underlined, and any individual piece left behind after a move shown in normal brackets '()'.

I consider three main possibilities for these reactions, all of which can be applied to pieces of the same or of opposite colour, giving rise to the usual auto, oppo and free variants.

- The two pieces join together permanently to form a single piece combining the power and colour of each of its components; the term '**additive**' will be used as a variant name, but the verb '**combine**' will be used for the process of forming these single '**combined pieces**'.
- The two pieces combine temporarily, being able to move or be captured either together or separately; this will be called an '**alliance**'.
- The two pieces do not combine at all, and are only able to move and be captured separately; this will be called '**coexistence**'.

Combinative variants can be as complicated as transitive ones, though the complications are of a different nature. One difficulty with them is that of showing pieces on the same square in diagrammed positions; in this version I simply (though not very satisfactorily) mark each such square with a black spot, listing the pieces involved in the text below the diagram. A more fundamental difficulty is that the difference between variants will not show up on the move on which pieces come together; separate coexisting pieces would control exactly the same squares as would a single combined piece. The consequence is that different variants shade into one another, and an individual problem may be sound in more than one type of variant. My main aim in formulating rules has been to keep the variants distinct; as a consequence, they form less of a related family than do the transitive variants. However, I have retained a few of the general principles used for the latter; thus there is always a free choice between a capture and an oppo-reaction (though see appendix problems Z4 and Z5), while a combined or allied pawn promotes if carried to its 8th rank, and if carried to its 1st rank has no pawn move.

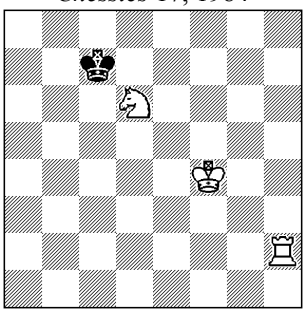
A further complication is that a considerable number of combinative variants already exist, many being very similar to one another. Thus ECV describes three variants ('Coronation', 'Empire' and 'Knightmare') which have an additive element, five ('Biplace', 'Double(III)', 'Duper', 'Gregarious' and 'Stacking') which are coexistence forms, and no fewer than ten ('Augsburg', 'Kombi', 'Combination', 'Crescendo', 'Ferry', 'Chessers', 'Nuclear', 'Riga', 'Incredulon' and 'Proton') which are essentially auto-alliance. (It also notes the use of the name 'Alliance' in a quite different sense in partnership games.) However, only two of the ECV variants have to my knowledge been used in problems. The main one of these is '**Augsburg Chess**', invented by Erich Bartel in 1965 and explored in problems during the following years; I have taken it as the standard **Auto-Alliance** form. In it (a) pawns ally by directly forward (i.e. non- capturing) moves, (b) a queen, even if formed by promotion during the play, is always regarded as an allied {R+B}, and (c) kings are excluded from alliances. I have dropped features (b) and (c) in my own version of **Free-Alliance Chess**. The Augsburg composers later extended the scope of their variant, producing 'Kombi Chess' as a modified version without the king limitation. They also considered oppo-alliance, which I discount as a variant on the grounds that in it the capture of allied pieces could lead to inconsistencies (but see appendix problems Z7 and Z8).

I regard auto-addition as merely a limited form of auto-alliance (except insofar as it provides a possible mechanism for generating fairy pieces such as the Empress (R+S) or Dragon (S+P). Accordingly, **Oppo-Additive Chess** is the only additive variant considered here; I have followed logic by ruling that in it pawns combine by diagonally forward (i.e. capturing) moves.

With coexistence (which pawns logically achieve by directly forward moves), I consider all three forms. In the free variant I have allowed an unlimited number of pieces to occupy a single square; in the auto variant I have set the limit at two pieces on the same square in the hope that this might improve the play. In order to maximise the distinction between coexistence and alliance, I have given my **Free-Coexistence Chess** the additional feature of '**transparency**'; i.e. pieces may move through as well as on to occupied squares. Dropping this transparency of pieces would make the variant identical to Jon Spencer's 1972 'Duper Chess' (ECV) and might lead to an overlap with Free-Alliance Chess. **Auto-Coexistence Chess** and **Oppo-Coexistence Chess** both differ from the free form in lacking transparency of pieces (a change from the rules given in the *Chessics* articles) and by sharing a special feature arising out of the logic of captures. If only one piece may be captured at a time, a capture on a square occupied by two pieces of the same colour will leave two pieces of opposite colour there, and *vice versa*. Each situation would be illegal in the variant concerned, leading to the interesting feature that in both forms coexisting pieces are immune to capture and coexisting kings immune to check.

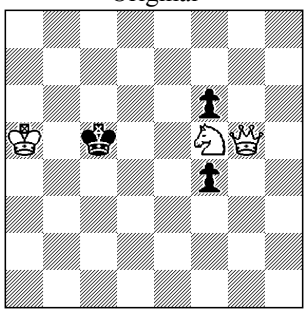
C1. Oppo-Additive Chess *(seven problems - but see also appendix problems Z4 and Z5)*. A piece moving to a square occupied by an enemy piece may either capture it or 'combine' with it. A combining move is denoted by '-' and combined pieces by '{}'. Combined pieces remain together permanently and behave as neutral pieces; either side can move them or capture enemy or other combined pieces with them. Pawns combine by diagonally forward moves; the pawn component of a combined piece will promote on being carried to its 8th rank but have no move on its 1st rank. Thus the variant introduces an interesting class of 'mixed neutrals', though forcing their formation can be difficult; it also gives a mechanism for 'normal' neutrals (except kings) to be formed, though neutral and combined pawns have different promotion rules. The normal fool's mate works, but one featuring a combined K is 1.e3, ~ 2.Bb5 ~ 3.Bxd7+ K-d7 4.{B+K}h3+ {B+K}xg2 5.Qf3#.

C1.1 CT and G. P. Jelliss
Chessics 17, 1984



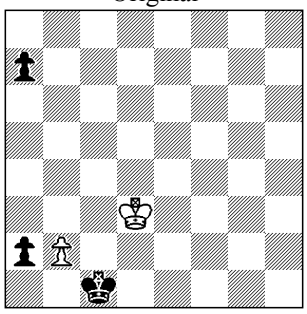
H#2

C1.2 CT
Original



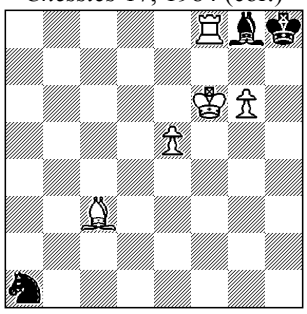
H#2

C1.3 CT
Original



Series-H#7

C1.4 CT
Chessics 17, 1984 (cor.)



