



## The Two Move Triggers

**Quote of the Month:** *Never Make a Bad Move Quickly*

On the surface, the axiom, “Never Make a Bad Move Quickly” appears to be stating the obvious. What does anyone gain from knowing they should not make a bad move quickly? And what is the sense of warning them? Yet there is much wisdom to be gained by understanding this principle!

### COLUMNISTS

## Novice Nook

Dan Heisman

We can use time management principles to identify the “normal” amount of time one *should* spend on a move, based upon:

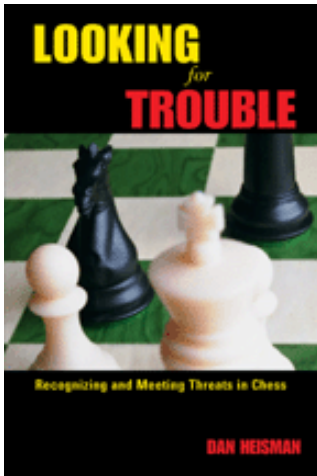
- the time control (the slower the time limit = more time can be spent per move),
- your time remaining (more time remaining = more time per move),
- how many moves remain in the time control (more moves to play = less time per move), and
- the criticality of the position (more critical = more time per move).

For a definition of a *critical move*, see the final part of the Novice Nook [The Most Important Strategic Decisions](#). Critical moves include:

- Those important strategic decisions,
- Most moves in complicated positions,
- When the best move may be clearly better than the second best move (excluding trivial recaptures), and
- The first move each game where you are no longer 100% certain you are in your opening “book” (as mentioned by GMs Alburt and Soltis).

Next, let’s define what we mean by moving quickly, or fast (both are synonymous in this article): A move is played *fast* if you it play quicker than you should based on the above time management criteria. *So, for the purposes of this discussion, “fast” is relative: it means playing too quickly for the circumstances, not moving within a short amount of time.* For example, in time trouble you must make almost every move quickly, but this is not playing *too* fast since in this situation to do otherwise is fatal!

At the start of the game you can conservatively assume forty moves will be made in the game while adjusting this estimate as play continues. For



example, if you are playing G/80 (all moves in 80 minutes), then the average move will take 2 minutes (80 minutes divided by 40 moves). In general, you should spend less than the average time on a non-critical move and more on a critical one. When you begin to run out of budgeted time for a particular move then make the best one you have found so far. If you are sure a move is non-critical, then choosing a second-best alternative may be good enough. However, with extremely strong opponents relatively small errors may cost you the game and thus become more critical. In a G/80 time limit, non-critical moves should take less than 2 minutes, say 45-60 seconds, allowing much more time later for critical decisions.

Although this month's column is generally targeted to players who play *too fast*, it should also be extremely helpful to players who play *too slow*, as *the primary cause of unnecessary time trouble is spending too much time on non-critical moves!*

No one budgets their time precisely. Still, all good players understand the time constraints of the event in which they are participating and don't usually consume more time for non-critical moves than critical moves. Certainly there will be obvious occasions such as when there is only one legal move or when you are playing a book move in the opening. But when you *do* have a decision to make, and assuming you have adequate time, there is no reason to make a quick decision.

Occasionally you can budget almost all your remaining time on the current move if it is critical enough or if there are clearly no further critical moves remaining. For example, if you have 20 minutes remaining and you are sure you will achieve an easily won or drawn position, then using almost all your time is warranted if you deem it necessary.

If you are playing a slow game and have a large amount of time remaining, why would you make *any* move quicker than necessary? You are trying to make the best move you can, given the time constraints, each and every move (see the Novice Nook [The Goal Each Move](#)). Sometimes the situation allows you to choose a move that is "good enough" or "the best among equals" but this does not change the logic. Similarly, in this article, "best" can also mean "equally as good." All this allows us to make a powerful statement:

*The only time you should use less time than "normal" (i.e., "play fast") is if you can prove you have found the best move.*

But then a corollary is:

*If you cannot prove a move is the absolute best one, you should take approximately the normal amount of time to play the best move you have found so far.*

Therefore, there are primarily two possibilities to *properly* trigger a move:

- Trigger 1: You have *proven* which move is best, so no further time is necessary, or
- Trigger 2: You have *not* proven which move is best, but time

constraints (good time management) make it efficient for you to play the best move you have found so far.

