Part 1: Calculation and Solving.

game for

Seniors





HE MIDDLEGAME IS a vast topic, covering themes from tactics to positional play to mating attacks. There are a tre-

mendous number of fantastic books, electronic tools, and online materials available to help improve one's middlegame play.

The

Middle

In what follows, I am going to discuss how I train, focusing on the intersection of intuition and calculation. As older, "experienced" players, we should have developed a lot of intuitive ideas over the years. The trick is how to use that experience effectively!

Here "effectively" is a bit of a loaded term. First: if your intuition is wrong, playing intuitively is not effective, but destructive and self-defeating. Second, if you are studying material that is not suitable for your level, your effort may be wasted. If it is too hard, you may become discouraged.

So what does effective, helpful, and successful training look like?

I participate in GM Jacob Aagaard's "Killer Chess Training," an online chess academy. He assigns 12 homework problems each week in one of two sections — "friendly" (U2200) and "killer" (2200+) — and students can solve one or both sets of problems, depending on rating and interest. I recently heard a 2700+ grandmaster grumble that the friendly sheets weren't that friendly. My point in mentioning this is to reinforce the idea that chess is hard.

The common wisdom among top trainers is that successful, useful training exercises take between five and 10 minutes to solve, with a success rate between 50% and 75%. Players should work to find material to solve that fits into that range. Material can be found in many places; there are tactics training websites, dozens of books, and homework sets from paid trainers. What is important is locating material at the right level for the individual, and also working to solve exercises training the weakest part of their game.

I try to solve six problems per day that take me, on average, 10 minutes each. Why? I'm targeting my training to be effective for games played at a time control of G/90+30, where I have found there are, on average, six difficult positions per game that take about one hour total to solve. (The remaining time is spent on the opening and making simple decisions in between the hard ones.) My experience is that if I get fewer than three of these positions correct, it is a loss. If I get more correct, I draw or win, barring catastrophic error.

It is important to remember that we don't need to be perfect to win. In fact, being perfect is not realistic. The point is that a 66% success rate on these types of problems will generate a lot of wins and very few losses. No less than GM Magnus Carlsen indicated his satisfaction at converting five of nine winning positions at the 2022 Tata Steel Tournament, an event that he won.

Where does something like Puzzle Rush (*Chess.com*) or Puzzle Storm (*lichess.org*) fit into all of this? In my experience, Puzzle Rush can help build up intuition, and it can be hugely addicting. Played three or four times a week, it can help with blitz skills and hone intuition. But much more than

that, it becomes an addiction, leading to superficiality in calculation and perhaps even doing harm.

There is a general conception that studying openings is more useful than training calculation and intuition. People complain that the specific positions solved are not likely to come up in their games, but everyone has to play the opening, so why bother solving exercises?

I believe that regular solving of exercises develops two skill sets. First, by seeing lots of positions, even if the specifics are not explicitly remembered, one hones intuition. Second, every solving session trains calculation. It is important to spend approximately half as much time reviewing the solutions as solving the exercises, with the goal of trying to understand why solutions were missed. This review process is a strong tool for strengthening intuition by improving our understanding of the nuances of the positions.

Not sure that your knowledge base in the middlegame is what it should be? Let me mention two books that I have found useful for many players: *Mating the Castled King* by GM Danny Gormally and *Your Jungle Guide to Chess Tactics* by GM Peter Prohaszka.

Gormally systemically analyzed the various pawn and piece configurations that can deliver mate, and created 160 problems that range from basic to quite challenging. There are also 150 pages of illustrative games and game fragments that are delightful.

Prohaszka authored a comprehensive puzzle book centered around 25 different tactical themes. The material ranges from

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easy to ridiculously hard. As with the Gormally book, this is a great title for beginners, but it also has a lot of material that even masters can benefit from.

Together both of these books comprehensively treat the tactical tools a player must develop. Any player who has worked through this material can be confident they have the tools required for the next training step.

Another key topic in chess training is recognizing critical moments. A critical moment is a move where the difference between finding the correct move and failing to do so will change the game result by at least one half-point. It is also a move where a clear-cut solution can be found to a position, as opposed to playing an inferior move that leaves the position rather a mess.

As a lower-rated master, I have made a career out of creating messes against higher rated players that ultimately led to my demise from much superior positions. Minimizing messes can dramatically improve our results.

So how should we think about critical moments? In every position we determine to be critical, we have to be prepared to make a time investment. Then a list of alternative moves should be developed. The most promising candidate, the intuitively best move, should be analyzed first.