#2

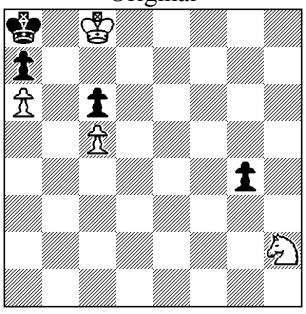
C1.1 is a simple asymmetric featuring a {wS+bK} combined piece. The wS component carries the bK component directly into a mate; note that the piece cannot then use its wS powers to escape from the mate. 1.K-d6 {K+S}f6 2.{K+S}g7 {K+S}h4#.

C1.2 is another asymmetric, but one in which the combined piece (formed by promotion of a combined pawn) does the mating. 1.f-g5 {Q+P}g1={wQ+bS}+ 2.{Q+S}e2 {Q+S}b5#. Note that the bS component of the piece cannot now release the mate.

C1.3 contains a 'double excelsior', and also shows up the difference in promotion options between a combined {wP+bP} and a neutral P. 1.a5 2.a4 3.a3; 4.a-b2; 5.{P+P}b1={wP+bR}; 6.{P+R}b8={wQ+bR}; 7.{Q+R}h8, {Q+R}a1#.

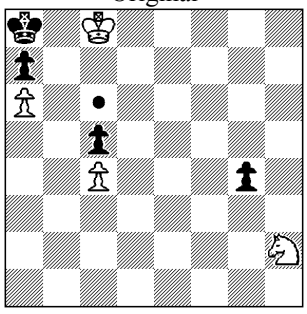
C1.4 shows White forming a combined piece in order to get his B carried to a diagonal where it can perform necessary guard duty. 1.B-a1! (waiting), {B+S}c2/{B+S}b3; 2.g7/Rxg8#.

C1.5 (a) CT
Original



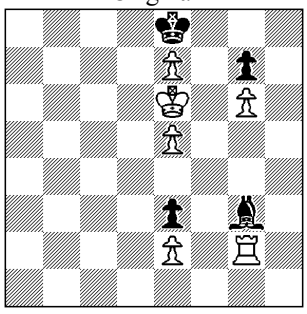
#6

C1.5 (b) CT
Original



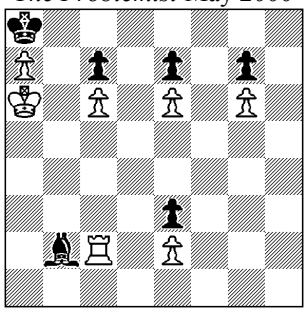
{wP+bP}c6 #6

C1.6 CT
Original



#3

C1.7 CT
The Problemist May 2000



#4

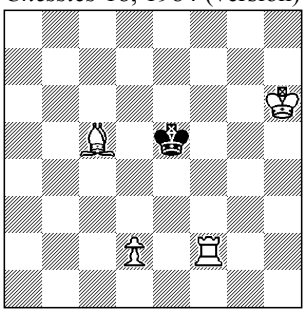
C1.5 is really a pair of linked positions (here diagrammed separately) rather than a twin. In each 'part' the wS makes a combining move partly to avoid stalemate and partly to control the bP; after this, the combined {wS+bP} has to fight a sort of duel with itself in order to mate.
(a) 1.S-g4! {S+P}g3 2.{S+P}f5 {S+P}f4 3.{S+P}e6 {S+P}e5 4.{S+P}d7 {S+P}d6! ({S+P}d5? 5.{S+P}c7#) 5.{S+P}b7 {S+P}b5 6.{S+P}c7#.
(b) 1.Sf1! g3 2.S-g3 {S+P}g2 3.{S+P}f4 {S+P}f3 4.{S+P}e5 {S+P}e4 5.{S+P}d6 {S+P}d5 6.{S+P}c7#.

C1.6 is another 'self-duel', in which a {wR+bB} must entice itself to an open file. 1.R-g3! waiting (1.Rxg3? is stalemate) {R+B}e1/xe5 (other moves leave short mates) 2.{R+B}g1/g5 followed by 3.{R+B}f8/h8#.

C1.7 is an extended version of C1.6, and is probably the most complex original in this whole collection (but was not well-received on publication). 1.R-b2! (threat 2.{R+B}b8#). If {R+B} now or later moves to an open file, White has an immediate mate on the 8th rank, and if it moves to the 1st/5th rank, White has a mate in 2 by {R+B}g1/g5. The main line is 1...{R+B}a3/c3! 2.{R+B}c3/a3! ~ 3.{R+B}g1/g5 ~ 4.{R+B}f8/h8#.

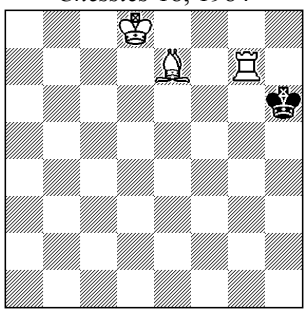
C2. Free-Coexistence Chess *(seven problems – but see also appendix problem* Z12*)*. In this very different variant, any number of pieces of either colour can 'coexist' on the same square and are also 'transparent'; any piece can make a normal move on to or through an occupied square, capturing one enemy piece at most. Pawns move directly forward to coexist. Thus the movement and capturing power of a piece is unaffected by the presence of other pieces (apart from pawn captures and considerations of check), making the variant only just viable; lines and squares cannot be blocked, leaving captures and threats of capture as the only possible tactics. In the solutions and diagrams, coexisting pieces are bracketed together by '{}', a coexisting move is written as '-', and the piece remaining on a square after a later move is indicated in normal brackets '()'.
Fool's mate can be easily forced; 1.Ra-e1+ K-f7(e.g.) 2.Q-f1+ Kg6 (bPf7) 3.Re-g1#.

