



THE PUZZLING SIDE OF CHESS

Jeff Coakley

ONE GOOF LEADS TO ANOTHER

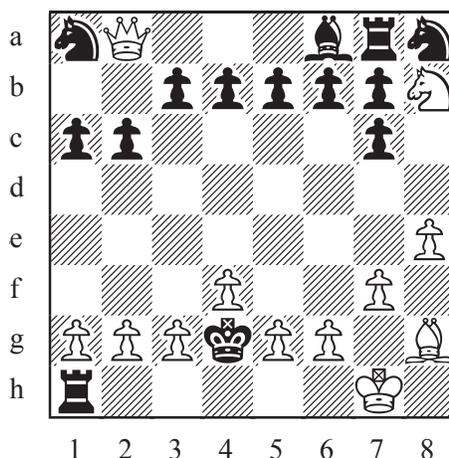
number 43

August 17, 2013

The positions in this column are intentionally illegal. Your task is to figure out why.

A chess position is *legal* if it can be reached in an actual game, starting from the initial array and following the rules of normal play. Don't worry if the moves seem strange. Legality has nothing to do with good strategy.

Who's the Goof? 20



Why is this position illegal?

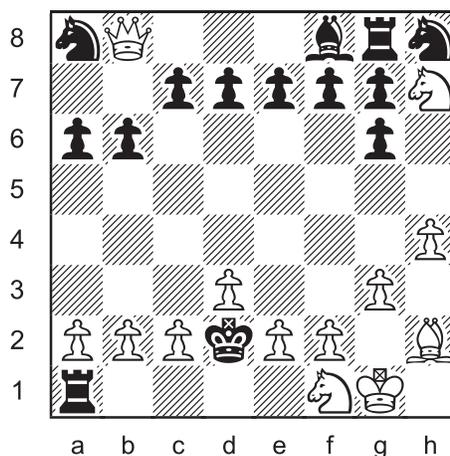
For problems 1-19, see columns 12, 19, 26, 34, 37 in the archives.

I suppose the first puzzle might be considered a cheap trick. Did you spend much time analyzing the details of the position? If so, your efforts will not be wasted. The arrangement of pieces in the next three diagrams is very similar.



The cheerless cop was not amused by the bishops' lame excuses.

Who's the Goof? 21

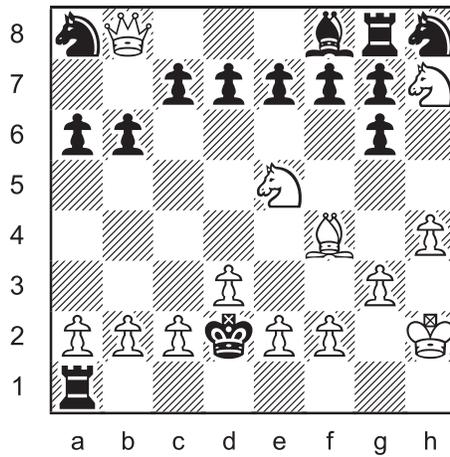


Why is this position illegal?

Who's the Goof? is a kind of negative *proof game*. The goal is to prove that a position could **not** happen in a real game. Solving the puzzle usually involves “backwards thinking” (retrograde analysis).

The *stipulation* is to explain why the position is illegal. Sometimes a single piece or tactical element can be identified as the “goof”. However, in more complicated cases, a logical argument is necessary to demonstrate a “legal contradiction” within the position.

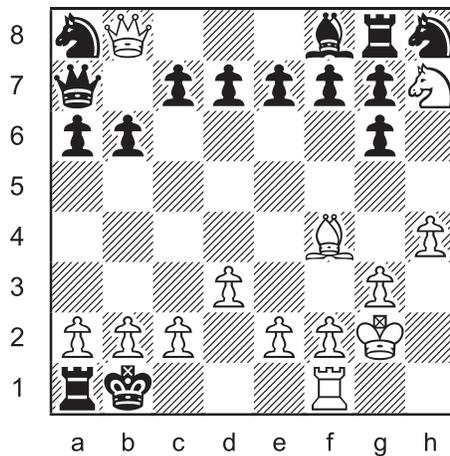
Who's the Goof? 22



Why is this position illegal?