Trigger 2 includes almost all situations where you are in time trouble and have to move quicker than you otherwise would or else you will lose on time.

Once you understand the time and criticality constraints, move only when you feel that further use of time would yield diminishing returns on your overall time investment. Don't get into unnecessary time trouble and risk playing even worse later on. In simpler terms, *move only when you can prove that a move must be best or when your time and position tell you that taking any more time may be unwise.*

Note that Trigger 1 is *not* when you *think* you have found the best move! Anyone can claim that in an attempt to justify unnecessarily quick play, but this excuse makes Trigger 1 meaningless. I reserve Trigger 1 for when you can clearly show your move is best or when no other move is clearly better. Trivial examples would be book moves, the only legal move, mating with a queen and king against king, or "only-moves" such as recaptures. But, of course, it *is* often possible to prove a non-trivial move as best in a reasonable amount of time – this occurs more often as you become better at analyzing. However, for a large percentage of positions, no one can *prove* the best move under normal time constraints – even in slow games; thus the practical need for Trigger 2.

Dr. Adrian de Groot's thought protocol experiment (see [Learning From Dr. de Groot](#)), where he had subjects find their move "out loud," had no specific time limit, although he did tell subjects they were under normal time controls. Therefore, Dr. de Groot discovered that most of his higher rated subjects used Trigger 1. They completed their thought process by finding the best move, period. Naturally, then, he named the final phase of the thought process "Striving for Proof," meaning that strong players, with no clock running, generally *were* able to continue thinking until they could reasonably prove which move was best. With today's faster time limits, and with most players not nearly as strong as a typical de Groot subject, it is much more likely that time will be the deciding move trigger (Trigger 2).

There is a subset of Trigger 1 where A) you are a good player, B) you have done the best you possibly can in determining which move is best, and C) no further thinking will help, even if you have additional time by Trigger 2 criteria. This occasionally happens to strong players near the end of the game. For example, this can occur when there is substantial time remaining in a second time control, but the game is almost decided. In this situation a twenty minute think might yield as much information as possible from the position, but the best move still cannot be proven. In this case you will play the best move you can, even if you could think longer, because there is nothing else to consider (or you are getting diminishing returns on your energy). You will never "prove" the best move; you have proven all you possibly can. This subset rarely occurs among weaker players since they have poorer board vision and analysis skills so they seldom reach a situation where they have thought so long that they have *correctly* derived all they can (but they can get equally tired!).

Trigger 2 is thus a more common reason for making a move, especially for weaker players. Therefore, weaker players should be careful to apply a sufficient amount of thought and then settle for their best guess lest they get into time trouble (and that is no excuse for playing *too* fast!). These players may make sub-optimal moves as a result of “running out of time for a given move,” but the alternatives are either A) the greater evil of spending too much time and still making a mistake, while making even *greater* mistakes in time trouble later, or B) the worst evil, playing too fast and making *unnecessary* blunders!

There is also a subset of Trigger 2 that applies only to stronger players. Suppose you are a very strong player who is unlikely to make a big mistake if sufficiently careful. Then it may be possible to quickly find a very strong move without any attempt to prove it is the best move. If you like your move enough, then it may be better to save time for later situations where you feel like you may need it, and that may be enough reason to make the move without waiting for full Trigger 2 time constraints. However, weaker players should understand that their judgment is rarely that good, and they should assume that even a small amount of additional time is likely to be helpful. I believe Capablanca said, “If you see a good move...make it,” but few players have Capa’s judgment, so instead they should heed Lasker’s edict: “If you see a good move, look for a better one,” and the extra Trigger 2 time will be well spent.