C2.1 CT
Chessics 18, 1984 (version)



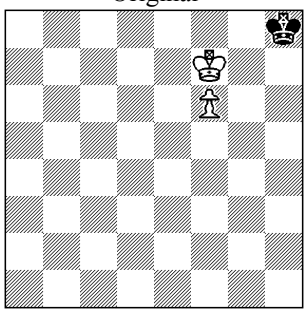
H#2 (b) Pd2>d3 (c) Rf2>c2

C2.2 CT
Chessics 18, 1984



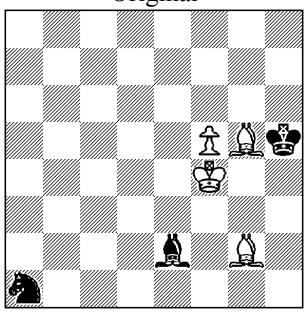
Blundermate in 2

C2.3 CT
Original



#4

C2.4 CT
Original



#4

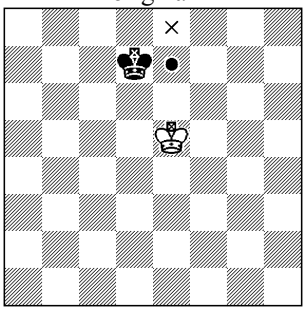
C2.1 has three parts in which the wR and wB, individually or together, guard some or all of the bK's field from the *inside*. Part (c) features three pieces on one square.
(a) 1.Ke4 Rf4+ 2.K-f4 Bd6#. (b) 1.Kd5 Bd4 2.K-d4 Rd2#. (c) 1.Kd5 R-c5+ 2.K-c5 d4#.

C2.2 requires Black to move and leave White with a forced #2. Here, Black makes an oppo-coexisting move to give White a normal waiting key. The two defences and mating moves are normal, but the mates involve auto-transparency.
1.K-g7 Bg5! (waiting) 2.Kh8/f8(wRg7) Bf6/h6#.

C2.3 is a simple ending in which White uses first auto-coexistence and then auto-transparency to force a normal mate. 1.f-f7 Kh7 2.f8R(wKf7) Kh6 3.R-f5 Kh7 4.Rh5#.

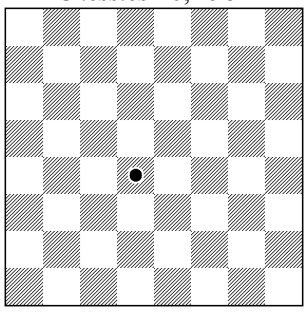
C2.4 features a duel between wB and bB+bS, in which the bB takes up a strong defensive position coexisting with the bK, but is forced away by *zugzwang* (which is also used to dispose of the bS).
1.Bc6! (threat 2.Be8#) B-h5! (1...Bb5? 2.Bf3#) 2.Ba4 Sb3/c2 3.Bxb3/c2 B~ 4.Bd1/f7/g6#.

C2.5 CT, version F Moralee
original



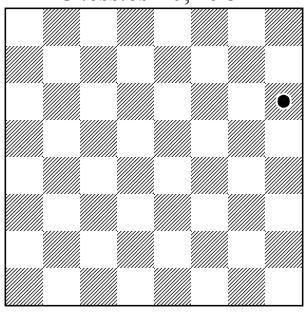
White Zero e8 {wP+wP}e7
Blundermate in 2

C2.6 CT
Chessics 10, 1981



{wK,R,B,S,P+bK,R,B,S}d4
#2

C2.7 CT
Chessics 10, 1981



{wK,P+bK,R,R,B,S}h6
H#3

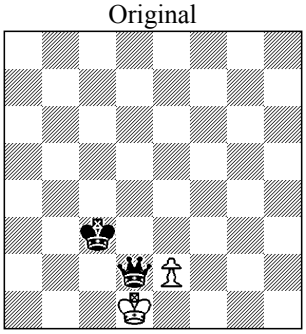
C2.5 is an oddity featuring the only fairy piece in this whole collection, a Zero being the normally harmless 0,0 leaper; the diagrammed position also contains a pair of coexisting wPs. As with C2.2, Black plays to leave White a forced mate in 2. Normal coexisting pieces cannot interact with one another, but here the Zero actually delivers mate by attacking a coexisting K from 'inside'.
1.K-e7 e-e8Q(wP/bKe7)+ 2.KxZe8(wPe7, wQ/bKe8), e-e8Z#. The final position has wQ/wZ/bK on e8.

C2.6 is another oddity, with trivial play from a diagrammed position containing nine pieces all on the same square – and thus being illegal, since the two kings (both now immobile) could never have reached their coexisting state. (Note that appendix problem Z12 shows two kings reaching the same square legally.)
1.d5! (waiting). Any black piece now moving is captured with mate by the corresponding white piece.

C2.7 also has an illegal position with immobile kings, but its seven coexisting pieces produce somewhat more interesting play.
1.Bg7+ hxg7 2.Rh8+ gxh8S 3.Sf7+ Sxf7#. (For simplicity, the various pieces remaining on h6 are not indicated here.)

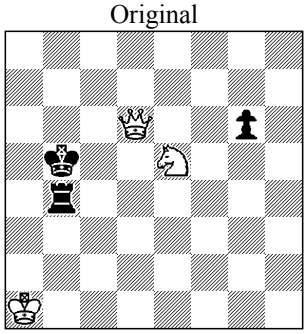
C3. Auto-Coexistence Chess *(six problems)*. Pieces are not transparent, but two (though no more than two) pieces of the same colour may occupy ('coexist' on) the same square, retaining their individual identity so that only one is able to move at a time. Both pieces are invulnerable to capture or check while coexisting (since a capture of either would leave pieces of opposite colour on the square), this invulnerability giving play an extra dimension (including the possibility of king checks) without adding too many complications. Pawns move directly forward to coexist. In the solutions and diagrams, coexisting pieces are bracketed together by '{}', a coexisting move is written as '-', and the piece remaining on a square after a later move is indicated in normal brackets '()'. For fool's mate, the mated king must be separated from its own forces; 1.K-f2 Sf6 2.Kg3(wPf2) Q-d7 3.Kh4 Qg4(bPd7)#.

C3.1 CT
Original



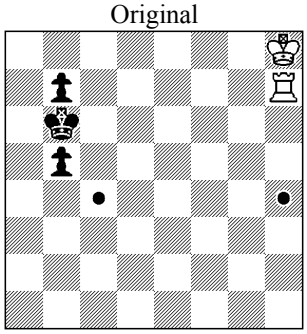
(wK in check)
H=3½

C3.2 CT
Original



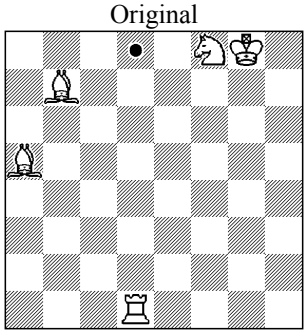
Series-H#6

C3.3 CT
Original



{bS+bS}b4, {bR+bR}h4
Series-H#6

C3.4 CT
Original



{bK+bQ}d8
#2

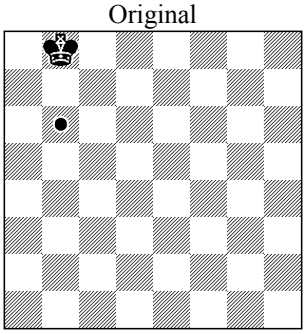
C3.1 starts with wK in check, but shows a surprising stalemate of bK/bQ by wK/wP.
1...K-e2 (forced) 2.K-d2 Kf2(wPe2) 3.Qe1(bKd2)+ Kf3 4.K-e1 K-e2=.

