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Is Your Move Safe?

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Upon hearing that, my student replied with something indicative of the way many other students have played:

"*Well, Dan, I went through all the same logic exactly the same way you did with one exception. When I saw I had to move the queen to e7, I did not check to see if that move was safe, so I played 1...♕e7 first, my opponent checked, I lost the bishop, and I lost the game.*"

This is not an isolated case and that student was not a beginner.

I had another student who chose to lose a pawn rather than suffer an isolated pawn(!). While occasionally there are positions where it is better to lose material than to have a positional weakness, those are certainly a minority. Until you are a very good player and can make those infrequent distinctions correctly with a high percentage of accuracy, it's very likely you should just put safety first.

I find the following principle helpful: *Strategy is the tiebreak of equally safe moves.*

Get in the habit of first checking if a candidate is safe so you don't make the same mistake the student did when he played 1...♕e7?.

Strategy will initially help you choose your candidate moves, but safety usually determines if they remain candidates. I call this concept *Initial and Final Candidate Moves.* Initial candidates are those that do something (offensive or defensive). Final candidates are subsets of the initial candidates that either pass the safety test or are willing sacrifices.

> ## Strategy is the tiebreak of equally safe moves.

Determining if a Move Is Safe

Over the course of providing private lessons to about 1,000 players, I have given many, many "Is it safe?" problems. Some you will find in this book.

In actual play, students often do not even ask if a candidate is safe, which certainly makes it difficult to determine if it is. Therefore, *the first step in finding out if a move is safe is the willingness to consistently check for its safety!*

I am not going to do an extensive discourse on how to determine move safety here in the Introduction. To some extent, that's what the remainder of this book, as well as every tactics book ever written, are partially trying to do. But I should provide an overview of some of the issues involved in finding piece safety. This I will do below and continue through some initial problems in Chapter 1, "Basic Safety Issues."

Another reason weaker players often do not find that a move is safe is that they depend too much on their pattern recognition, especially defensively, when determining if their own candidate is safe. From this aspect, the three ways one can determine whether a move is safe are:

- Purely pattern recognition – this almost exclusively occurs in the early opening or late endgame when the exact pattern studied appears on the board,

- A mixture of pattern recognition and analysis; this is the most common case. A position might have elements closely or loosely resembling those that were studied before. Once recognition is made, careful analysis is required to determine, *"Is the answer to this move's safety the same as the similar position that I studied previously?"*

- Pure analysis – there is no similar pattern studied previously, or at least none that is triggered by examining the current position. In this case, careful analysis is required to determine if the move is safe. *You can't assume a move is safe just because you don't immediately recognize any danger.*

You cannot always tell which of the three is required. For example, you may think that your opponent has fallen into a book opening trap (pure pattern recognition) and that his move is not

safe. However, unless the position is identical to the one you studied, it may be that the trap does not work if even one piece is in a slightly different position. Therefore, when in doubt, never rely purely on pattern recognition.

Pattern recognition study (tactics, openings, endgames) is necessary and extremely helpful; however, it is usually not sufficient. Even in patterns that seem identical to something studied previously, it makes sense to ask, "*Does the solution I remember really work in this position?*" and augment with double-checking analysis. This takes time, which is one reason those who play faster chess on the internet often have trouble developing the skills and habits which would help them become strong over-the-board players in slower time controls.

When you are doing a puzzle, you are told if the previous move was not safe, i.e. "White to play and win." In a game, you have to determine the safety situation on each move – and for each candidate move.

The keys to seeing that a move might not be safe are certain "danger" patterns in a position such as loose pieces, a weak back rank, or an exploitable geometric pattern like two pieces lined up for a pin or skewer. I call these the *Seeds of Tactical Destruction*, but other authors have different names.

No matter what you call these seeds, a position must possess them if there is to be a tactic. World Champion Steinitz correctly postulated that you need something wrong with the opponent's position to win material; you can't make something out of nothing just by your brilliance (although if the safety issue is obscure enough, it may require great brilliance to discover it!).

Contrarily, if those seeds do exist, that does not mean there has to be a tactic. In my book *Back to Basics: Tactics,* I included a chapter of puzzles called, "Is There a Tactic?", meaning that the side to move may or may not have a tactic, even though seeds existed in every position.

