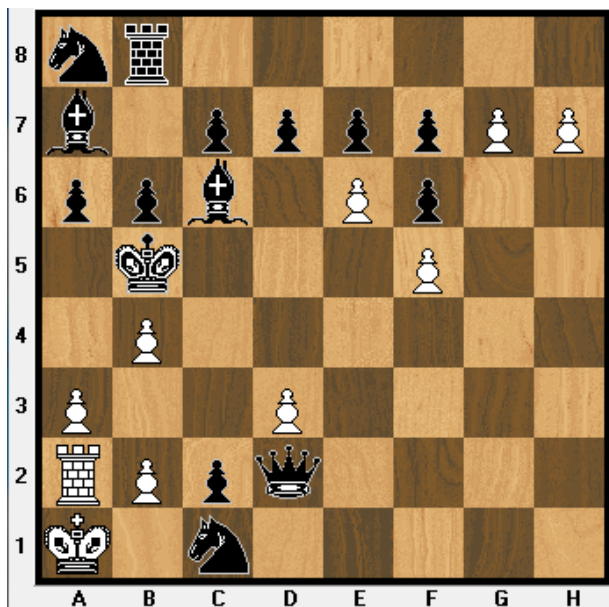


Yoav Ben-Zvi – WCCI 2016-2018, Retro section H

1.

Yoav Ben-Zvi – H07 5th FIDE World Cup in Composing 2017, Retro section
1st Commended



10+15 nr6/b1ppppPP/ppb1Pp2/1k3P2/1P6/P2P4/RPpq4/K1n5

A - Last Move: Of the Game and by each piece in the diagram

B - Pieces that played a fully determined path

Analysis

All 16 pawns are on the board so there were no promotions. [bPh7] captured 5 of White's 6 missing pieces, on its way to c2 across d3. Prior to the completion of the 5 captures by bPd3xc2, [wPd2] could not advance to d3 so [wBc1] stands locked at home therefore it is the last White piece to be captured, by bPg7xBf6. The pieces captured by [bPh7] include [wBf1] and [wRh1] since, with wB standing locked at c1, [wRa1] could not have escaped the SW corner cage.

When bPg7xBf6 is played, [bPh7] has already completed the capture of 5 White pieces and stands on c2 (required to allow wPd2-d3 to release [wBc1] prior to its capture at f6) so after the capture of the wB on f6 the only White officers left are wK and wRa2 both of which stand locked in their final position (to get to a1 behind wRa2, wK must come from b1, moving to b1 before, or immediately after, the bP arrives at c2) so White has only a limited number of pawn moves remaining. With bP standing on g7, [bBf8] is locked at home. In order that [bBf8] can subsequently move to a7, bPb6 must still be standing on b7 (it could not have advanced to b6 where it would obstruct the path of bB to a7) so [bBc8] was also locked at home. With both Black bishops locked at home, the Black "Central cage" is also locked so bK and bQ remain standing at e8, d8.

Following the capture of the wB by BPg7xBf6 Black moves his king, queen, both bishops and [bPb7] to their final position while White plays its remaining pawn moves. Counting the maximal number of moves available for each wP individually gives the following: 1 move by wPb4 (cannot start on c2 as it is occupied by bP) plus 4 by wPe6 plus 3 by wPf5 plus 5 by wPg7 plus 5 by wPh7 for a total of 18. It is known (as noted above) that both [wBf1] and [wRh1] were released from their home cage and captured prior to the release (by wPd2-d3) of [wBc1] and its capture by bPg7xBf6. This means that, prior to bPg7xf6, either [wPe2] or [wPg2] have advanced to row3, to release [wBf1] from its home cage, and that one of the wPs e2,f2,g2,h2 have advanced to row4, to allow the escape of [wRh1] from the South-East corner via row3. This means the maximum combined number of wP moves that remain available is reduced by 3, in case the advance to row4 is by [wPf2] or [wPh2] and by only 2, in case the advance to row4 is by [wPe2] or [wPg2] (combining the release of wR and wB), for a maximal total of $18-2=16$. This means that Black needs to get his king, queen and bishops from home to final destination in no more than 16 moves.

[bBf8] needs to play 3 moves to reach a7 (f8-h6-e3-a7) followed by bPb7-b6 releasing [bBc8]. The release of [bBc8], by bPb7-b6, occurs after [bBf8] has arrived at a7 so bP has previously vacated a7 and stands on a6 preventing access to a6 by Black's bishop, queen and king. If [bBc8] plays only 2 moves (c8-b7-c6) then bK cannot move out of the Central cage to the left, via c8 (when c8 is vacated by the released bB, bPs already stand on a6 and b6 so with bB standing on b7 or c6 the exit of the bK is blocked) therefore bK must exit to the right side requiring 8 moves to reach b5. The bQ then needs 3 moves to reach d2 (d8-f8/h8-h6-d2) making for a total of $3+1+2+8+3=17$ which exceeds the limit (noted above) of 16 (see Try1 below). Therefore [bBc8] plays at least 3 moves to allow the bK to exit to the left, via c6, which requires 5 moves (e8-d8-c8-b7-c6-b5). Excluding the bQ, this makes for a total of $3+1+3+5=12$ moves leaving $16-12=4$ moves for [bQd8] to reach d2. It cannot do so by crossing over the bK to the right (with bQ inside the North-West corner along with bNa8, bBa7 and bRb8 there is no room for the cross over) therefore the bQ must also exit via the left side reaching d2 in 4 moves by d8-c8-b7-g2-d2. To allow the bQ access to g2 the clearance move by [bBc8] must be bBb7-h1, a "Bristol".

The full paths of Black's king, queen and bishops have been uniquely determined, totaling (with the move bPb7-b6) 16 moves so wPs must be ready to play all 16 tempo moves. It has been shown that to enable the wPs to play 16 moves from the critical position (immediately before bPg7xBf6, see the diagram below) one of the wPs e2, g2 had previously advanced to row4 (releasing [wBf1] and [wRh1]) and the other remained on row2. wP standing on e2 would prevent entry of bN to c1 (it could not come from d3 which is occupied by wP before wB can vacate c1, see Try2 below) therefore wP stood on e4, wPs f2,g2,h2 stood at home and wPc4 stood on b3 or c3. wPs f2,g2,h2 advance a single step on their first move to complete the required number of tempo moves. wPe2 advanced to e4 after [bPh7] had reached d3 and before [wRh1] could escape the South-East corner (via e3) so [wRh1] was captured on c2, reaching c2 by crossing c3. This determines that the last move of [bPh7] was bPd3xwRc2 and that the last move of wPc2 could not be wPc3xbRb4 (standing on c3 it obstructs the path of [wRh1] to c2). The capture of the wR on c2 means [wBf1] was captured earlier on d3/e4/f5/g6. This occurs before [wPe2] can advance to e4 (obstructing the advance of [bPh7]) and after it has vacated e2 (to release [wBf1] with wP standing on g2) so White played wPe2-e3. The rook captured by wPc2xbR3 was released from the North-East corner by bPh7xg6, not by bPg7xf6, so the first capture of the game was on g6, not on f6 or b3.

Try1 Retraction: -1...bKc5-b5? -2.Pb3-b4+ Kd5-c5 -3.Pe5-e6 Ke6-d5 -4.Pf4-f5+ Kf5-e6
 -5.Pf3-f4 Qh6-d2 -6.Pg6-g7 Qf8-h6 -7.Pf2-f3 Qd8-f8 -8.Pg5-g6 Kg6-f5 -9.Pg4-g5 Kg7-g6
 -10.Pg3-g4 Kf8-g7 -11.Pg2-g3 Ke8-f8 -12.Ph6-h7 Bb7-c6 -13.Ph5-h6 Bc8-b7
 -14.Ph4-h5 Pb7-b6 -15.Ph3-h4 Be3-a7 -16.Ph2-h3 Bh6-e3 -17.Pe4-e5 Bf8-h6 -18.???

White is in Retro-Stalemate

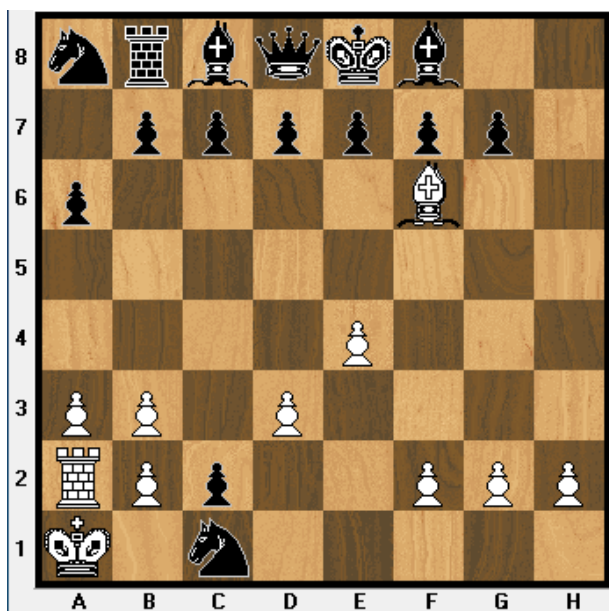
Try2 Retraction: -1...Bh1-c6 -2.Ph6-h7 Kc6-b5 -3.Ph5-h6 Kb7-c6 -4.Ph4-h5 Kc8-b7
 -5.Ph3-h4 Kd8-c8 -6.Ph2-h3 Ke8-d8 -7.Pg6-g7 Qg2-d2 -8.Pg5-g6 Qb7-g7 -9.Pg4-g5 Qc8-b7
 -10.Pf4-f5 Qd8-c8 -11.Pe5-e6 Bb7-h1 -12.Pe4-e5 Bc8-b7 -13.Pf3-f4 Pb7-b6
 -14.Pf2-f3 Be3-a7 -15.Pb3-b4 Bh6-e3 -16.Pe3-e4? Bf8-h6 -17.Pe2-e3 Pg7xBf6

wB must retract to c1 before retracting wPd2-d3 but, with wPs standing on d3 and e2, bN cannot vacate c1 for the wB.