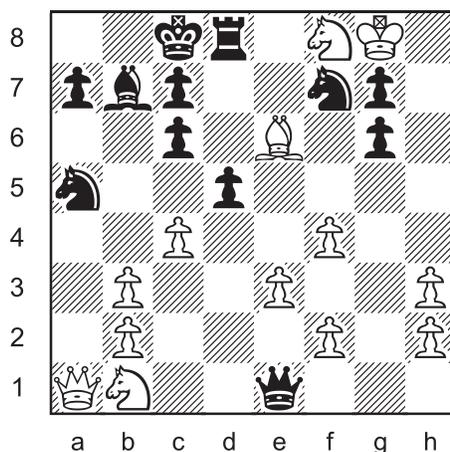
Who's the Goof? 23



Why is this position illegal?

For our final goof, we have a fresh setup. No cheap trick here. This violation warrants a stiff fine.

Who's the Goof? 24



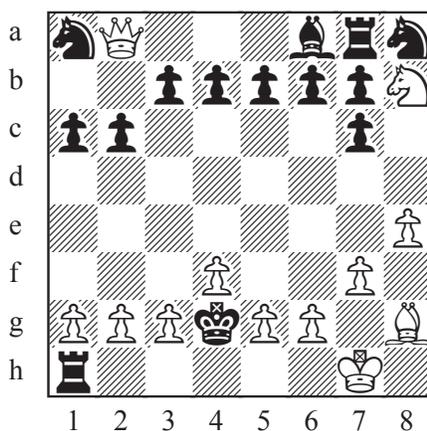
Why is this position illegal?

SOLUTIONS

All problems by J. Coakley, *ChessCafe.com* (2013).

PDF hyperlinks. You can advance to the solution of any puzzle by clicking on the underlined title above the diagram. To return to the puzzle, click on the title above the solution diagram.

Who's the Goof? 20



The board is turned sideways.

The lower left corner should be a dark square. Otherwise the position is perfectly legal. The unusual arrangement of pieces, with the black king on d2 and rook on a1, is possible. *(continued next page)*

The black rook (a1) escaped from the 8th rank along the b-file after the capture ...bxa6 and before ...axb6. The rook then invaded the 1st rank through h3 after White played h4 and prior to g3.

It's not pretty, but here's a proof game which shows that diagram #20 can be reached with legal moves.

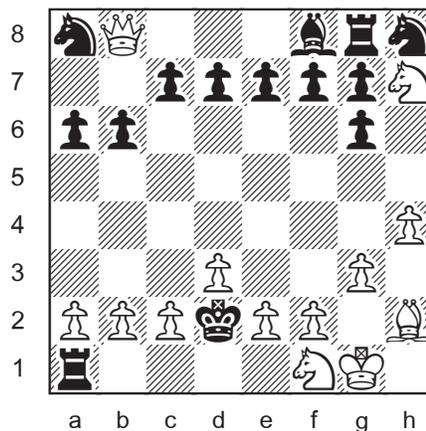
1.h4 Nc6 2.Rh3 Nf6 3.Ra3 Rb8 4.Ra6 bxa6 5.Nc3 Rb3 6.Na4 Rh3
 7.Nb6 Nd5 8.Nxc8 Nb6 9.d3 Na8 10.Nb6 axb6 11.Bf4 Rh1 12.Bh2
 Ne5 13.g3 Ng6 14.Kd2 Rg8 15.Bh3 Nh8 16.Bf5 Qb8 17.Bg6 hxg6
 18.Nf3 Kd8 19.Ng5 Kc8 20.Nh7 Kb7 21.Ke3 Kc6 22.Qd2 Kd6 23.Qc3
 Ke6 24.Qc6+ Kf5 25.Qb7 Kg4 26.Qxb8 Kh3 27.Qb7 Rxa1 28.Qa7
 Kg2 29.Qb8 Kf1 30.Kf3 Ke1 31.Kg2 Kd1 32.Kg1 Kd2+

If this kind of “sideways goof” happens in a tournament, it does not nullify the game. These are the applicable FIDE rules.

2.1 ... *The chessboard is placed between the players in such a way that the near corner square to the right of the player is white.*

7.1 b. *If during a game it is found that the chessboard has been placed contrary to Article 2.1, the game continues but the position reached must be transferred to a correctly placed chessboard.*

Who's the Goof? 21



Besides the colour of the squares, the only difference between this puzzle and the first is the addition of a white knight on f1. Now the position is illegal, but not directly because of the knight. (The last two moves could have been 1...Ke1-d2+ 2.Ne3-f1+.)