The practical consequences of the move triggers are enormous: *One should never make a move faster than is reasonable unless you feel you have shown that it is best.* If you followed this advice, then you would eliminate all errors caused by moving too quickly! The only errors you would make would be those where you did take a reasonable amount of time (Trigger 2), but erred because you are not a perfect player. Players who follow this advice should improve markedly because they not only will become more careful, but also will manage their time better.

Bottom line: In theory, you should not complete your thought process unless you are sure that no other move is better or when taking more time would be counterproductive. To make your move for any other reason is very likely to be inefficient.

Whenever a student moves too quickly and makes a mistake, I often ask, “Were you sure this was the best move?” You would think the reply would be, “Of course, or else I would not have made it!” Unfortunately, that is not always the case! Often the student simply “forgot” they were looking for the best move and made a move for other reasons. In most cases they admit they should have taken more time.

Now we can define what it means to play “too quickly” or “too slowly” according to the Two Triggers.

### **Too Quickly**

*Trigger 1:* A) You don’t attempt to find the best move and just make a quick move, or B) You think you found the best move, but your “proof” is faulty (or,

as in case A, you don't make a strong attempt at a proof).

*Trigger 2:* As defined above, there is a certain reasonable time you should take, given the situation, if you can't prove the best move. To move in much less time than that is too quickly.

In either case you are likely making a gigantic mistake. Whenever I see an adult who is looking to improve and yet ends up with 53 minutes on his clock at the end of a 60 minute game, I think to myself, "He can't be using either trigger! And in failing to do so he can't be trying his best – he could have played much better by playing more slowly, waiting for Trigger 2, and finding the best moves he could."

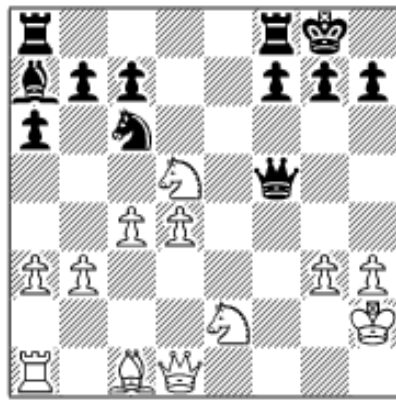
### **Too Slowly**

Trigger 1: You find the best move, but it takes more time than it should or takes considerably more time than what *Trigger 2* would allow given the situation.

*Trigger 2:* Again, there is a certain reasonable time you should take. If you use much greater time than what is reasonable, that is too slow. This is common among weaker players who are too cautious, especially in non-critical positions (which they may erroneously identify as critical, and thus take too much time).

Hint: If you play too slowly in non-critical positions, consider the following: *The more critical a move is, the more it requires careful and specific analysis. The less critical a move is, the more you can make it on general principles.* So once you determine that a move isn't critical, you can relatively quickly gauge whatever general principles you think apply to the position and decide which move fits best.

Let's see how the Two Triggers work in practice. The following position occurred in an online game with a 45 minute time limit and a 45 second increment. Thus, on the average, each side has about 2 minutes to make each move. Critical moves should take more than two minutes (possibly much more) and non-critical moves should take less. For each move we will see if *either* trigger was followed (an \* will indicate which trigger *should* have occurred with proper analysis). As we will see, in many cases neither trigger was used, resulting in play that was too fast (not waiting at least for Trigger 2) or too slow (Trigger 2 failed to go off, or was not heeded).



### Black to Play

Black is about to make his 19<sup>th</sup> move. White has 40:47 and Black 42:28 remaining on their clocks (over 90% of the initial time). That means both sides have played too quickly, making many suboptimum moves without waiting for Trigger 2. Black normally plays too slowly, but clearly this has not been the case thus far. However, Black is winning and, with a little care, can put the game

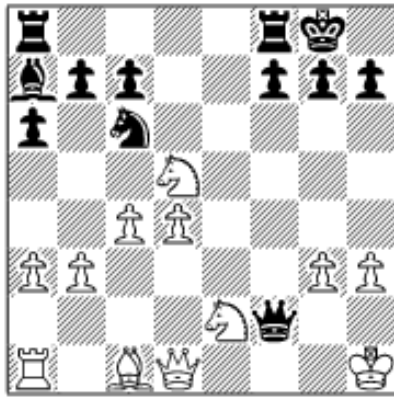
away in the next few moves. When you see the end is near, that is critical, especially if you have a choice of good continuations, because the best move might lead to a much easier win than the others. Also, when the end is near you don't need to save as much time for later. Black now played the best move **19...Qf2+**, but took 9:27 to do so!