C3.2 has the bK using coexistence with the bR in order to get past the wQ to the mating square, though the bR must get out of range before the 'coexistence mate' (in which the wQ is protected only by coexistence) can be effective.
1.K-b4 2.Kc3(bRb4) 3.Rd4 4.K-d4 5.Ke4(bRd4) 6.Rd2 Q-e5#.

C3.3 uses the '2 pieces on a square' limitation, leading to a normal mate in which all the bK's three flight squares have to be doubly blocked. 1.Ka6 2.b-b5; 3.Sb6(bSc4) 4.S-b6 5.Rb4(bRh4) 6.R-b4 Ra7#. Note that moves 3 and 5 might conceivably be considered to be duals, since in each case either of two identical pieces may have made the move!

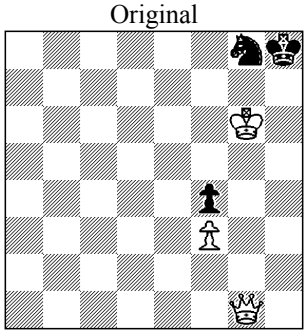
C3.4 is a crude 2-mover in which the bK starts off under double attack – but is *not* in check! A give-and-take key introduces *zugzwang* as the only way to separate coexisting pieces, and capture as the only way to prevent them rejoining.
1.Bc6! (waiting) Kc8/Ke7(bQd8) 2.Rxd8/Bxd8#.

C3.5 CT
Original



{wK+wS}b6 #3

C3.6 CT
Original



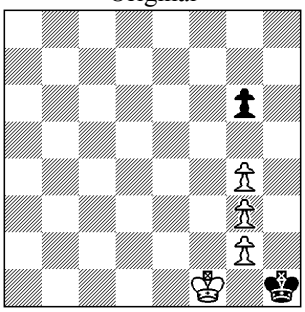
#5

C3.5 is a simple ending in which the triangulating wK uses its coexisting invulnerability to deliver check and so give mate.
1.Kc6(wSb6) Ka7 2.Kc7 Ka6 3.K-b6#.

C3.6 is in effect another ending, with *zugzwang* again the weapon used to deal with a coexisting bK. Note that White must wait until bK and bS are together on g8 before forming his own K+Q coexistence on f8.
1.Qe1! K-g8! 2.Qe8 Kh8(bSg8) 3.Kf7 K-g8+ 4.Q-f7 Kh8(bSg8) 5.Qxg8(wKf7)#.

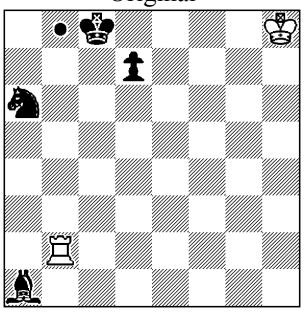
C4. Oppo-Coexistence Chess *(nine problems – but see also appendix problem Z6)*. As Auto-Coexistence, except that only pairs of pieces of opposite colour may coexist, such pairs being invulnerable to capture (which would leave pieces of the same colour on the square). There is a free choice between capturing and forming a coexisting pair (except that a pawn would need different moves for the two). In the solutions and diagrams, coexisting pieces are bracketed together by '{}', a coexisting move is written as '-', and the piece remaining on a square after a later move is indicated in normal brackets '()'. This variant is more interactive and more suited to forced play than Auto-Coexistence, and is perhaps the most promising of all the variants presented here. A simple fool's mate using oppo-coexistence is 1.e4 ~ 2.Qg4 ~ 3.Q-d7#. A mate like this can be forced, but the play is not trivial. Thus after 1.e3 c5 2.Qf3 Qa5 Black can hold out to move 6; 3.Q-f7+ Kd8 4.Q-e7(bPf7)+ Kc7 5.Q-d7(bPe7)+ Kb6 6.Q-b7(bPd7)#.

C4.1 CT
Original



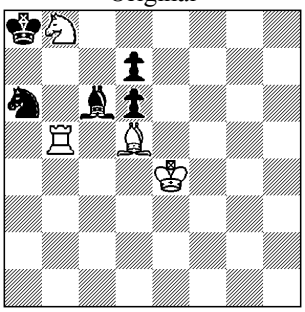
H#4

C4.2 CT
Original



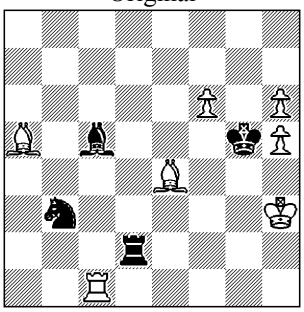
{wS+bR}b8 H#2

C4.3 CT
Original



H#2

C4.4 CT
Original



H#2, 2 solutions

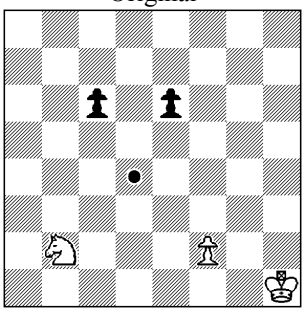
C4.1 shows a simple wK coexistence mate after the bP 'walks' through the wPs.
1.g5 g-g5 2.g4(wPg5) g-g4 3.g3(wPg4) g-g3 4.g2(wPg3)+ K-g2#.

C4.2 ends in a coexistence mate by the wR, but its main point is to show two pairs of identical Black and White pieces swapping places. 1.R-b2(wSb8) S-a6 2.Sb8(wSa6) R-b8(bRb2)#.

C4.3 shows a cycle of swaps by the pieces on b8, c6 and b5.
1.S-b8 S-c6(bSb8) 2.B-b5 (wSc6) R-b8(bBb5)#.

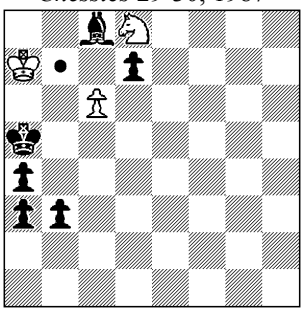
C4.4 has matched solutions in which the bK must capture two wPs to deny himself a coexistence escape, while White neutralises the Black force by making first a capture and then a coexistence move.
1.Kxh5 Rxc5+ 2.Kxh6 B-d2#. 1.Kxh6 Bxd3+ 2.Kxh5 R-c5#.