Solution

Retraction: -1...Bh1-c6 -2.Ph6-h7 Kc6-b5 -3.Ph5-h6 Kb7-c6 -4.Ph4-h5 Kc8-b7
 -5.Ph3-h4 Kd8-c8 -6.Ph2-h3 Ke8-d8 -7.Pg6-g7 Qg2-d2 -8.Pg5-g6 Qb7-g7 -9.Pg4-g5 Qc8-b7
 -10.Pg3-g4 Bb7-h1 -11.Pg2-g3 Qd8-c8 -12.Pf4-f5 Bc8-b7 -13.Pf3-f4 Pb7-b6
 -14.Pf2-f3 Be3-a7 -15.Pe5-e6 Bh6-e3 -16.Pe4-e5 Bf8-h6 -17.Pb3-b4 (not Pc3xRb4? as, with wPs standing on c3 and d2, the wR, subsequently uncaptured on c2, cannot retract home to h1) Pg7xBf6

Position when the last capture (first uncapture) was played



11+15 nrbqkb2/1pppppp1/p4B2/8/4P3/PP1P4/RPp2PPP/K1n5

R: bN—e2-c1, wBc1—f6, wPd2-d3, bPd3xRc2, wRh1—e1—e3—c2, wPe3-e4,
 bPe4xBd3, wBf1—d3, wKe1—b1-a1, wRa1-a2, wPc2xRb3, bRh8—b3

Last move

In game: -1...Bh1-c6 (not Qg2-d2?)

By White: Kb1-a1, Ra1-a2, Pa2-a3, Pb3-b4 (not Pc3xRb4?), Pd2-d3, Pe5-e6, Pf4-f5, Pg6-g7, Ph6-h7

By Black: Kc6-b5, Qg2-d2, Ra8-b8, Bh1-c6, Be3-a7, Nb6-a8, Ne2-c1, Pa7-a6, Pb7-b6, Pg7xBf6, Pd3xRc2

Fully determined paths

By Black: Ke8-d8-c8-b7-c6-b5, Qd8-c8-b7-g2-d2, Bf8-h6-e3-a7, Bc8-b7-h1-c6, Pa7-a6, Pb7-b6, Pg7xBf6

By White: Pa2-a3, Pc2xRb3-b4, Pd2-d3, Pe2-e3-e4-e5-e6, Pf2-f3-f4-f5, Pg2-g3-g4-g5-g6-g7, Ph2-h3-h4-h5-h6-h7

Thematic content

Pure “Bristol” clearance (moving bBb7 all the way to h1 is purely motivated by the need to clear g2 for bQ) followed by a combination of Form and Anti-Form of the “Bristol” in a single move (bQb7-g2, by crossing c6, allows the BK to subsequently play bKb7-c6, a “Bristol” clearance effect, while preventing the move bBh1-c6 until the bQ moves away from g2, an “Anti-Bristol” obstruction effect which determines that bBh1-c6 is the last move of the game, not wQg2-d2). In terms of retractions: “Retro-Turton” (-1...bBh1-c6 crosses g2 allowing bQ to retract without obstruction to b7). Path of “Violet Pawn” along the diagonal must cross a square prior to its occupation by another piece, repeated in 2 “Echo”s ([bPh7] crosses e4 before White plays wPe3-e4 and crosses d3 before White plays wPd2-d3). All 20 pieces in the diagram that have moved play a “Unique Last Move”, 9 play a “Fully Determined Path” of more than 1 move and 8 play an “FDP” of more than 2 moves. These numbers may be task records in Classical Retro-Analysis. “Promenade” ([wRh1] plays a minimum of 6 moves, occupying e1 and e3 on its way to c2. This element is taken from a problem I published in Die-Schwalbe 2012).

Secondary thematic elements include: timely opening of “Home cage”s (of the 4 bishops, 2 White rooks, Black king and queen, [bRh8] (released by bPh7xg6 so this is the first capture of the game before wPc2xRb3) and locking of “Dynamic cage”s (release of the South-West cage starts with retraction of bNe2-c1 followed by retraction of uncaptured wB to c1 then retraction of wPd2-d3 and bPd3xRc2, release of the North-West cage starts with retraction of bB home to c8 followed by retraction of bPb7-b6 then exit of bBa7 and bNa8 allowing retraction of bRa8-b8).

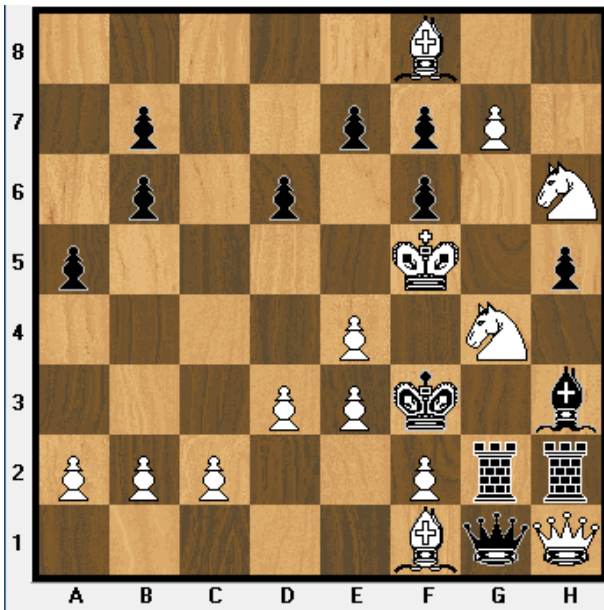
Proof Game

After bPg7xwBf6 the game continues 16.0 moves (moves 27. To 42. below). To reach the position when the last capture is played (see diagram above) requires White to play a minimum of 5 moves by pawns (including 2 by [wPe2]), plus 8 moves by the 4 pieces captured on the g6-d3 diagonal (3 moves by wNg1 to g6, 2 moves by wQd1 to f5, 2 moves by wNb1 to e4, 1 move by wBf1 to e3), plus 2 moves by [wBc1] (c1-g5-f6), plus 6 moves by [wRh1] (h1-e1-e3-f3-f5-c5-c2), plus 1 move by [wRa1] (a1-a2), plus 4 moves by wK (e1-d1-c1-b1-a1) for a minimal total of 26 moves. The game below achieves this minimum so it is an SPG.

1.Ng1-f3 Ng8-f6 2.Nf3-e5 Nf6-g8 3.Ne5-g6 Ph7xNg6 4.Pe2-e3 Rh8-h7
5.Pa2-a3 Rh7-h6 6.Nb1-c3 Rh6-h8 7.Nc3-e4 Pa7-a6 8.Ra1-a2 Nb8-c6
9.Bf1-d3 Rh8-h5 10.Qd1-f3 Rh5-b5 11.Qf3-f5 Rb5-b3 12.Pc2xRb3 Pg6xQf5
13.Ke1-d1 Pf5xNe4 14.Kd1-c2 Pe4xBd3+ 15.Kc2-b1 Ra8-b8 16.Kb1-a1 Nc6-e5
17.Pe3-e4 Ne5-c4 18.Rh1-e1 Nc4-b6 19.Re1-e3 Nb6-a8 20.Re3-f3 Ng8-f6
21.Rf3-f5 Nf6-h5 22.Rf5-c5 Nh5-f4 23.Rc5-c2 Pd3xRc2 24.Pd2-d3 Nf4-e2
25.Bc1-g5 Ne2-c1 26.Bg5-f6 Pg7xBf6
27.Pb3-b4 Bf8-h6 28.Pe4-e5 Bh6-e3 29.Pe5-e6 Be3-a7 30.Pg2-g3 Pb7-b6
31.Pf2-f3 Bc8-b7 32.Pf3-f4 Bb7-h1 33.Pf4-f5 Qd8-c8 34.Pg3-g4 Qc8-b7
35.Pg4-g5 Qb7-g2 36.Pg5-g6 Qg2-d2 37.Pg6-g7 Ke8-d8 38.Ph2-h3 Kd8-c8
39.Ph3-h4 Kc8-b7 40.Ph4-h5 Kb7-c6 41.Ph5-h6 Kc6-b5 42.Ph6-h7 Bh1-c6

2.

Yoav Ben-Zvi – 17088 Die Schwalbe, 06/2017



14+13 5B2/1p2ppP1/1p1p1p1N/p4K1p/4P1N1/3PPk1b/PPP2Prr/5BqQ

Squares that must have been vacated and re-occupied (Switchback) by wBc1 and bBf8.