If a move is not safe, it will require a forcing move in response to win the material or mate. These forcing moves are the responding player's checks, captures, and threats.

For example, when you are determining if a candidate move is safe, you have to consider the opponent's checks, captures, and threats to see if one of these can force the win of material or mate. A threat that can be met is *not* a tactic. Similarly, to determine if your *opponent's* move is not safe, you have to consider your own checks, captures, and threats to see if one of them can forcibly win material or mate.

Unless a position is unclear, you usually have to analyze to *quiescence* before you can come to a conclusion and evaluate. A "quiescent" position is one where further checks, captures, and threats either do not exist, or further analysis of them would not change the evaluation of the position.

As an absurd example, you would not analyze that you could capture your opponent's queen, stop analyzing, and conclude you are ahead a queen if the opponent had a simple recapture of your queen!

As a more practical example, suppose you analyze that you lose your queen but don't get sufficient compensation or mate in return. At that point, you can stop your analysis and reject that candidate. You can do so even if analyzing further forcing moves after that point might reveal that you could eventually win, say, a pawn.

In most positions, you don't have to know how many moves are safe. But you *do* have to determine if each of your candidate moves is safe (and if not, are you willing to sacrifice?).

In certain defensive situations, it *is* efficient to ask, *"How many safe moves do I have?"* before trying to find the best one. But in most "normal" situations once you have determined that your candidate moves are safe, it is a waste of time to know what other safe moves you have.

Determining if a candidate move is safe is necessary, but it is not sufficient for determining which move you want to play. The move actually played is often the best one you can find in a reasonable amount of time. Moreover, in many non-critical positions, especially dead-drawn positions, any safe move might do.

Determining whether a move is not safe may require skills and knowledge that range from simple pattern recognition to world-class analysis. Partly for this reason, I could not include all easy problems nor all extremely difficult ones. The problems will range from relatively trivial to quite difficult, but most are fairly challenging. I hope that almost all the problems will also prove thought-provoking and instructive.

Value of the Pieces

For purposes of "Is it safe?" evaluation, we have to determine a baseline of what constitutes losing material. Beginners – and some intermediates – often use the popular 1-3-3-5-9 valuation system (which I call the "Reinfeld" system in honor of the prolific 20th century American author Fred Reinfeld) for average piece values.

We shall use a more accurate value system that was determined via computer analysis by GM Larry Kaufman, most recently noted in his book *The Kaufman Repertoire for Black & White* (White's p. 12):

- Pawn = 1
- Knight = 3.5
- Bishop = 3.5
- Rook = 5.25
- Queen = 10
- Bonus of 0.5 pawns for the *bishop pair* (one side has two bishops and the other does not)

Using GM Kaufman's system, if the difference in the total value between each side's traded pieces comes out to a quarter-pawn or less, that would usually be considered a fair trade. More than

- In chess, it is easy to generate unstoppable threats. That means if you don't look for your opponent's checks, captures, and threats that he can make *in reply to* your candidate move, it is entirely possible you will make a move like 1...♕xb5 and your opponent will counter with an unstoppable threat that will win the game. In this case I purposely picked a very familiar mating pattern so that 2.♕h6 would "jump out" at you if I asked about 1...♕xb5. But not every unstoppable threat is so easily spotted...

- It's extremely important and helpful to study basic tactical patterns. That's not news. Pattern recognition should help prevent you from making a move like 1...♕xb5. The more patterns you know, the better. *But you can't rely on only knowing those patterns;* spotting the opponent's tactics in reply to your move often requires careful analysis. And even in well-known positions like this, once you spot 1...♕xb5 2.♕h6, you *still* should double-check to make sure Black would have no defense. Even for common patterns, double-checking – at the very least – with careful analysis is always sensible, except in speed games. There's too much riding on making one huge mistake.