C4.5 CT
Original



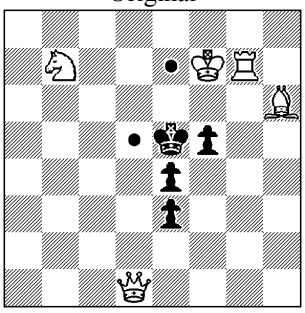
{wQ+bK}d4 #2

C4.6 CT
Chessics 29-30, 1987



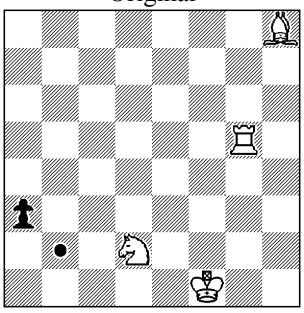
{wR+bP}b7 #2

C4.7 CT
Original



{wP+bB}e7 {wS+bS}d5 #2

C4.8 CT
Original



{wQ+bK}b2 S#6

C4.5 is a simple directmate with a waiting key which entices one of the bPs to a square where the wQ can use it to deliver a coexistence mate. 1.f3! (waiting) c5/e5 2.Q-c5/Q-e5#.

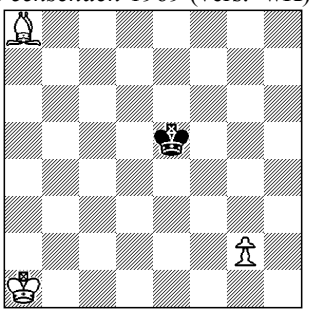
C4.6 has a key in which a white piece vacates the 'coexistence square' b7, allowing a mating threat on that square by another piece. Black defends by vacating the square with bP moves which allow coexistence mates on three other squares.
1.R-b3(bPb7)! (threat 2.S-b7#) b6/b5/bxc6 2.K-g6/R-g5(bPb3)/S-c6#. Note the wK mate in the first variation, also the try 1.Rb6(bPb7)? K-b6+!

C4.7 is another directmate with two awkward-looking pairs of coexisting pieces, but its four defences include a capture and a coexistence move by the same piece to the same square; the capture allows a coexistence mate on the square, while the coexistence move blocks it as a flight. The third defence allows another coexistence mate, and the fourth an unusual double-check mate.
1.Sf4(bSd4)! (threat 2.Sg6#) Sxf4/S-f4/f4/K-f4 2.B-f4/Qa1/Q-d5/Sd3#.

C4.8 is a selfmate in which the wQ delivers a series of checks, each one forcing the bK to take refuge in coexistence with his attacker. In this way, the bK is dragged to a square on which he becomes the attacker and delivers a coexistence mate.
1.Qb3(bKb2)+ K-b3 2.Qc4(bKb3)+ K-c4 3.Qd4(bKc4)+ K-d4 4.Qe4(bKd4)+ K-e4 5.Qf3(bKe4)+ K-f3 6.Qf2(bKf3)+ K-f2#.
*The ninth Oppo-Coexistence problem **C4.9** is on the final page.*

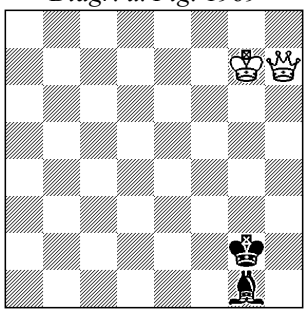
C5. Auto-Alliance ('Augsburg') Chess *(six problems)*. A piece can move to a square occupied by one or more other pieces of its own colour to form an 'alliance' of pieces. On a subsequent move, any of the 'allied' pieces may make a normal move or capture, either moving alone or carrying one or more of the others with it. A move to a square occupied by enemy pieces must result in the capture of all of them. Pawns move directly forward to form alliances; a pawn carried to its 8th rank will promote, but if carried to its 1st rank will have no move of its own. A king may not take part in an alliance, but a queen, whether present originally or formed by promotion in the play, is always (but illogically) taken to be a {R+B} alliance. In the solutions, '-' is used for an 'allying' move and '{}' for an alliance, with the piece controlling an allied move underlined and any unmoved pieces indicated by '()'. A fool's mate is 1.Q-c2 ~ 2.{Q+P}xc7 ~ 3.Qxd8(wPc7)#.

C5.1 E Bartel
Feenschach 1969 (vers.+wK)



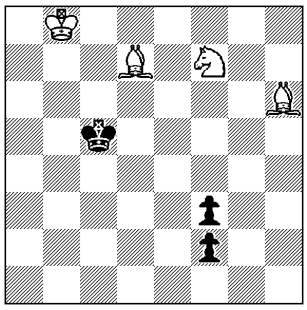
H#3

C5.2 E Bartel
Diagr. u. Fig. 1969



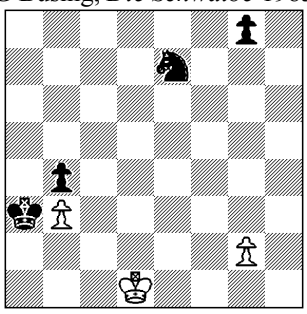
H#2 with set play, 2 solutions

C5.3 F Hoffmann
Feenschach 1973



Series-H#4, (b) bK>h4

C5.4 H Gruber, A Tüngler & G Büsing, *Die Schwalbe* 1983



bPg8 H#6

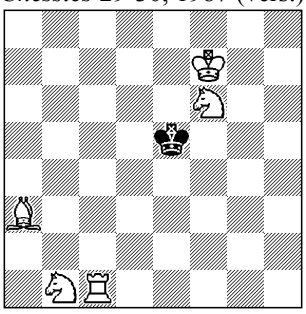
C5.1 includes a double switchback, and shows the three alliance phases of pieces allying, moving together and separating. (It would also be sound under the Free-Alliance rules given later.)
1.Kf4 B-g2 2.Kg3 {B+P}a8(=B+Q) 3.Kh2 Qg2(wBa8)#.

C5.2 shows the special Augsburg feature of Q as R+B; it also exploits the forbidding of K alliances by using the bB to block a flight-square. Set: 1...Qc2+ 2.Kh1 Be4(wRc2)# and 1...Rh8(wBh7) 2.Kh1 Be4#. Play: 1.Bh2 Qg6+ 2.Kh1 Be4(wRg6)# and 1.Bf2 Be4(wRh7) 2.Kg1 Rh1#.