Analysis

All 16 pawns are on the board so there are no promotions. [wPg2] captured on f3 and e4, both light colored squares, while [bBf8] was captured on a dark square so the pieces captured by [wPg2] were the 2 missing bNs. [wPh2], on its way to g7, captured [bBf8] (the third missing Black piece) on the g file. The White Rooks were captured by bPc7xwRb6 and bPg7xwRf6. All captures were by pawns.

Looking backwards:

The East cage cannot be released by retracting wNh6-g4, since this exposes wKf5 to check by bBh3 forcing retraction of bRg4-g2+ which exposes BKf3 to illegal check by wQh1. The cage also could not be released by retracting wPd2-d3, as this would require prior retraction of wB to c1 which means a wR (uncaptured on b6 or on f6) must be retracted first to a1/b1 via the back row, but this is impossible without prior release of the cage.

Release of the East cage must therefore be by retraction of wKg5-f5 (not wKe5-f5? as bPd6 cannot be retracted to d7 before the locked bBh3 has been retracted to c8). wK standing on g5 requires retraction of bPg7xf6 which must be preceded by retraction home to f8 of the Black bishop previously uncaptured by [wPg7]. Until the uncapture of [bBf8], the other Black officers remain immobile, so Black has only pawn retractions available. Prior to release of the East cage, bPd6 cannot be retracted to d7 (as this locks out [bBc8] while bBh3 stands locked inside the cage) and bPh5 cannot be retracted back to h6 or h7 (as then the subsequent retraction of bPg7xf6, with bB on f8, would lock out [bRh8] while both bRs stand locked inside the East cage). Black also cannot retract both bPa6/a7-a5 and bPc7xRb6 as then bPg7xRf6 would prematurely lock out [bRa8]. Therefore, prior to the uncapture of bB (by wPg7), Black has only 2 retractions available: bPa6-a5 followed by bPa7-a6.

The uncapture of [bBf8] cannot be by wPh6xBg7 as bPh5 would need to be retracted to h7 first (neither White nor Black h pawn has 2 available captures to cross the other) but with bP on h7 (as noted above) the subsequent retraction of bPg7xf6, with bB on f8, would lock the North-East cage of [bRh8] (see Try1 below). The fastest way to uncapture the bB is therefore by wPh4xBg5 which completes 3 retractions by wPg7 while Black uses his 2 neutral pawn retractions. This means that, to avoid Black Retro-Stalemate, White moved last (see Try2 below) and the last 6 single moves are uniquely determined (see below).

Try1 Retraction: -1.Ng8-h6? Ph7-h5 -2.Ph6xBg7 Bh8-g7 -3.Ph5-h6 Bg7-h8
-4.Ph3-h4 bh6-g7 -5.Bg7-f8 Bf4-h6 -6.Be5-f4 Bf4-h6

To open the East cage (by retracting bPg7xRf6) [bRh8] must be locked out. As both bRs stand locked inside the cage, neither can retract back to the NE corner in Time.

Try2 Retraction:

-1...Pa6-a5? -2.Pg6-g7 Pa7-a6 -3.Pg5-g6 Pc7xRb6

Opening the East cage requires locking out [bRa8] so neither bR can retract back to the NW corner in Time.

Last 6 single moves:

Retraction: -1.WPg6-g7 Pa6-a5 -2.Pg5-g6 Pa7-a6 -3.Ph4xBg5 Bf4-g5.

Following the uncapture of bB (by wPh7xBg5) and prior to the release of the East cage (by bPg7xRf6) the bB, uncaptured on g5, must be retracted home to f8 crossing the retro-path of wBf8 on its way back to c1. The cross over of the bishops cannot occur if both remain inside the "Corridor" f8-h6-f4-e5-d4 so one bishop needs to step aside from the corridor, "hiding" to allow the opposing bishop to retract past it so the first bishop can then step back to the corridor in front of the second bishop. While the bishops perform the cross-over retraction maneuver, neither White nor Black can retract other pieces except for wN cycling between g8 and h6 (as noted above, with wK standing on f5, wNg4 cannot be retracted to h6).

If wB hides on h8, allowing bB to cross over to f8, then the wB will subsequently need to retract back to g7 incarcerating the bB standing on f8 and causing Black Retro-Stalemate. This is refutation by "Retro-Opposition" (as defined by Fabel, see below): the occupation of g7 by wB prevents a neutral Black tempo retraction that would allow wB to remove the obstruction by continuing to h6. See Try3 below.

If bB hides on h8 allowing wB to cross over to h6, then, on its way from g5 to h8, bB must retract from h6 to g7, incarcerating the wB on f8. A "tempo maneuver", wherein bB gets from g5 to h6 in an odd number of retractions, ensures that wB can vacate g7 at the right time for the retraction of bBg7-h6 so that no Retro-Opposition occurs with wBg7-bBh6. The incarceration of wB on f8 means that White needs a tempo retraction by wN to allow bB to continue to h8. The wN could not be standing on h6 (since bB has just retracted from there to g7) so this tempo retraction could only be wNh6-g8 but then, following retraction of bBh8-g7, wBf8 is prevented from retracting to h6 (as h6 is occupied by wN) so, at this point, White can either retract wNg8-h6, which forces a repetition (after retraction of bBg7-h8 and wNh6-g8), or else retract wBg7-f8 which leads to Black Retro-Stalemate. The case of cross over with bB standing on h8 is, therefore, also refuted by Retro-Opposition: after bB is retracted to g7 the White tempo move wNh6-g8, required to allow bB to continue to h8, obstructs the exit path of wB via h6, see Try4 below.

The above means the cross over cannot occur using h8 as a loop-hole, it requires the retraction of wBf8 further back along the "Corridor" preceded by similar retraction of bB starting from g5, serving as a "Retro-Magnet".

Try3 Retraction: -1.wPg6-g7 Pa6-a5 -2.Pg5-g6 Pa7-a6 -3.Ph4xBg5 Bf4-g5
-4.Ng8-h6 Bg5-f4 -5.Bg7-f8 Bh6-g5 -6.Bh8-g7 Bf8-h6 -7.Bg7-h8? ???

Getting wB out from h8 after bB crosses over to f8 forces Black Retro-Stalemate.

Try4 Retraction: -1.wPg6-g7 Pa6-a5 -2.Pg5-g6 Pa7-a6 -3.Ph4xBg5 Bf4-g5
-4.Ng8-h6 Bg5-f4 -5.Bg7-f8 Bh6-g5 -6.Bf8-g7 Bg7-h6? -7.Nh6-g8 Bh8-g7
-8.Ng8-h6 Bg7-h8 (repeats the position after -6...Bg7-h6) -9.Bg7-f8 ???

Avoiding perpetual repetition forces Black Retro-Stalemate.

The cross over cannot be performed with one of the bishops hiding on h4 because it is occupied by wP after uncapturing bB on g5.

If BB hides on g3 to allow WB to cross it via f4 then the retraction of wBf4-g5/h6 incarcerates the BB on g3 leading again to Black Retro-Stalemate. Another refutation by Retro-Opposition: the occupation of f4 by wB prevents a neutral Black tempo retraction needed to allow the wB to continue to e5. See Try5 below.

Try5 Retraction: -1.WPg6-g7 Pa6-a5 -2.Pg5-g6 Pa7-a6 -3.Ph4xBg5 Bf4-g5

-4.Ng8-h6 Bg5-f4 -5.Bh6-f8 Bf4-g5 -6.Bg5-h6 Bg3-f4 -7.Bf4-g5? ???

bBg3 is incarcerated by the cross over of wB leading to Black Retro-Stalemate.

If wB hides on g3 to allow bB to cross it via f4 then the wB is incarcerated by bB occupying f4. White has a tempo retraction by wN so bB can continue to h6 on its way back home to f8. When wB occupies f4 on its way to g3, the bB must have retracted back from g5 to e5 (to clear the way for wB) and, if it has not already retracted further along the corridor to d4 or c3, it will need to do so now to provide a tempo for wB to continue to g3. Another case of Retro- Opposition: wB occupying f4, on its way to g3, prevents, by obstruction, the return of bB from e5 to f4, requiring a Black tempo retraction to allow wB to continue to g3. In this case the tempo is available so it is not a refutation, it does show that the bB uncaptured on g5 must retract beyond e5 (retracting, via f4 and e5, to d4 or c3) before returning to e5 and f4 on its way back home to f8.

The remaining possibility is that the bB retracts from g5 via f4 and e5, beyond d4, to c3 or c5 allowing wBf8 to cross over by retracting to c5 or c3 via f4, e5. After the cross over the bB returns home to f8, on its way stepping again on e5 and f4.

After the retraction of bPg7xRf6, locking bB at home on f8, White must immediately relieve the impending Black Retro-Stalemate. This can only be done by retracting wNh6-g4. With wK standing on f5, the shield on g4 cannot be removed as it would expose the wK to check from bBh3, requiring Black to retract bRg4-g2+, which exposes the bK to illegal check from wQh1. Therefore, White must first retract wK to g5, followed immediately by the retraction of bPg7xRf6. If the removal of the shield provided by wK on f5 exposes the bK to check from the uncaptured wRf6, then White will need to deal with this check on the following retraction and will not be able to deal with the Black Retro-Stalemate. Therefore a shield must be provided in advance to protect the bK from check by the uncaptured wR. Additionally, the wN, standing on h6 in the diagram, must, at this point, have vacated h6 so it stands on g8. The shield cannot stand on f5 as it has just been vacated by wK so it stands on f4 and must be provided by wBf8. This means that wBf8 is retracted to f4, the first time on its way to either g3 or e5, to allow the cross-over with the uncaptured bB, the second time to provide the shield. After retraction of wNh6-g4 the wK on g5 stands in check from bRg2 requiring the retraction of bBg4-h3+ (bB replaces the wN shield) followed by retraction of bRh2-h3 (Black's last rook move).