- *Trigger 1\**: No, Trigger 1 was not used, since the extended time taken clearly indicates that a “best move proof in less than normal time” solution was not found. With proper play, Trigger 1 should have gone off much earlier since 19...Qf2+ is best – the extra time is ironic after Black's previously fast play.
- *Trigger 2*: Not necessary since his move was best. However, even if he did not know it was best, 9:27 is too long for a proper Trigger 2 since the best move is not that complicated (the only reasonable check and also an extra attacker on d4). So even though Trigger 1 should have been used, in practice Trigger 2 should have reduced Black's reflection time.

Now White has only one legal move, so he should verify this and play it immediately. Instead, he made the common mistake of unnecessarily trying to figure out what was going to happen next, and played the forced **20.Kh1** using 55 seconds.

- *Trigger 1\**: No, this is similar to the comment on Black's 19th move. The time taken is ironic since White had been playing way too fast, and yet now takes 55 seconds to make the only legal move! Remember, *it is not always necessary to predict future moves, especially if you can prove the best move* and can move quickly by Trigger 1.
- *Trigger 2*: Never necessary if you only have one legal move!

After **20.Kh1** Black has three reasonable ideas: place a rook on e8 to threaten e2, 20...Nxd4, and 20...Bxd4 (or Fritz's preference of throwing in 20...Qf3+ first). The prospect of a quick win means that some time should be put into this decision.



### Black to Play

However, Black played **20...Rae8** in only 72 seconds, which is probably not enough time for this situation unless you are a very strong player and know this wins easily. Still, we have to give Black credit for finding a strong plan and realizing that guarding c7 was unnecessary.

- *Trigger 1*: Black did not prove this was the best move (although a stronger player with more time might have), and...
- *Trigger 2\**: No, the criticality of the situation would indicate Black certainly *could* have taken longer.

White replied **21.Be3**, taking 89 seconds. But 21.Be3 is desperation – it is not safe. Black can simply reply 21...Rxe3 22.Nxe3 Qxe3 which increases the lead in material to a full piece! Unfortunately, White has nothing better, but in this situation if you have the time it never hurts to play slowly and look for your chances. At least White did succeed in confusing Black, so kudos for that.

- *Trigger 1*: Not likely; it is not easy to find the best move – or even a satisfactory one – in any amount of time given such a difficult situation...
- *Trigger 2\**: No, clearly White could have taken more time to *try* to find something less desperate, even though he is lost in any case.

But instead of the simple 21...Rxe3, Black erred by taking only 11 seconds to play the meaningless **21...Qf3+**. This is the kind of move you might play quickly when in time trouble to gain time on the clock; however, in this situation playing this move quickly does not gain much. Remember, since there is a 45 second increment, he *added* 34 seconds to his clock.

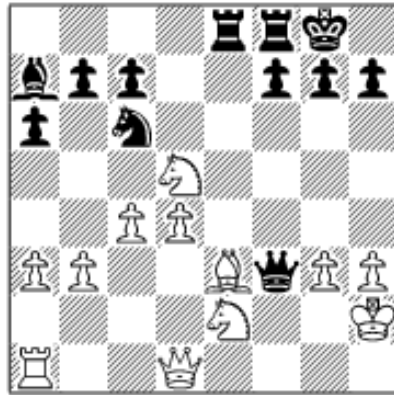
- *Trigger 1\**: There is no reason to play 21...Qf3+ so quickly since Trigger 1 cannot go off and tell you this is clearly superior to 21...Rxe3, since it is not necessary better. When I asked Black after the game why he did not play 21...Rxe3, he said he never considered it because a rook is worth more than a bishop and the bishop was guarded! Simple counting on the e3 captures would show he is winning two pieces for a rook, but instead he made the quiescent error of not even getting that far (unfortunately consistent with his playing too fast and moving in only 11 seconds)! Once again this shows that counting is the most basic tactical skill.
- *Trigger 2*: No, the move was played quickly and is not necessary since 21...Re3+ is a clearly good move. The only reason 21...Qf3+ is not a mistake is that you can play 22...Rxe3 next move anyway!