C5.3 shows bPs allying, promoting identically (though such promotions need not be identical), moving together and then separating to block flight squares.
(a) 1.f-f2 2.{P+P}f1(=B+B) 3.{B+B}c4 4.Bd5(bBc4) Be3#. (b) 1.f-f2 2.{P+P}f1(=S+S) 3.{S+S}g3 4.Sh5(bSg3) Bg5#.

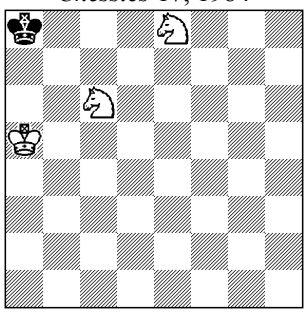
C5.4 is taken from an article on 'superexcelsior' problems, and shows a S+P alliance moving both as S and as P, carrying the P from its 1st rank to promotion. It also shows a promoted Q dividing into R+B.
1.S-g8 g4 2.{S+P}e7 g5 3.{S+P}e5 g6 4.{S+P}d3 g7 5.{S+P}c1(=S+B) g8Q 6.Bb2(bSc1) Ra8(wBg8)#.

C5.5 CT
Chessics 29-30, 1987 (vers.)



#2

C5.6 CT
Chessics 17, 1984



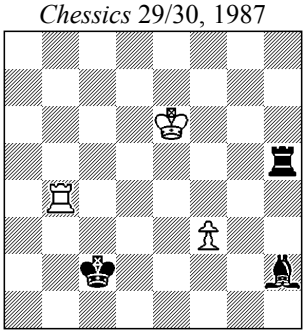
#3

C5.5 is a directmate with a give-and-take key which combines R and B (making a Q). The three mates are moves by the complete Q and by R and B separating. 1.B-c1(=wQ)! (waiting). 1...Kd4/Kf5/Kd6 2.Qc3/Rc5(wBc1)/Bf4(wRc1)#.

C5.6 is a simple directmate which has no separating move, and so would be sound in 'Auto-Additive Chess' – and was indeed originally published as such. 1.S-a5! Ka7/Kb8 2. {K+S}c6+ Ka6/Ka8/Kc8 3.Sc7/Sc7/Sd6#.

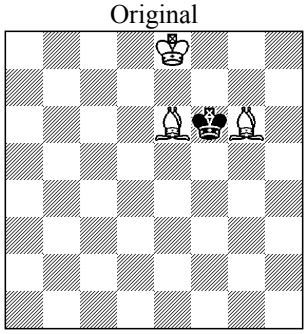
C6. Free-Alliance Chess *(six problems)*. As for Augsburg, but alliances may now be of pieces of either or of both colours. Kings may take part in alliances (leading to the drawback that flight-squares cannot be blocked), but queens are regarded as single pieces. A piece or alliance of pieces moving to a square containing one or more enemy pieces has the free choice of capturing all, some or none of them (though the nature of a pawn's allying move depends on whether or not it is capturing). In the solutions, '-' is used for an 'allying' move and '{}' for an alliance, with the piece controlling an allied move underlined and any unmoved pieces indicated by '()'. An alliance of pieces of both colours may not use an enemy piece to move the alliance or to capture friendly pieces; e.g. a {wB+bR} alliance on a1 could on White's turn of play move to c3 but not to c1, and, if c3 contained a {wS+bP+bQ} alliance, could capture the bP and/or the bQ but not the wS. A fool's mate (with auto-alliances only) is 1.K-f1 B-b7 2.{wK+wB}-g2 {bB+bP}a6 3. {wK+wB}xh8(wPg2) Sc6#.

C6.1 CT
Chessics 29/30, 1987



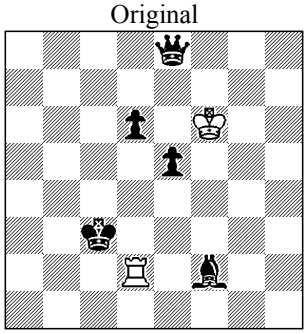
Series-H#5

C6.2 CT
Original



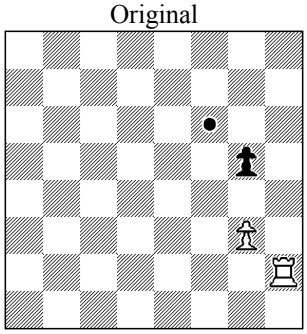
Series-H#7

C6.3 CT
Original



H#3

C6.4 CT
Original



{wK+bKf6} H#3

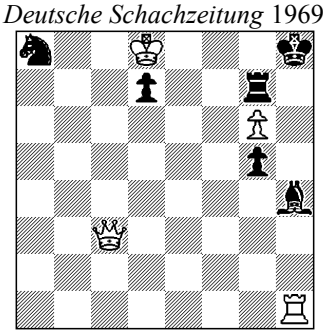
C6.1 shows 2-piece and 3-piece auto-alliances. The bR carries the bB to the bK's square; the bB then carries the bK to its final square, and leaves it there to be mated while itself moving again to shut off the bR.
1.R-h2 2.{R+B}-c2 3.{K+B}g6(bRc2) 4.{K+B}e8 5.Bc6(bKe8) Rb8#.

C6.2 has a starting position with two light-squared wBs, a situation which could have arisen through alliances as well as by promotion. In the play, the bK carries the wBs around (separately or together) to create its own mating net. The position and effect is curiously similar to that of the Oppo-Kick problem B6.1.
1.K-g6 2.{K+B}f6 3.{K+B}-e6 4.{K+B+B}d6 5.{K+B}c6(wBd6) 6.{K+B}b7 7.{K+B}c8 Ba6(bKc8)#.

C6.3 shows another Black and White 3-piece alliance, but this time moved by the bB and wR in turn. The bK is carried to its mating square and the mate is delivered by a separating move.
1.K-d2 {wR+bK}-f2 2.{wR+bK+bB}h4+ {wR+bK+bB}h6 3.Bf8(wR+bKh6) Rh8(bKh6)#.

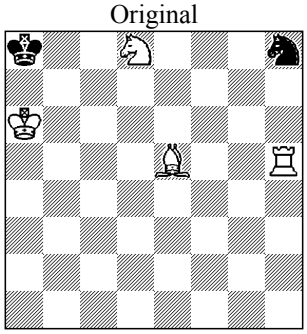
C6.4 features a wK+bK alliance (effectively a neutral K). This alliance could only have been formed after one king had allied with a pawn on its 2nd rank which then made a double-step move to the other king; it can only be broken after a further alliance. As in the previous problems, all alliances have been dissolved when the final position is reached.
1.{wK+bK}-g5 Rh5+ 2.{wK+bK+bP}-h5 {wK+wR+bP}f5(bKh5)+ 3.{wR+bP}f4(wKf5) Rh4(bPf4)#.