Answer 1-5
White to play: Which of the following are safe?
a) 1.♗e3   b) 1.♘c3   c) 1.c4
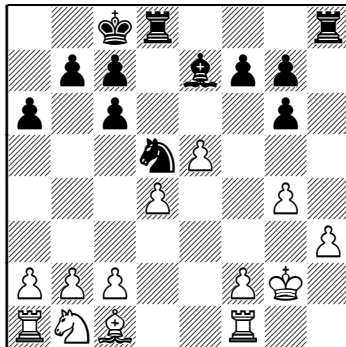
a) Yes, 1.♗e3 is safe. If Black plays 1...♘xe3, then 2.fxe3 protects the d-pawn. Doubling White's pawns, as explained in the In-

troduction, may not be desirable (here it is fine), but doesn't count as "not safe" unless it causes White to lose material or get checkmated. With the d-pawn already guarded, other knight discoveries such as 1...♘b4 only threatens the c2-pawn, which can be made safe with, say, 2.♘a3.

b) 1.♘c3 would be my first candidate move in this position but I would have to reject it because it is not safe. No, it's not because of 1...♘xc3 2.bxc3 where the doubled pawn nicely goes toward the center and guards the important d-pawn. It's because the discovered attack 1...♘b4! hits both the d-pawn and the c-pawn, and the c-pawn cannot be saved.

If you failed to find 1...♘b4 when doing the problem, the following is one way that may have helped you find it. After 1.♘c3, identify which white pieces are not guarded by another white piece: ♔g2, ♖a1, ♙c2, ♙d4. But we don't have to worry about guarded kings, so the other three are "loose" pieces. How many Black moves in reply to 1.♘c3 would attack at least two of these other three (♖a1, ♙c2, ♙d4)? The answer is two: 1...♘b4 and 1...♘e3+. But 1...♘e3+ itself is not safe, so the move to be concerned about is 1...♘b4.

It is very instructive to compare the situation in Position 1-4 with 1...♕xb5 with the one here with 1.♘c3. Both allow unstoppable threats 2.♕h6 and 1...♘b4. While 2.♕h6 in 1-4 is a mate threat and 1...♘b4 here "only" wins a pawn, the principle of not allowing unstoppable threats through careful play on the previous move is the same. What differs, however, is whether or not you can depend on your prior pattern recognition to prevent making the error. The pattern after 1...♕xb5 2.♕h6 is a purposely well-known one, while the pattern here after 1.♘c3 ♘b4 is a purposely rare one, and unlikely to be in your mental database of dangerous patterns. Both cases call for analysis, but whereas 2.♕h6 should "jump out" at you to trigger this analysis, usually 1...♘b4 is only found after some care.

c) Having seen the answer to the previous move (b), it should come as no surprise that the "aggressive" 1.c4 also has similar problems after 1...♘b4, hitting c2 and d4. Even though c2 is

empty, 2...♘c2 would trap the rook. But any knight move by White would only save the rook – it can't save d4 as well.

Answer 1-6
White to play: Is 1.♕e8+ safe?
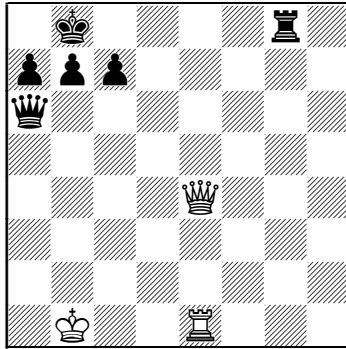
This is another easy problem to illustrate a point. Of course 1.♕e8+ is safe, for although it immediately "loses" a queen for a rook with 1...♖xe8, White gets mate on the recapture 2.♖xe8#.

This is a problem that only the rawest beginners fail to recognize, and they soon learn it, too.

This is another example of basic pattern recognition, but with a specific purpose: to show how to avoid a "*quiescence error*" of stopping too soon in the analysis. Here, to stop after 1.♕e8+ because it loses the queen would be incorrect.

Quiescence errors are one of the biggest problems for intermediate players. In games if they can't recognize the pattern, they often stop their analysis and miss "pseudo-sacrifices." These same sacrifices they would often find when doing a puzzle in a book, where the guarantee of a solution ensures that if they search further in some lines it will be worthwhile.

However, relying solely on pattern recognition is the problem; if you don't recognize a safe pattern, you still should always ask if further analysis might show the initial sacrifice to be reasonable. This issue is discussed further in Answer 1-7.