The position is illegal because there are **not enough missing white pieces** to explain the black pawn formation, which required three captures (on a6, b6, g6). As discussed in puzzle #20, the black rook (on a1) could only have escaped from behind the black pawns along the b-file after ...bxa6 and before ...axb6. *(continued next page)*

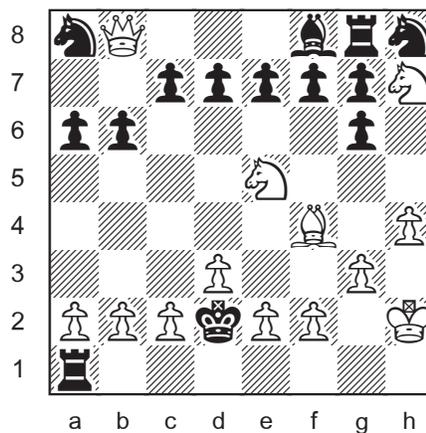
White is missing three pieces (RRB). However, it is impossible that both the white rook from a1 and white bishop from f1 escaped from behind the white pawns (to be captured on a6, b6, or g6). Either one of them could have escaped, but not both.

The white rook from a1 could only “get out” (through h1 and h3) if the bishop on f1 moved first, which would require the g-pawn to advance. But after White plays g3, the rook’s route along the 3rd rank from h3 is closed.

Another possibility can also be refuted. The white rooks and the bishop from f1 did not escape by means of pawn captures on the g- and h-files (gxh and hxg3) because a bishop could not be on h2 if hxg3 was played and a white pawn is still on f2.

We can conclude that one of the three missing white pieces was captured inside the white pawn formation, and not on a6, b6, or g6. If Black was unable to play ...axb6 and ...bxa6, then the black rook cannot be on a1. The position is therefore illegal.

Who’s the Goof? 22



Black is in an impossible check.

The last move had to be with the white bishop. No discovered check was possible.

The bishop did not move to f4 from e3 because it would already be checking the king. *It cannot be White’s turn if Black is in check.* For the same reason, the bishop did not move to f4 from h6 or g5, unless it captured on f4.

However, a capture on f4 is impossible because Black does not have enough missing pieces. The only way to explain how the black rook (on a1) exited the 8th rank is by the pawn captures ...bxa6 and ...axb6.

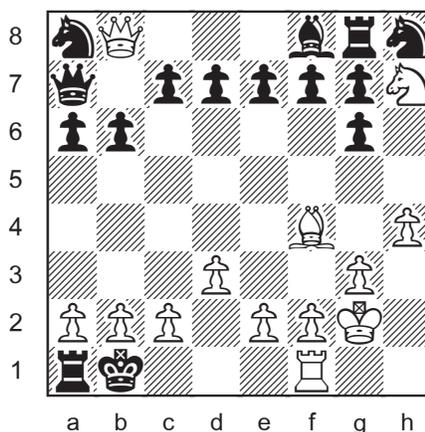
(continued next page)

That could only happen if the three missing white pieces (RRB) all escaped from behind the white pawns to be captured on a6, b6, g6. And that is only possible if White opened the g-file earlier by gxh, and later closed it by hxg3. Black is missing two pieces (QB). If they were captured by the white g- and h-pawns, then we can rule out a capture on f4 last turn.

In complicated goofs, there is often more than one way to prove that the position is illegal. But typically, the argument is still based on the same logical components.

Here is an alternative solution for #22. The last move had to be the capture Bg5xf4+ or Bh6xf4+, which only leaves one missing black piece available for capture elsewhere. That means that White could not have played gxh and hxg3. Therefore, one of the three missing white pieces was captured inside the white pawn formation, and not on a6, b6, or g6. So Black could not have played ...bxa6 and ...axb6 to let the rook from a8 escape. The position is illegal because the black rook cannot be on a1.

Who's the Goof? 23



The position is illegal because **Black did not have a legal move on their previous turn.**

Black is in check from the rook on f1.

The last move was not a capture by the rook (Rh1xf1+ or Rg1xf1+) because Black is only missing one piece, the light-square bishop. If that bishop were on f1, the white king would have been in an impossible check. *(continued next page)*

Other moves by the rook to f1, without capturing, could only happen from along the 1st rank. That is impossible since the black king would already be in check.

So the last move had to be a discovered check by the white bishop, from c1 to f4.

Now consider the position before Bc1-f4+, with the white bishop on c1. What was Black's previous move?

The only black pieces on the board with any "reverse mobility" are the queen and the pawns on a6 and b6.

The queen could only come from b7, and that is impossible because she would have been checking the white king. *It cannot be Black's turn if White is in check.*

As we know from the earlier puzzles, Black had to play ...bxa6 (and ...axb6) earlier in order to let the rook out from a8. Therefore the previous black move could not be ...b7xa6 or ...b7-b6. (Note that the black rook has to be freed by ...bxa6 followed later by ...axb6, and not vice versa. If ...axb6 was played first to open the a-file, then a black knight could never have reached a8.)