It has been shown that, in both variants of the resolution, [bBf8] plays a Switchback to e5 and f4 and that [wBc1] plays a Switchback to f4. See the Solution below.

Solution

Squares that must have been vacated and re-occupied (Switchback) by wBc1 and bBf8:

1.WBc1→f4 2.BBf8→f4 3.BBf8→e5

Retraction: -1.wPg6-g7 Pa6-a5 -2.Pg5-g6 Pa7-a6 -3.Ph4xBg5 Bf4-g5

-4.Ng8-h6 Be5-f4 -5.Bh6-f8

-5...Bf4-e5 -6.Bg5-h6 Be5-f4 -7.Bf4-g5 Bd4-e5 -8.Bg3-f4 Be5-d4 -9.Nh6-g8 Bf4-g5

-10.Ng8-h6 Bh6-f4 -11.Bf4-g3 Bf8-h6 -12.Kg5-f5 Pg7xRf6+ -13.Nh6-g4 Bg4-h3+

-14.R-f6 Rh3-h2

bB retreats beyond e5 to provide a tempo

OR

-5...Bc3-e5 -6.Bf4-h6 Bb4-c3 -7.Be5-f4 Bc5-d4 -8.Bc3-e5 Bd4-c5 -9.Bb4-c3 Be5-d4

-10.Bc3-b4 Bf4-e5 -11.Be5-c3 Bh6-f4 -12.Bf4-e5 Bf8-h6 -13.Kg5-f5 Pg7xRf6+

-14.Nh6-g4 Bg4-h3+ -15.R-f6 Rh3-h2

bB retreats beyond d4 to enable cross over

Both variants lead to: 5bN1/pp2ppp1/1p1pR2N/6Kp/4PBbP/3PPk1r/PPP2Pr1/5BqQ

For a valid continuation of the resolution from this position see the Proof Game below (moves 1. to 36.).

Thematic content

A bi-chromatic cross over duel along a “Corridor” (between wBf8 and bB uncaptured on g5) showing a “Rehmer” type maneuver (wB, starting from f4, first steps off the corridor to g3 or to c3/c5 allowing the bB to move along the corridor, beyond a critical square (f4 or d4), which enables the wB to re-enter the corridor in front of the bB so it can move unobstructed along the corridor, crossing g5, to its final destination on f8, followed by return of the bB to g5. Due to the lack of time pressure the moves involved are not unique). The “Magnet” effect in the first part differs from the “Anticritical” effect specified in a complete “Rehmer” while the “Bristol” effect in the last part conforms to the basic Rehmer specification. “Retro-Opposition” (henceforth “RO”) refutes 3 attempts at implementing the required maneuver (bBg7-wBf8, wBg7-bBf8, wBf4-bBg3). A fourth “RO” (wBf4-bBe5) triggers a thematic tempo (proving that uncaptured bB must retreat beyond e5). “Retro-Shield”s (provided by wB on f4 and by bB on g4 and removed by wK on f5, wN on g4 and bR on g2). “Switchback”s (played by bB on f4 and e5 and by wB on f4). Secondary thematic elements include timely release from Home cage (of [wBc1], [wRa1], [wRh1], [bBc8], [bBf8], [bRa8], [bRh8]) and locking of a Dynamic cage (East cage).

Definition of Retro-Opposition

The usage of the term “Retro-Opposition” complies with the definition by Fabel in “Introduction to Retrograde Analysis” (English version Q-Press 1973, French version Problème 1971):

“RO can occur in a series of retractions when a White piece and a Black piece must occupy the same square, and this square is occupied by one piece at the moment when the other needs to move there. A waiting move or a manoeuvre to gain a tempo is necessary to make possible the departure of the first piece.”

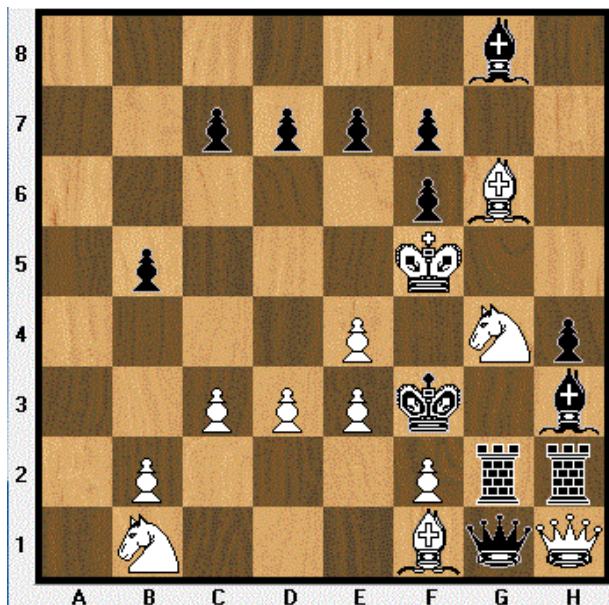
Proof Game (SPG ?)

1.Pd2-d3 Ph7-h6 2.Bc1-e3 Ph6-h5 3.Ng1-f3 Nb8-c6 4.Nf3-d4 Nc6-e5 5.Rh1-g1 Ne5-f3+
6.Pg2xNf3 Ng8-f6 7.Bf1-h3 Nf6-g8 8.Ke1-f1 Ng8-f6 9.Kf1-g2 Nf6-g8 10.Kg2-g3 Rh8-h6
11.Kg3-h4 Ng8-f6 12.Rg1-g6 Nf6-e4 13.Rg6-b6 Pd7-d6 14.Qd1-e1 Pc7xRb6
15.Qe1-a5 Bf8-e6 16.Nb1-c3 Ra8-c8 17.Ra1-g1 Rc8-c5 18.Bh3-f1 Be6-h3
19.Rg1-g6 Rc5-g5 20.Nd4-f5 Rg5-g2 21.Nc3-d5 Ke8-d7 22.Nd5-f6+ Kd7-e6
23.Be3-c5 Ke6-e5 24.Nf6-g8 Ke5-f4 25.Rg6-e6 Rh6-g6 26.Bc5-d4 Rg6-g3
27.Pf3xNe4 Bh3-g4 28.Pe2-e3+ Kf4-f3 29.Kh4-g5 Qd8-c7 30.Ph2-h4 Rg3-h3
31.Qa5-e5 Qc7-c5 32.Qe5-h2 Qc5-e5 33.Qh2-h1 Qe5-g3 34.Nf5-h6 Qg3-h2
35.Bd4-e5 Qh2-g1 36.Be5-f4 Rh3-h2 37.Re6-f6
37...Bg4-h3+ 38.Nh6-g4 Pg7xRf6+ 39.Kg5-f5 Bf8-h6 40.Bf4-g3 Bh6-g5
41.Ng8-h6 Bg5-f4 42.Nh6-g8 Bf4-e5 43.Bg3-f4 Be5-d4 44.Bf4-h6 Bd4-e5
45.Bh6-f8 Be5-f4 46.Ng8-h6 Bf4-g5 47.Ph4xBg5 Pa7-a6 48.Pg5-g6 Pa6-a5
49.Pg6-g7

The schema of the East cage in the above is adapted from the cooked problem below. The analysis is entirely different.

Fabel, Haproblemai 1959

Fide Album 1959-61 1966 - 2nd Prize IRT 1958-9



12+13 6b1/2pppp2/5pB1/1p3K2/4P1Np/2PPPk1b/1P3Prr/1N3BqQ

Who mates in 1?

Intended Solution: 1.WNb1-d2#

Retraction:

-1... Bh7-g8 -2.Na3-b1 Bg8-h7 -3.Nc4-a3 Bh7-g8 -4.Nb6-c4 Bg8-h7 -5.Nd5-b6 Bh7-g8
 -6.Nf4-d5 Bg8-h7 -7.Nh6-g4 Rg4-g2+ -8.Ng2-f4+ Bh7-g8 -9.Ng8-h6 Pb6-b5
 -10.Pg7-g8=N Bg8-h7 -11.Pc2-c3 Bh7-g8 -12.Bh5-g6 Bg8-h7+ -13.Pg6-g7 Bh7-g8
 -14.Pg5-g6 Bg8-h7+ -15.Bg6-h5 Ph5-h4 -16.Ph4xBg5 Bh6-g5 -17.Bh7-g6 Bf8-h6
 -18.Ke5-f5 Pg7xf6+ etc.