GM Jacob Aagaard developed a concept that, following an idea championed by former U.S. champion GM Sam Shankland, he dubbed "the Shankland rule." The basic premise of the rule is that if a move appears intuitively correct, but there appears to be a tactical issue — let's call it resistance — with the move, calculation will in many (but not all!) instances find a solution that enables the move to work. Working through resistance is a key component of training calculation and preparing for critical moments.

The following five examples are from my tournament practice in 2021-2022. In each position, the move that I believed was intuitively best was, in fact, the best move. In two of the positions, I did not play that move as I was unable to accurately calculate the consequences; in one of those games, I was fortunate to win anyway. In the other three positions, I trusted my instinct and played the correct first move; in one game I subsequently erred and lost anyway.

POSITION #1 FM Doug Eckert (2268) FM Dalton Perrine (2281) Charlotte Spring Norm (4), 02.14.2021



WHITE TO MOVE

20. Bxe7!

Of course this is the move I wanted to play, but what about 20. ... f6 followed by 21. ... Kf7, trapping the bishop?

20. ... **f6 21. Rb7 Kf7 22. Bd8!** Perrine missed this — an oversight by a very

strong opponent having a tough day.

22. ... Rxd8 23. Rxc7 Rxa3? 24. Nd2 Ke7 25. Nc4 Ra4 26. Nb6 Ra6 27. Nc8+ Kf8 28. Rb1 Ne5 29. Rbb7 h5 30. Rh7 Kg8 31. Rbg7+ Kf8 32. Ne7, Black resigned.

POSITION #2 FM Doug Eckert (2258) FM Jason Liang (2421) Charlotte Masters (2), 04.09.2021





This is a typical hanging pawn structure where the first move White should be looking at is 20. b4. What if Black just takes it? The elements in the position favor a potential combination, with the rook on c1 indirectly attacking the c6-bishop and a pin on the d7-knight.

20. b4!

I played **20. Bb2** and the opportunity passed with Black eventually winning: **20. ... Rb8 21. Bxd7 Qxd7 22. Ba3 Rb5 23. Bb2 Ba8 24. Qd3 Rbb8 25. Qc3.** Black already has an advantage.

20. ... cxb4 21. Bxg7 Kxg7 22. Nd4 Bb7

Not 22. ... Nb8? 23. Qg4+ Qg5 24. Bxc8 and White wins.

23. Qg4+ Qg5 24. Bxd7

Here Black can probably draw, but it's not trivial. In hanging pawn structures, White must try to find the most favorable moment to play the e2/3-e4 or b2/3-b4 pawn breaks. Once the opportunity is missed, Black is generally fine.

POSITION #3

FM Doug Eckert (2266) GM Ben Finegold (2538) 4th Annual John T. Irwin Tournament of Senior State Champions (2), Cherry Hill, 08.01.2021

(see diagram next page)

This game was previously published in *Chess Life* (November 2021) but I wanted to add some explanation. Here, we have the hanging pawn structure on the kingside, and I was playing with awareness of my missed b2-b4 against Liang. At first, g3-g4 looks like it will expose White's king. But intuition says the move must be considered. Absent White taking action, Black can build up behind his pawn center.





WHITE TO MOVE

20. g4 Nfe8 21. Ng3!

Instead 21. gxf5? Nxf5 is exactly what White should avoid. Black will put a piece on d4 and the open g-file is aimed at the white king.

21. ... fxg4 22. h4

When playing 20. g4, this was the position I had in mind. Now for the question: what does White have for his pawn? Quite a lot, it seems.

The g-file is closed. If White leaves his knight on g3 and rook on f1, Black can never play ... Nf5-d4. White immediately threatens Bg2-e4, Rf1-f7, h4-h5-h6 winning. Additionally, White can pile up on the e5-pawn, while Black's dark squares are weak due to his absent dark-squared bishop. Finally, how in the world does Black get the a8-rook, c8-bishop, and e8-knight into play? During the game my intuition was that is a lot for a pawn, and it turns out that it's +9.4 per Stockfish.

A strong GM gave me the advice when it is your turn, you should calculate. When your opponent is thinking, you should consider plans, not variations. If you are always calculating variations as an old man, you will wear yourself out.

In this game I tried to follow this advice. I had no idea how Finegold might try to respond. After playing 22. h4, I considered the ideas above in terms of where my pieces might go and what I should prevent him from doing, i.e, ... Nf5-d4.