C6.5 W Speckmann
Deutsche Schachzeitung 1969



#2

C6.6 CT
Original



#2

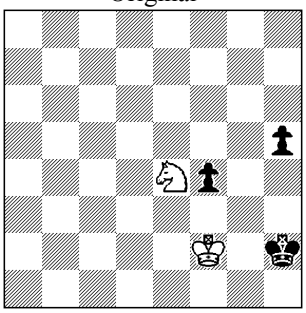
C6.5 uses the wQ to represent a {wR+wB} alliance. It was composed as an Augsburg problem with king alliances, and was later classified as 'Kombi Chess'; it shows king auto-alliances in the mates and other alliance effects in the key and the try play. 1. {R+B}f6? (threat 2.Rf8(wBf6)#) is met by 1...Kg8! 2.{R+B}-d8+ K-g7. The key is 1.Rc8(wBc3)! (threat 2.R-d8/K-c8#). 1...g4+/Sb6/Sc7 2.K-c8/R-d8/Kxc7#.

C6.6 shows the R having to ally with an enemy piece, but managing to break free of the oppo-alliance and mate.
1.Rxh8? is stalemate, so White must play 1.R-h8! The threat is 2.R-d8(bSh8)#, (but not 2.{wR+bS}-d8+ {wR+bS}f7 etc.). 1...Sf7 (wRh8)/{wR+bS}f7/{wR+bS}g6 2.Sxf7/Ra7(bSf7)/R-a6(bSg6)#.

Z. Appendix *(12 problems).*

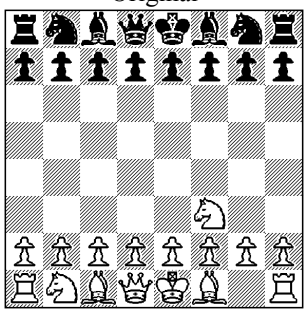
This appendix contains miscellaneous problems that go beyond the variants already described, either by modifying their rules or combining them in different ways.

Z1 CT
Original



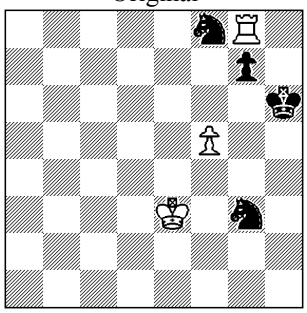
Null Auto-Skip
#2

Z2 CT
Original



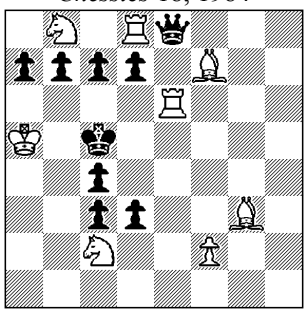
Null Oppo-Skip
(a) SPG3.0 (b) #2

Z3 CT
Original



e.p. Oppo-Skip
#2

Z4 CT
Chessics 18, 1984



Transpnt Oppo-Coexistence
#2

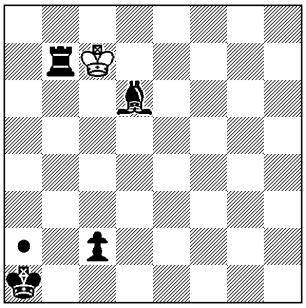
Z1. As Auto-Skip (B1), but 'null' moves where a piece skips back to its original square are allowed.
This has the null key 1.S-f2-e4! (waiting). 1...f3/g4 2.Sg3 (checking with the K)/S-f2-g4#.

Z2. As Oppo-Skip (B2), but 'null' moves where a piece skips back to its original square are allowed. This uses a null move in the SPG. (a) 1.Sf3 Sc6 2.Se5 (Se4?? would be self-check by the bS *via* d4 and c2) S-e5-c6 3.Sf3 Sb8.
(b) 4.c3! with no defence to the double-threat 5.Qa4/Qb3#. If 1.c4? b5! defeats both threats, the first directly and the second by a skip over c4.

Z3. As Oppo-Skip (B2), but a pawn able to capture *en passant* may instead skip over the enemy pawn, bringing it back to its 3rd rank in the process. Here, the e.p. skip gives a double-check mate by virtual promotion on f8 as well as through bP brought back to g3.
1.R-g7-g4! (waiting). 1...g5/Se6/Sd7 2.f-g6(e.p.)-g7/Rg6/Rg7-d7-d5#.

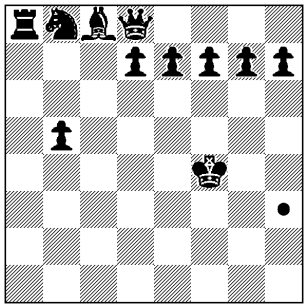
Z4. As Oppo-Coexistence (C4), including the prohibition on capturing coexisting pieces, but a piece may also move *through* the square occupied by a piece of the opposite colour. The play involves a variety of strategies.
1.R-d3! (threat S-d7#). 1...d6/d5/dxe6/d-e6/b6+ 2.B-d6/R-d5/R-(or x)c3/Rd5/K-b6#.

Z5 CT
Chessics 29-30 1987



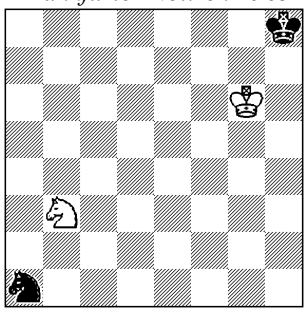
Forced Oppo-Additive
{wS+bQ}a2 H#2, 2 solutions

Z6 CT
Chessics 29-30 1987



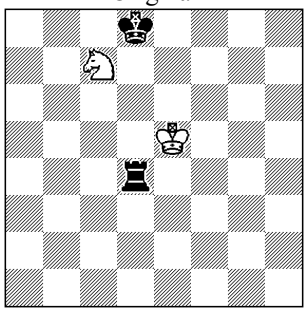
Forced Oppo-Additive
{wK+bP}h3 #11

Z7 H Schiegl
Frankfurter Notizen 1965



Oppo-Alliance
H#3

Z8 CT
Original



Oppo-Alliance
H#3½

Z5. This problem and the next represent a more radically modified variant than with the last four. The rules are as in Oppo-Additive Chess (C1), but without the choice between combining and capturing after a move to an occupied square; instead, a simple piece must combine and a combined piece must capture. This rule allows interesting king-mates, but has the drawback that legal positions must include at least one combined piece to have made the last capture; here, the wS is only there for legality. The two solutions feature matched play in which the wK is carried by the bB/bR to deliver the mate.
1.Rb3 K-d6 2.{wK+bB}a3+ {wK+bB}xa2#; 1.Ba3 K-b7 2.{wK+bR}b3+ {wK+bR}xa2#.