Dual Solution: 1.BBh3xNg4#

Retraction:

-1.Na3-b1 Bh7-g8 -2.Nc4-a3 Bg8-h7 -3.Nb6-c4 Bh7-g8 -4.Nd5-b6 Bg8-h7 -5.Nf4-d5 Tg3-g2 -
 6.Ng2-f4 Bh7-g8 -7.Nh6-g4 Tg4-g3+ -8.Ng8-h6 Pb6-b5
 -9 to -17 as in -10 to -18 in intended solution above

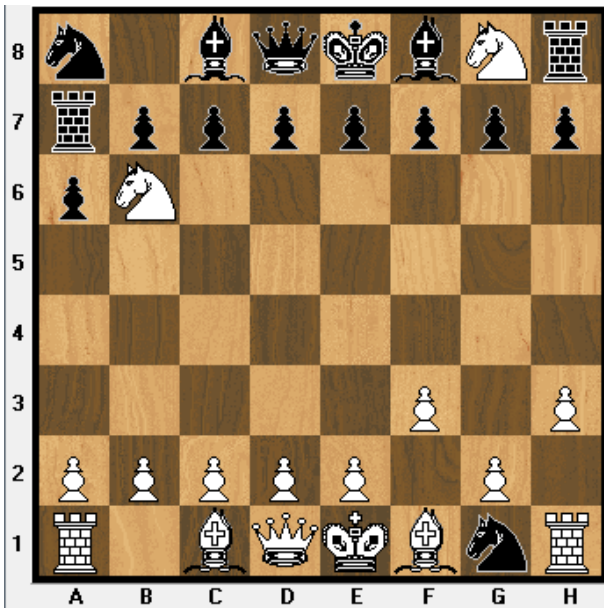
Since Rg2 could have come from g4 in 1 move or 2 either side can be on the move and mate in 1.

Cook: -1.Pd2-d3 Bh7-g8 -2.Bxx-f1 Qxx-g1

wBc1 captured at home, WRs captured on f6 and b1, WPa2 captured on a file

3.

Yoav Ben-Zvi – R7, R.I.F.A.C.E. St Germain 2017 Retro Solving Tourney.



16+16 n1bqkbNr/rppppppp/pN6/8/8/5P1P/PPPPP1P1/R1BQKBnR

White's Castling rights?

- a) Diagram
- b) Remove wRa1
- c) Remove wBf1
- d) Remove wBc1

Analysis

Black has played an even number of moves and does not have a valid last move so it is Black's turn to move and White has played an odd number of moves. WNs and WPs have played an even number of moves while WBs have played none so one of the other White pieces has played an odd number of moves.

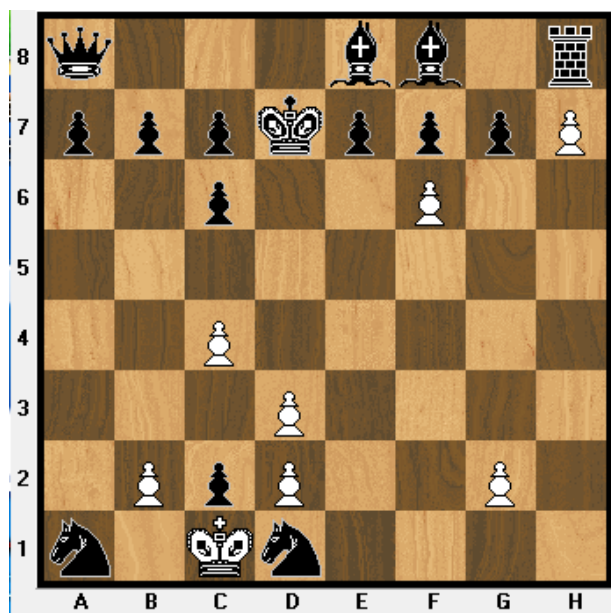
Solution:

- a) Diagram – Either wK or wQ played an odd number of moves, returning home after a “Triangulation” maneuver. In either case the wK must have moved so White has lost the right to castle either short or long.
- b) Remove wRa1 – [wRa1] could have played an odd number of moves to be captured on b1 so White retains the right to castle short.
- c) Remove wBf1 – wRh1 could have played an odd number of moves by triangulation on f1,g1,h1 so White retains the right to castle long.
- d) Remove wBc1 – wQ could have played an odd number of moves by triangulation on b1,c1,d1 so that White retains the right to castle on both sides.

Thematic content

The “Parity Argument” used to establish the need for “Tempo loss” by White. The available means to achieve this, including “Triangulation”, determine the status of White castling rights so that each of 4 possible results is shown in one of the 4 twins.

4.
Yoav Ben-Zvi – R534 The Problemist 11/2018



8+15 q3bb1r/pppkpppP/2p2P2/8/2P5/3P4/1PpP2P1/n1Kn4

Last 13 moves by Black

Analysis:

White's only capture was $wPe2 \times Rd3$. $[wPa2]$ did not leave the a file so it was captured there by a Black officer and there are no promotions. $[wBc1]$ was captured at home. The 6 other missing White pieces, all officers, including $[wBf1]$ and both wRs , were captured by $[bPh7]$ and $[bPd7]$. $[wBf1]$ was released, by $wPe2 \times Rd3$, after $[bPh7]$ crossed d3 to arrive at c2, completing 5 captures. bP standing on c2 implies that the wK had arrived at c1 so $[wBc1]$ had also been captured. Therefore $[wBf1]$ was the last White piece to be captured, by Black's remaining pawn capture $bPd7 \times Bc6$.

Looking backwards:

To retract $bPd7 \times Bc6$, Black must first retract a bishop to c8, a rook to a8/b8 and (before the Central cage is locked) the king to e8 and the Queen to d8. The uncapture of the bR on d3, by $wPe2 \times d3$, occurs after the wB is returned to f1 following its uncapture, by $bPd7 \times Bc6$. bP standing on d7 implies that the bB has been retracted to c8 so the bR , uncaptured on d3, is locked out of a8, it must retract home to h8. Therefore it is $bRh8$ in the diagram that is played back to the North-West corner so it is a Sibling Impostor. The Black maneuvers in preparation for $bPd7 \times Bc6$ require, at a minimum, 2 retractions by $[bBc8]$ plus 3 by $[bRa8]$ plus 2 (including castling) by bK plus 3 by $[bQd8]$ (to vacate row8 for the rook and then return to d8) for a total of 10 retractions.

Until wB is uncaptured on c6 White can only retract his pawns. The maximum available tempo retractions are 1 by wPc4 plus 4 by wPf6 plus 3 by wPh7 (this pawn cannot retreat beyond h4 as [wRh1], after it is uncaptured by bPc2 following incarceration of [wBf1] by wPe2xd3, needs to retract home to h1 via h3) for a total of 8 retractions. The 2 additional tempo retractions that are required can be provided by uncapture of [wPa2], partially offset by additional Black retractions needed for the uncapture.

If the uncapture of the wP is by bQ on a5 then 3 wP tempo retractions are added but 2 extra retractions by bQ are required, and the net addition of 1 tempo is insufficient, see the Try below:

Try

Retraction: -1...BQd8-a8 -2.Ph6-h7 Kc8-d7 -3.Ph5-h6 Qd5-d8? -4.Ph4-h5 Qa5-d5
-5.Pf5-f6 Ra5-h5 -6.Pf4-f5 Rd5-h5 -7.Pf3-f4 Rd8-d5 -8.Pf2-f3 Qd5xPa5 -9.Pa4-a5 Bd7-e8
-10.Pa3-a4 0-0-0 -11.Pa2-a3 Bf8-d7 -12.Pc3-c4 Qd8-d5 13.Ph3-h4 Pd7xBc6
-14.Bf3-c6 Ne3-d1

Uncaptured wB retracts to f1 before retraction of wPe2xRd3 followed by bPc2 uncapturing both wRs on its way back to h7. With wB locked in f1 and wP standing on h2 or h3 neither of the uncaptured wRs can retract to h1.

Uncapture of the wP on squares other than a5 does not result in a better balance therefore wP is uncaptured by bR on a5 using 1 extra Black retraction, see the solution.

Solution (Last 13 moves by Black)

Retraction: -1...bQd8-a8 -2.Ph6-h7 Kc8-d7 -3.Ph5-h6 Qd4-d8 -4.Ph4-h5 Rh5-h8
-5.Pc3-c4 Ra5-h5 -6.Pf5-f6 Rd5xPa5
-7.Pf4-f5 Rd8-d5 -8.Pf3-f4 Bd7-e8 -9.Pf2-f3 0-0-0 -10.Pa4-a5 Bc8-d7
-11.Pa3-a4 Qd8-d4 -12.Pa2-a3 Pd7xBc6 -13.B-c6 Ne3-d1
wBf1-e2—f3, wPe2xRd3, bRd5-d3, wKd1-c1, bPd3xRc2, bPe4xRd3,
bRh8—d5, wRh1—h3—d3, bNb8—a1, wRa1—c1-c2