22. ... Qd7 23. Qc3 Qd6 24. Rde1 h6 25. Bd2 Nf6 26. Rxe5, Black resigned.

Finegold resigned here as some combination of Qc3-e3xh6 or Re5-e6xf6 is going to deliver checkmate or heavy material gain.

POSITION #4 FM Ryo Chen (2401) FM Doug Eckert (2306) SPICE Cup (5), St. Louis, 10.19.2021



BLACK TO MOVE

Ryo Chen is one of America's great up and coming talents at age 11. In previous moves, we had traded mistakes in a very complicated position. I had 25 minutes left with three moves to choose from: ... Qg5-h4+, ... g4-g3+, and ... Qg5xf4+. I think that ... Qg5xf4+ winning the pawn is the move we want to make work, but the issue is after 31. ... Qxf4+ 32 g3 White is threatening Rd1-f1, Qe2-e6+, and then capturing on g6 with huge threats. What should Black play?

31. ... g3+

What about the other two moves?

(a) The position after 31. ... Qh4+ 32. Kg1 g3 33. Qe6+ Kh8 34. Qxg6 Qh2+ 35. Kf1 Qh1+ 36. Ke2 Qxg2+ 37. Kd3 Qf3+ 38. Kd2 Qxf4+ 39. Kc3 Rc8+ 40. Kb3 Rxc2 41. Kxc2 Bxd4 42. Qxh5+ Kg7 43. Qe2 is equal. This is a very forcing line. I spent 10 minutes calculating this variation, and I decided White was OK, but was convinced Stockfish would tell me Black was winning somewhere after the game. As it turned out, my original analysis was correct.

(b) After 31. ... Qxf4+ 32. g3 Qg5! — this is key, getting out of the way of the main threat. Rd1-f1 should be a move we analyze, even if it is not immediately obvious. (I kept focusing on 32. ... Qf6? during the game, allowing Rd1-f1 with a decisive tempo. My main variation at the board was 33. Rf1 Qg7 34. Qe6+ Kh8 35. Bxg6 and White is winning.) Play continues 33. Qe6+ Kg7 34. Rf1 Rb7! 35. Qxd6 Bxd4 36. Qf8+ Kh7 37. Qf4 Qxf4 38. Rxf4 and Black is better, although White should hold the draw.

32. Kg1??

To my surprise, Ryo played this instantly. The king intuitively looks unsafe on the h3-square, but the back rank is worse. Intuitively, we should all understand that a king stuck on the back rank, hemmed in by a pawn, is in mortal danger.

White had to play 32. Kh3 Qxf4 33. Qe6+ Kf8 34. Qxg6 Qg4+?! 35. Qxg4 hxg4+ 36. Kxg3 Rc8 37. Be4 Rc4 with equality. I finally settled on this variation believing it was a safe draw, and as I was running short on time. I just didn't see 32. ... Qg5 after 31. ... Qxf4+. The variations after 31. ... Qh4+ were so long, I was concerned I had missed something. This seemed safe.

32. ... Qxf4 33. Qe6+ Kh8 34. Bxg6 Rf8

The threat is ... Qf4-f2+-f1 mate, so White must defend the f1-square.

35. Bd3 Bxd4+ 36. Kh1 Qh4+ 37. Qh3 Qxh3+ 38. gxh3 Rf2, White resigned. Black efficiently mates after ... Rf2-h2.

POSITION #5 FM Doug Eckert (2271) Lev Paciorkowski (2422) NYC Winter IM (7), 01.16.2022



WHITE TO MOVE

Black is weak on the dark squares. The intuitive move is obvious, but how can White make it work?

23. Rxh4! Qxh4 24. Bg5 Qxh3?! 25. Bf6+ Rg7 26. Qe3!

In the game I played **26. Nd1??**, thinking the path to h6 was via Nd1-f2 and Rg1-h1. Black subsequently won after **26.... Qh6+ 27. Kb1 Rag8 28. f4? Qxf4 29. Bxg7+ Kxg7 30. Rf1** when Black consolidated his material.

26. ... Kg8 27. Ne2 c6 28. Rg4 Rc8 29. Rh4 Qg2 30. Qh6 gxf5 31. Rh1!

and White is winning. During the game, neither my opponent nor I saw the path Rg1-g4-h4 to get the rook decisively into the game. The elements of the combination were there, but hard to visualize.

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