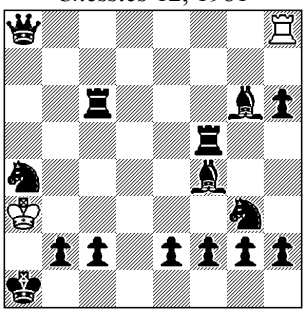
Z6 has the same rules as Z5. In it, the lone wK is not only able to deliver mate but is actually invulnerable; Black can only attempt to escape being mated by keeping his king on a higher rank for as long as possible.
1.{wK+bP}g4+ Ke5 2.{K+P}f5+ Kd6 3.{K+P}e6+ Kc7 4.{K+P}d6+ {K+P}d5 5.{K+P}c6+ {K+P}c5 6.{K+P}b6+ Kd6 7.{K+P}c6+ Ke5 8.{K+P}d5+ Kf4 9.{K+P}e4+ Kg3 10 {K+P}f3+ Kh2 11.{K+P}g2#.

Z7. As Free-Alliance (C6), but with oppo-alliances only). This shows the variant allowing dovetailing of moves in a simple H# position. 1.S-b3 {wS+bS}d4 2.{wS+bS}f5 {wS+bS}h6 3.Sg8(wSh6) Sf7#.

Z8 is in the same variant as Z7 and has an equally simple position, but shows two separate king-alliances.
1...K-d4 2.K-c7 {wS+bK}a8 3.{wK+bR}d7 Kc8 (bRd7) 4.Ra7 Sb6(bKa8)#.

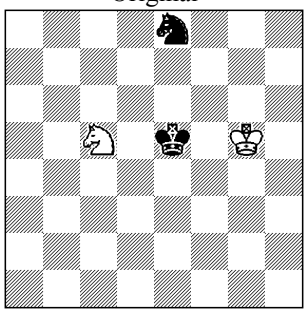
Z. Appendix (continued)

Z9 CT
Chessics 12, 1981



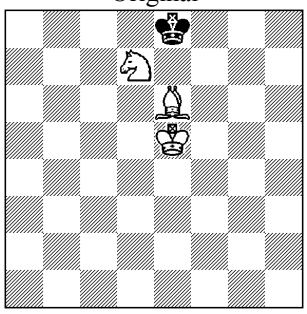
Auto-Cancellation
Series H#7

Z10 CT
Original



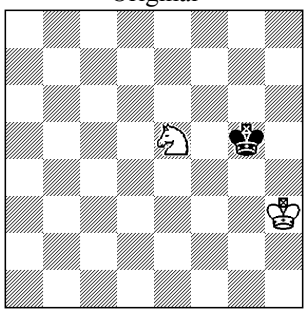
Sensitive Free-Cancellation
#2

Z11 CT
Original



Auto (non-cap) Skip-Tag
#1 after 6 tags

Z12 CT
Original



Free-(Kick+Coexistence)
H#2

Z9. Oppo-captures and checks are as normal, but pieces may also capture others of the same colour, both captured and capturing pieces being removed together. This shows 7 successive auto-cancellations (compare A1.1).
1.S*e2 2.B*h2 3.R*f2 4.B*c2 5.R*h6 6.Q*g2 7.S*b2 Rh1#.

Z10. This trifle differs from Z9 in having sensitive kings as well as free cancellations; it shows destructive reactions taken to their limit, a king being in check if it attacks/guards pieces of either colour or if pieces of either colour attack/guard it. Under these circumstances, mate is easy!
1.Kg4! (waiting) Sc7/g7 2.Se4#. (1...Sd6/f6?? would be self-check.)

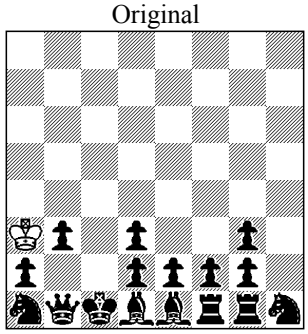
Z11. This more complex problem takes transitive reactions to (or beyond?) their limit. After a move to a square occupied by a piece of the same colour, *both* pieces move on simultaneously, possibly to other occupied squares. Thus a branched chain can result, but may not end in a capture or threaten check (meaning that the final mate will be a normal one). In this problem, all the skips happen to be to unoccupied squares, and the single move (a reorganisation of the White pieces) is written as a series of skips.
1.{K-e6-f6, B-d7-f5, S-f6-e4, K-f5-g5, B-e4-c6, S-g5-e6, Kf6}#. Without the '6 tags' in the stipulation, there would be a 7-tag solution beginning with S-e5-f7, followed by the rest of the move reflected vertically.

Z12 is a lone attempt to mix different classes of reaction in a single variant, the aim here being to produce a problem ending in a mate with both kings legally immobilised on the same square (unlike the illegal situation in C2.6 and C2.7). In it, pieces may either kick or coexist with other pieces of either colour. 1.Kf6 Kg4 2.K-e5 {S-g4, K-e5}#.

Conclusion

What are the futures of all these variants? Some are of course already established, though not I think widely used. But the majority must counr as my own inventions, and I would love to believe that a few of these might at some time be taken up by other composers (preferably, but not necessarily, in the forms described here). There are certainly difficulties and drawbacks; thus, my new 'Destructive' variants are limited in scope, my 'Transitive' variants are by contrast highly complex, while developing any 'Combinative' variant involves overcoming the difficulty of how to represent several pieces on one square. However, the possibilities in these variants, as demonstrated by the wide variety of illustrative problems that I have managed to compose, are so great that some at least ought to be worth developing further. I will hazard the guess that **Oppo-Coexistence Chess** is the most likely variant to prove worth exploring, if only because it has the greatest number of illustrative problems, too many to fit on to a single page. So here is the last one as a final problem, hopefully providing a fitting conclusion to this account.

C4.9 CT
Original



Oppo-Coexistence #2

C4.9 is a light-hearted illustration of a lone wK defeating the entire black forces.
1.K-b3 (waiting); 1...b2++/Qb2 2.K-b2#; 1...Sc2/Qc2/Bc2 2.K-c2#.