Thematic content

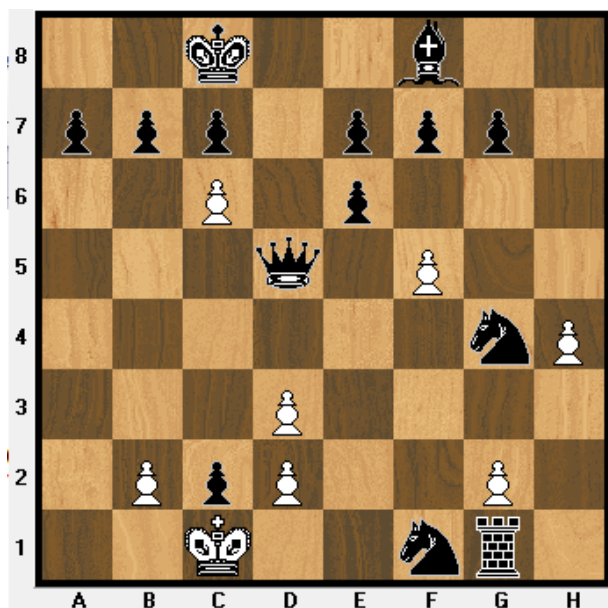
“Fully Determined Path”, after “Castling”, by original bR, includes capture of a pawn that provides tempo moves ([bRa8] plays to d8-d5xPa5-h5-h8), resulting in a “Sibling Impostor” (on h8). This is combined with a “Bristol clearance” and “Switchback” maneuver (bQd8-d4 crosses d5 for bR coming from behind the bQ, followed, after bR vacates d5, by bQd4-d8 on its way to a8). In terms of retractions: the bQ maneuver begins with an “Anti-Critical” retraction (retraction of bQd8-a8 crosses c8 for bK which determines the order of the first bQ and bK retractions) followed by a “Retro-Turton” (bQd4-d8 crosses d5 for bR) and “Switchback” (bQd8-d4) which, in combination with the retraction maneuver of the rook, constitutes a complete “Retro-Rehmer”. The retractions involved are unique, forced by non-stipulated time pressure. “Retro-Bristol” by pawn (retraction of wPh4-h5-h6-h7 clears h5 for bR) serves to determine White’s move order so that the last 11 single moves are unique. Fully determined paths of length 1 ([bPd7], [wPe2]), 2 ([bBc8], wK, [wPc2]), 3 (bQ, [wPa2]), and 4 ([wPf2], [bRa8]).

Proof Game (moves that are mandatory in **Bold**)

1.**Pc2-c3** Ng8-f6 2.Ph2-h4 Nf6-g8 3.Ng1-h3 Ng8-f6 4.Nh3-f4 Nb8-a6 5.Nf4-g6 Na6-c5
6.Nb1-a3 Nc5-b3 7.Na3-b5 Nb3xBc1 8.Nb5-d4 Nc1-b3 9.Ra1-c1 Nb3-a1 10.Nd4-f5 Ph7xNg6
11.Qd1-c2 Pg6xNf5 12.Qc2-e4 Pf5xQe4 13.**Rc1-c2** Rh8-h5 14.Rh1-h3 Rh5-d5
15.Rh3-d3 Pe4xRd3 16.**Ke1-d1 Pd3xRc2+** 17.**Kd1-c1** Rd5-d3 18.**Pe2xRd3** Nf6-g4
19.**Bf1-e2** Ng4-e3 20.Be2-f3 **Ne3-d1** 21.Bf3-c6 **Pd7xBc6**
22.Pa2-a3 Qd8-d4 23.Pa3-a4 Bc8-d7 24.Pa4-a5 0-0-0 25.Pf2-f3 Bd7-e8
26.Pf3-f4 Rd8-d5 27.Pf4-f5 Rd5xPa5 28.Pf5-f6 Ra5-h5 29.Pc3-c4 Rh5-h8
30.Ph4-h5 Qd4-d8 31.Ph5-h6 Kc8-d7 32.Ph6-h7 Qd8-a8

5.

Yoav Ben-Zvi – (10) Problemas 10/2018



8+14 2k2b2/ppp1ppp1/2P1p3/3q1P2/6nP/3P4/1PpP2P1/2K2nr1

Last 11 moves by Black

Analysis:

[wBc1] was captured at home. [wPa2] could only capture once so it could not be captured by a bP or promoted so it was captured by a Black officer, on the a or b files, and there are no promotions. The 6 other missing White pieces (including [wBf1] and [wRh1]) were captured by [bPh7] and [bPd7]. [wBf1] was released by wPe2xd3 after [bPh7] had crossed d3 to arrive at c2, completing 5 captures, and wK had arrived at c1 following capture of [wBc1]. This implies that [wBf1] was the last White officer to be captured, by Black's remaining pawn capture bPd7xBe6. This means [wRh1] escaped earlier (to be captured on the g6-c2 diagonal) but could not do so by crossing f1 (occupied by locked wB) so it escaped via h3 after [wPh2] moved to h4 to clear the way. wPc6 did not capture (requires 3 captures by White) so it came from c2, its first move occurring prior to the arrival on c2 of [bPh7].

When White played wPe2xd3, [wBf1] was still standing on f1 so [bPd7] was still standing on d7 (waiting to capture [wBf1] on e6, after the wB is released) so [bRa8] and [bBc8] had not been released and could not therefore be captured on d3. This means [bRh8] was the piece captured on d3 and [bRa8] escaped via file d (after the obstruction of [bPd7] is removed by the capture on e6) to reach g1.

Looking backwards:

Until the first uncapture of a White officer by bPd7xBe6, White can only retract his pawns. To enable the retraction of bPd7xBe6, Black must first retract bQd5 and bRg1 (known to originate from a8) to row8 arranged in the correct order with the bK (after the retraction of bPd7xe6 no cross-overs are possible on row8). This must be accomplished before White runs out of neutral pawn retractions. The fastest way is to retract bRg1 to d8 followed by uncastling and then retraction of bQ to d8. To retract the bR via e1 or f1 requires placing a shield to protect the wK from check by the bR which requires 3 extra Black retractions by bNs. To do so via g3,g4 requires an extra retraction by bNg4. To do so via e3-e5-d5 requires an extra retraction by bQd5 To do so via f3,f4 implies that the bR obstructs the retreat of wPf5. In conclusion the fastest path for retraction of bRg1 to d8 is via h1-h3-e3-e4-d4 in 6 moves.

The maximal number of tempo retractions by wPc6 and wPf5 is 3 each for a total of 6. As noted above, wPh4 cannot retreat to h3 or h2 before [wRh1] has been uncaptured and returned to its corner via h3 so this pawn cannot contribute tempo retractions. Six tempo retractions by White are not sufficient for Black to complete the required preparation before the retraction of bPd7xBe6 (just getting bRg1 back to d8 requires at least 6 retractions) so [wPa2] must be uncaptured to provide additional tempo retractions. If [wPa2] is uncaptured on the b file it needs to uncapture the bB which must then be retracted back home to c8 prior to the uncapture on e6, adding 2 retractions to the preparatory maneuver, so this fails and the uncapture occurs on the a file.

Uncapture of [wPa2] on a5 (by bQ or by bR) leads to the following:

Try Retraction: -1...bRh1-g1 -2.Pc5-c6 Rh3-h1 -3.Pc4-c5 Re3-h3 -4.Pc3-c4

-4...Re4-e3 -5.Pf4-f5 Rd4-e4? -6.Pf3-f4 Qa5-d5 -7.Pf2-f3 Qb5xPa5 -8.Pa4-a5 Qe8-b5
-9.Pa3-a4 Rd8-d4 -10.Pa2-a3 Pd7xBe6

But the Black pieces on row8 cannot return to the original order.

-4...Re5-e3? -5.Pf4-f5 Qd4-d5 -6.Pf3-f4 Ra5-e5 -7.Pf2-f3 Rd5xPa5 -8.Pa4-a5 Rd8-d5
-9.Pa3-a4 0-0-0 -10.Pa2-a3 Qd8-d4 -11.Ph3-h4 Pd7xBe6

But the uncapture of a wR by bPc2 must be preceded by retraction of wPe2xd3 so wB will be locked at f1 and the uncaptured wR is locked out of h1.

Therefore [wPa2] is uncaptured on a6, as in the solution below:

Solution (Last 11 moves by Black)

Retraction: -1...bRh1-g1 -2.Pc5-c6 Rh3-h1 -3.Pc4-c5 Re3-h3 -4.Pc3-c4 Re4-e3

-5.Pf4-f5 Ra4-e4 -6.Pf3-f4 Ra6-a4 -7.Pf2-f3 Rd6xPa6 -8.Pa5-a6 Rd8-d6 -9.Pa4-a5 0-0-0
-10.Pa3-a4 Qd8-d5 -11.Pa2-a3 Pd7xBe6

White has used all available tempo retractions (retreat of wPh4 is invalid, as shown in the Try) so Black's maneuver requires unique retractions. The resolution continues:
bNb8—f1, wBf1—e6, wPe2xRd3, bRh8—d3, bPd3xRc2, wKe1—c1, bPe4xRd3,
wRa1—c1-c2, wRh1—d3

Thematic content

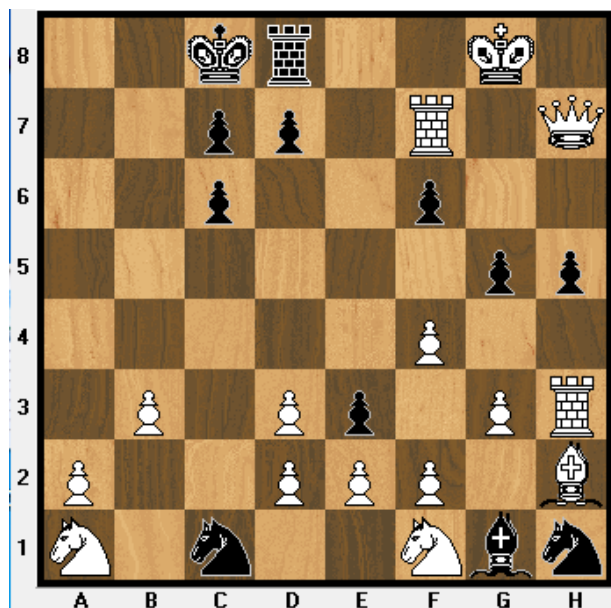
Fully determined path of an original (not promoted) rook consisting of 8 moves played after castling, a task record in Classical Retroanalysis (bR retracts g1-h1-h3-e3-e4-a4-a6-d6xPa6-d8). The rook retraction path includes uncapture to provide required tempo retractions for Black and a Peri-Critical maneuver (to get bR in front of bQ on the d file). Secondary thematic content (appears in the refutation of tries) shows timely release of Home cage (of [wBf1], [wRh1], [bRa8], [bQd8]), "Corridor" obstruction (the Black Central cage can be locked only with bR, bQ and bK in their original order on row8) and timely locking of dynamic cage (wK is released after [wBf1] is locked by wPe2xd3).