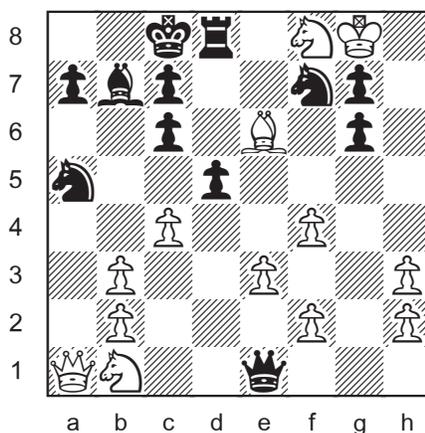
Another option is that Black just played a piece to f4 which was then captured by the white bishop (Bc1xf4+). However, that is also impossible because the only missing black piece is the light-square bishop and f4 is a dark square.

Since Black had no possible move on the previous turn (before White played Bc1-f4+), we have a *retro-stalemate*. This kind of backwards dead end proves that a position is illegal.

There are two other things worth mentioning.

1. It was possible for the three missing white pieces (RBN) to be captured on a6, b6, and g6.
2. The rook on f1 started the game on a1. The following sequence of moves allowed the black king and rook to reach a1 and b1. White plays d3 and h4, and clears the 1st rank except for the rook on a1 and bishop on f1. The black rook plays to h1 through h3. White plays g3 and the white bishop moves out (and is later captured on g6). The white rook goes to g2 and the black rook to a1. The black king makes it way to h3. The white rook moves to g1 and the black king to h2. The rook checks on g2 and the king moves to h1. The rook checks on h2 and the king runs to b1. The white bishop returns to c1 and the white rook goes to f1. Whew!?

Who's the Goof? 24



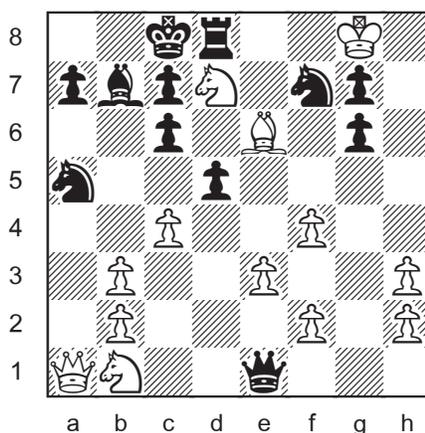
The goof is the **white king**. There is no way he could have reached g8. Black is in check from the bishop on e6.

The bishop did not move to e6 from d7 because it would already be checking the king. *It cannot be White's turn if Black is in check.* For the same reason, the bishop did not move to e6 from f5 or g4, unless it captured on e6.

However, a capture on e6 is impossible because Black does not have enough missing pieces. The white pawn formation requires four captures. For example, axb3, dx e3, exf3 (followed by f4), and gxh3. Black is missing four pieces (RBpp). Since those four pieces were taken by white pawns, the last move was not a capture on e6 by the bishop (Bxe6+).

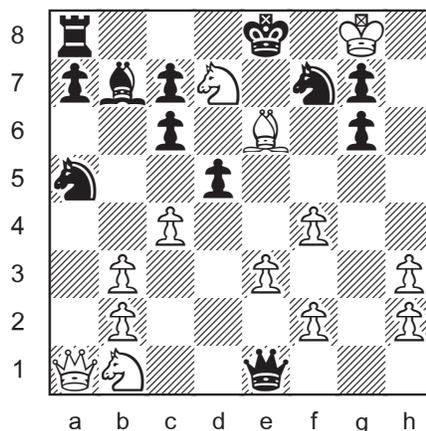
The last move had to be a discovered check by the white knight, from d7 to f8 (Nd7-f8+). This move could not be a capture for the same reason as above. All missing black pieces were captured by white pawns.

Here is the position before Nd7-f8+.



The white king is in check from the rook on d8. This could only occur if the last black move was castling. *(continued next page)*

Now look at the position before 1...0-0-0+ 2.Nd7-f8+.



Since Black castles on the next turn, we know that the black king has not moved previously. Therefore, the white king did not get to g8 through f8 or f7. *The two kings may never stand next to each other.*

The only other way for the king to reach g8 would be through h7 from g6. That could not happen if the black pawn were already on g6. But before that pawn reached g6, it stood on f7 or h7, where it guarded g6. That means that the white king could never have been on g6 (or reached g8 via h7). The position is illegal.

Until next time!

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