Proof Game (moves that must be played in any PG in **Bold**)

1.**Pc2-c3** Ng8-f6 2.Ph2-h4 Nf6-g8 3.Ng1-h3 Ng8-f6 4.Nh3-f4 Nf6-g8 5.Nf4-g6 Ng8-f6
6.Nb1-a3 Nf6-g8 7.Na3-c4 Ph7xNg6 8.Nc4-b6 Rh8-h5 9.Qd1-c2 Rh5-d5 10.Qc2-f5 Ng8-f6
11.**Nb6xBc8** Nb8-a6 12.**Nc8-b6** Na6-c5 13.Nb6-a4 Nc5-b3 14.Na4-c5 Nb3xBc1
15.Nc5-e4 Nc1-b3 16.Ra1-c1 Nb3-a5 17.**Rc1-c2** Pg6xQf5 18.Rh1-h3 Pf5xNe4
19.Rh3-d3 Pe4xRd3 20.**Ke1-d1 Pd3xRc2+** 21.Kd1-c1 Rd5-d3
22.**Pe2xRd3** Nf6-g4 23.**Bf1-e2** Na5-c4 24.Be2-f3 Nc4-e3 25.Bf3-d5 Ne3-f1
26.Bd5-e6 **Pd7xBe6** 27.**Pa2-a3 Qd8-d5** 28.**Pa3-a4 0-0-0** 29.**Pa4-a5 Rd8-d6**
30.**Pa5-a6 Rd6xPa6** 31.**Pf2-f3 Ra6-a4** 32.**Pf3-f4 Ra4-e4** 33.**Pf4-f5 Re4-e3**
34.**Pc3-c4 Re3-h3** 35.**Pc4-c5 Rh3-h1** 36.**Pc5-c6 Rh1-g1**

6.

Yoav Ben-Zvi – 10 Volobuev JT-60 12/2018, 4th Prize



15+12 2kr2K1/2pp1R1Q/2p2p2/6pp/5P2/1P1Pp1PR/P2PPP1B/N1n2Nbn

Moves that must have been played by wRa1

Analysis

[bPb7] captured [wBf1], White's only missing piece, on c6 releasing [bBc8]. [bPa7] did not capture and could not promote so it was captured, on the a file, by a White officer. The other 3 missing Black officers (Q,R,B) were captured by wPs. wPg3 could not have captured from h2, as this would prevent the entry of wB to h2, so it came from g2, releasing [wBf1]. It follows that [wPh2] captured on g3 and f4, both dark colored squares, so [bBc8] was captured by wPc2xBd3 while bQ and bR were captured on g3 and f4. The capture on d3 occurs after the release of the captured bB by bPb7xBc6 which occurs after the release of the captured wB by wPg2-g3 which occurs after the captures of bQ and bR on g3 and f4 have been completed. Therefore [bBc8], is the last Black officer to be captured (first Black officer to be uncaptured), by wPc2xBd3.

Looking backward from the diagram position:

The last move was 0-0-0+. After this [bKe8] and [bRa8] are immobile. Standing on e8, the bK restricts the return paths of [bRh8] and [bQd8] and the exit paths of wRf7 and wKg8.

wPg3 cannot retract to h2 (as noted above) so it retracts to g2 after [wBf1] has been uncaptured, by bPb7xBb6, and returned home to f1. Retreat of bP to b7 requires previous uncapture of [bBc8], by wPc2xBd3, so the bB can be returned home to c8. After White retracts wPg2-g3 and prior to the uncaptures of bQ and bR by wPf4, both bishops must exit the South-East corner via g3, h4. The exit of the bishops is preceded by retreat of bPg5 needed to allow wB to retract along the d8-g5 diagonal to vacate h4 for the bB. A wR cannot be retracted to h1 before it is vacated by bN retracting to g3 which requires previous retraction of wPg2-g3 so a wB stands locked at f1 preventing further retraction of the wR from h1 to a1. Therefore [wRa1] is retracted home via column c, retracting to b2 before the retraction of wPc2xBd3.

Until a wR is retracted to b2, allowing the first black officer uncapture by wPc2xBd3, all of the Black officers remain immobile so Black can only retract pawns, possibly including retractions by a bP uncaptured on the a file. The retreat of the bPs must avoid prematurely locking out [bRh8] or [bQd8] or locking in wRf7 or wKg8. The wR retracted to b2 comes either from f7 or from h3.

Retraction of wRh3 to b2 via h4,c4 fails since row4 cannot be cleared by retracting wPf3-f4. Retraction of wRh3 to b2 via h5,c5 fails since both bPg5 and bPh5 must retreat to clear row5 for wRh3 which requires previous exit of wRf7 across row6 which requires retreat of bPf6 to f7. But bPs standing on f7, g7/g6 and h7/h6, together with bK standing immobile on e8, prevent the bR that is subsequently uncaptured by wPf4 from retracting home to h8 (see Try1 below).

Retraction of wRh3 to b2 via h4-g4-g5-c5 fails since bP must vacate g5 for the rook (by retracting to g6) and White does not have time for early extraction of wRf7 which means that bPh5 cannot retreat (as this would prevent the exit of wRf7) so bPe3 must retreat all the way to e7 via e5, delaying (by temporary obstruction) the retraction of wRh3 across row5, and bP, uncaptured on a5, must retreat all the way to a7. But bPs standing on e7, a7 and (after the uncapture on c6) on b7, together with bK standing immobile on e8, prevent the bQ that is subsequently uncaptured by wPf4 from retracting home to d8 (see Try2 below).

Retraction of wRh3 to b2 via h6,d6 fails since, to clear row6 for wRh3, bPs h5 and f6 must retract to h7 and f7. This means that bPg5 cannot retreat from g5 until [bRh8] is retracted back into its corner via g6. Standing on g5 the bP prevents wBh2 from vacating h4 for bBg1 which is required (as shown above) before wPf4 can uncapture the bR (see Try3 below).

In conclusion: the wR retracted to b2 is not wRh3 so it is wRf7.

In order to retract wRf7 to b2 it needs to sneak behind the bPs while they retreat without locking out [bRh8]. This means that, prior to the uncapture of the bR by wPf4 and its return to the North-East corner, either bPf6 or bPg5 or bPh5 must remain in place (retracting all 3 closes the return path to h8 of the uncaptured bR) .

It has been shown above that leaving the bP on g5 does not work as this prevents the exit of wBh2 that enables bBg1 to follow to h4 which is required before wPf4 can uncapture the bR.

If bP remains on f6 (does not retreat to f7) wRf7 cannot exit via row6. Therefore it exits via row5. The exit path of wRf7 must be either via g7-g6-h6-h5 or via h7-h6-g6-g5. Both of these paths require retraction of wQ to vacate h7 (for wRf7 or for bPh5). To open the way for the wR Black must either retreat with bPg5 to g7 and bPh5 to h7, locking in wKg8, or else retreat with bPh5 to h7, bPg5 to g6 and bPe3 to e6 which means that the bR, subsequently uncaptured by wPf4, will not be able to retract home to h8 (see Try4 below).

It follows that bPf6 retreats to f7, bPh5 remains on h5 and bPg5 retreats to g6 (not to g7 as this prevents the exit of wKg8) and that the fastest exit path of wRf7 is via g7, g6, d6 using 3 retractions (not via h7, h6, d6 as this requires an extra retraction by wQ to vacate h7). Retracting the wR from d6 to b2 can be accomplished in 4 additional retractions but Black lacks a neutral bP retraction needed to make this possible. The missing tempo retraction can be provided by a bP that is uncaptured on the a file by the wR, on its way to b2. The tempo retractions of the uncaptured bP must also compensate for additional retractions by the wR needed for the uncapture. Prior to the uncapture of bQ by wPf4 and its return home to d8, Black will not be able to retract the uncaptured bP all the way to a7 while also retracting bPe3 all the way to e7, since bPs standing on a7 and e7, together with bK standing immobile on e8, imply that retracting bPb7xBc6 will prevent the bQ, subsequently uncaptured by wPf4, from returning to d8. This restriction prevents the implementation of the plan by uncapture of bP on a5, with 1 extra wR retraction, or for uncapture of bP on a3, with 3 extra wR retractions, (see Try5 below). In conclusion the wR must uncapture the bP on a4.

The number of bP tempo retractions available prior to the first uncapture of a Black officer is exactly enough to allow White to complete the maneuver preparing for wPc2xBd3 so the White retractions are fully determined by the time pressure.

8 retractions are needed for wRf7 to get back to b2. The final retreat of the rook, back from b2 to a1, requires 2 further unique retractions (wN cannot vacate a1 with wPs standing on c2 and b3 therefore prior retraction of wPb2-b3 is required implying that when wR retreats to a1, wB stands locked at c1 so wR must retract to a1 from b1) for a total of 10. This is claimed to be a record in Classical Retro-Analysis. See the Solution below.

Try1

Retraction: -1...0-0-0+ -2.Rg7-f7 Ph6-h5? -3.Rh5-h3 Pe4-e3 -4.Rg6-g7 Pf7-f6
-5.Rd6-g6 Pg6-g5 -6 Rc5/a5-h5

The bR, subsequently uncaptured by wPf4, cannot return to h8.

Try2

Retraction: -1...0-0-0+ -2.Rh4-h3? Pe4-e3 -3.Rg4-h4 Pg6-g5 -4.Rg5-g4
-4...Pe5-e4 (not -4... Pg7-g6 or -4...Ph6-h5 as then wRf7 cannot exit) -5.Rg7-f7 Pe6-e5
-6.Ra5-g5 Pf7-f6 -7.Rc5xPa5 Pa6-a5 -8.Rc2-c5 Pa7-a6
-9.Rb2-c2 Pe7-e6 (again not Ph6-h5?) -10.Pc2xBd3

The uncapture of bQ by wPf4 requires previous retraction of wPg2-g3 which requires previous uncapture of wB by bPb7xBc6 (so it can be returned home to f1) but bPs on a7,b7,e7 prevent return of the bQ, subsequently uncaptured by wPf4, to d8.

Try3

Retraction: -1...0-0-0+ -2.Rg7-f7 Ph6-h5 -3.Qf5-h7? Ph7-h6 -4.Rh6-h3 Pf7-f6
-5.Rd6-h6 Pe4-e3 -6.Rd4-d6 Pe5-e4 -7.Ra4-d4 Pe6-e5 -8.Rc4xPa4 Pa5-a4
-9.Rc2-c4 Pa6-a5 -10.Rb2-c2 Pa7-a6 -11.Pc2xBd3

wRh3—g6-g7, wNe3-f1, wKe1—g8, bBf8—d3, bNb8—b1, bPb7xBc6, wBf1—c6,
wPg2-g3, bNe4-g3-h1, wBh4-g3-h2, bBg3-h2-g1, wRh1—h3

But the uncapture of bR by wPf4 requires retraction of bB to h4 which requires that wB vacate h4 which requires retreat of bPg5 so the bR, subsequently uncaptured by wPf4, cannot return to h8.

Try4

Retraction: -1...0-0-0+ -2.Qh8-h7?

-2...Pg6-g5 -3.Rh7-f7 Pg7-g6 -4.Rh6-h7 Pe4-e3 -5.Rg6-h6
-5...Ph6-h5 -6.Rg5-g6

-6...Ph7-h6 wKg8 cannot exit.

-6...Pf7-f6 wKg8 cannot exit

-6...Pe5-e4 -7.Rf5-e5 Pe6-e5 -8.Ra5-f5 Pe7-e6 bB cannot return to f8

-5...Pe5-e4 -6.Rg5-g6 Pe6-e5 -7.Ra5-g5 Ph6-h5 bR cannot return to h8

-2...Ph6-h5 -3.Rg7-f7 Ph7-h6 -4.Rg6-g7 Pe4-e3 -5.Rh6-g6 Pg6-g5 -6.Rh5-h6

-6...Pg7-g6 wKg8 cannot exit

-6...Pf7-f6 bR, subsequently uncaptured by wPf4, cannot return to h8.

-6...Pe5-e4 -7.Rg5-h5 Pe6-e5

bR, subsequently uncaptured by wPf4, cannot return to h8.

Try5

Retraction: -1...O-O-O -2.Rg7-f7 Pf7-f6 -3.Rg6-g7 Pe4-e3 -4.Rd6-g6 Pe5-e4

-5.Rd5-d6? Pe6-e5

-6.Rc5-d5 Pg6-g5 -7.Rc2-c5 Pe7-e6 -8.Rb2-c2 Ph6-h5

bPs standing on e7, f7 and h6 imply that bR, subsequently uncaptured by wPf4, cannot return to h8.

-6.Ra5-d5 Pg6-g5

-7.Rc5xPa5 Pa6-a5 -8.Rc2-c5 Pa7-a6/Pe7-e6 -9.Rb2-c2 Pe7-e6/Pa7-a6 -10.Pc2xBd3

bPs standing on a7 and e7, together with bK standing immobile on e8, imply that when bPb7xBc6 is retracted, the bQ, subsequently uncaptured by wPf4, cannot return to d8

-7.Ra3-a5 Pe7-e6 -8.Ra5xPa3 Pa4-a3 -9.Rc5-a5 Pa5-a4 -10.Rc2-c5 Pa6-a5 -11.Rb2-c2

Repeat of the position after -9.Rb2-c2 above.

Solution:

Moves that must have been played by wRa1 - a1-b1-(?) -b2-c2-c4-xPa4-d4-d6-g6-g7-f7

Retraction (mandatory moves by [wRa1] in **Underlined**)

-1...O-O-O -2.**Rg7-f7** Pf7-f6 -3.**Rg6-g7** Pe4-e3 -4.**Rd6-g6** Pe5-e4 -5.**Rd4-d6** Pe6-e5

-6.**Ra4-d4** Pg6-g5

-6...Ph6-h5? leads to a position shown in the first part of Try5 above.

-6...Pe7-e6 changes Black's move order without affecting White.

-7.**Rc4xPa4** Pa5-a4 -8.**Rc2-c4** Pa6-a5 -9.**Rb2-c2** Pa7-a6/Pe7-e6 -10.Pc2xBd3

The moves of the wR are unique provided that Black does not have a spare tempo. This holds since Black could not now retract any of the following:

Pe7-e6?/Pa7-a6? bQ, when uncaptured by wPf4, is locked out of d8.

Pg7-g6? wKg8 cannot exit.

Ph6-h5? bR, when uncaptured by wPf4, cannot return to h8.

bBc8—d3, w**Rb1-b2**, wNe3-f1, wNb8—d3-c1, wQd1—h7, wKe1—g8, bPb7xBc6,

wBf1—c6, wPg2-g3, bNg8—h1, wBc1—h4-g3-h2, bBf8—h4-g3-h2-g1, bPg7-g6,

wPg3xRf4, bRh8—h6—f4, wRh1—h3, wPh2xQg3, bQd8—g3, bPe7-e6, bPh7—H5,

wPb2-b3, wNg1—a1, w**Ra1-b1**, wNb1—e3

Thematic content

A rook "Promenade" of 10 fully determined moves, a record in Classical Retroanalysis. The thematic moves are the first and the last 9 moves by the rook. Bi-chromatic Bishop "Corridor" play shows a "Magnet" (of bB for wB) in forward play and "Retro-Magnet" (of wB for bB) in terms of retractions. Secondary thematic elements, shown in the refutation of tries, include, timely release of Home cages (of [wBc1], [wBf1], [wRa1], [bBc8], [bRh8], [bQd8]) and timely locking of Dynamic cages (of wNa1, wBh2, wRf7, wKg8, bNc1, bNh1, bBg1).

Proof Game (mandatory moves in **Bold**) SPG?

1.Nb1-a3 **Pe7-e6** 2.Na3-c4 Ph7-h5 3.**Ra1-b1** Qd8-g5 4.Ng1-f3 Qg5-g3 5.Nf3-d4 Rh8-h6
6.Nd4-b3 Rh6-f6 7.**Nb3-a1** Rf6-f4 8.**Pb2-b3 Pg7-g6** 9.Ph2xQg3 Ng8-e7 10.Rh1-h3 Ne7-f5
11.Pg3xRf4 Bf8-e7 12.Bc1-b2 Be7-h4 13.Bb2-f6 **Bh4-g3** 14.Bf6-h4 **Bg3-h2**
15.**Bh4-g3 Bh2-g1** 16.**Bg3-h2** Nf5-g3 17.Nc4-e3 **Ng3-h1** 18.**Pg2-g3** Nb8-a6
19.Bf1-g2 Na6-b8 20.Bg2-c6 **Pb7xBc6** 21.Ke1-f1 Bc8-a6 22.Kf1-g2 Ba6-b7
23.**Ne3-f1** Bb7-fa6 24.Kg2-f3 Ba6-b7 25.Kf3-e4 Bb7-a6 26.Ke4-e5 Ba6-b7
27.Ke5-f6 Bb7-a6 28.Kf6-g7 Ba6-b7 29.Kg7-g8 Nb8-a6 30.Qd1-c1 Na6-b4
31.Qc1-b2 Nb4-d3 32.Qb2-g7 **Nd3-c1** 33.Qg7-h7 Bb7-a6 34.**Rb1-b2** Ba6-d3
35.**Pc2xBd3 Pa7-a6** 36.**Rb2-c2 Pa6-a5** 37.**Rc2-c4 Pa5-a4** 38.**Rc4xPa4 Pg6-g5**
39.**Ra4-d4 Pe6-e5** 40.**Rd4-d6 Pe5-e4** 41.**Rd6-g6 Pe4-e3** 42.**Rg6-g7 Pf7-f6**
43.**Rg7-f7 0-0-0+**