White again played slowly, taking 75 seconds to make the best reply: **22.Kh2**.

This is better than 22.Kg1, because after 22.Kg1 Rxe3 23.Nxe3 Qxe3 is check. Even though Black is still not seeing 22...Rxe3, White cannot assume he won't – you always have to assume your opponent is going to find the best move!

- *Trigger 1\**: No, the move 22.Kh2 was clearly at least equally best, but the time taken was too long to be Trigger 1.
- *Trigger 2*: Yes, there is no sense wasting time once you have found the best move, even though White has plenty of time remaining and, in general, should be playing more slowly.

At this point White now had an enormous 39:23 remaining to Black's more than adequate 33:50.



### Black to Play

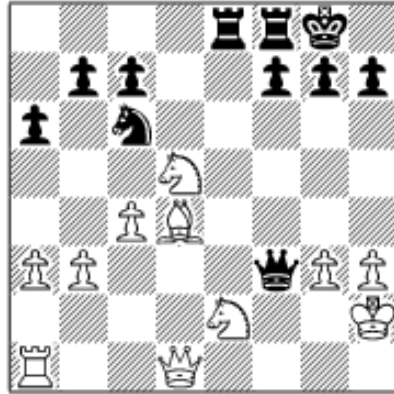
Having missed 21...Rxe3 on the previous move, it is probably no surprise that Black missed it again, but it may be a surprise that he played the extremely complicated and unnecessarily dangerous **22...Bxd4?** after 5:59 of thought. Six minutes should have been more than enough time to see the simple and strong capture ...Rxe3, even if moving in 11 seconds had not been enough on the previous move. If you have

sufficient time, consider all of your potentially winning checks, captures, and threats.

- *Trigger 1\**: No. Black misses 22...Rxe3, which should have been triggered as best long before 22...Bxd4 was decided upon. Fritz rates it the fourth best move at 19 ply, making the win much more difficult.
- *Trigger 2*: Taking 5:59 is unnecessary if you see 22...Rxe3, but to play a move like 22...Bxd4? should take *even more time than that*, given the amount of risk and calculation involved! So here, while Black may have been triggered by #2, it should not have been!

White now must calculate the same complications. Figuring out what is forced and what is best in such critical melees is trivial for a computer and often standard fare for experts and masters. However, it is not that easy for average players, so they should be especially careful, allowing plenty of time before Trigger 2 (or hopefully Trigger 1!) incites them to move. Yet here White replied in 38 seconds, well short of a good Trigger 2 time, considering the complications and the criticality. This is especially egregious, since those short 38 seconds resulted in the disastrous **23.Bxd4??** By far the best chance was 23.Nxd4, when Black would have to find the relatively difficult move order 23...Nxd4! 24.Qxd4 (24.Qxf3 Nxf3+) 24...c6! removing the guard on the e3-bishop, to retain the advantage. Ironically after all that Black would have been better off just playing the simple 22...Rxe3, which is why 22...Bxd4 is dubious at best. All good players would figure out why 23.Bxd4 is not a viable candidate in well less than 38 seconds – yet another example of why analysis is the most important chess skill.

- *Trigger 1\**: No. 23.Nxd4 is the move that *should* be triggered by elimination of the disastrous consequences of the alternatives.
- *Trigger 2*: This trigger obviously was not used, because White had plenty of time and yet did not use it while playing an inferior move (*Never make a bad move quickly!*).



### Black to Play

Unfortunately, Black replies **23...Qxe2+?** in 44 seconds. The good news is that this is good enough to win. The bad news is that much better is 23...Rxe2+, winning the queen or mating (24.Kg1 Qg2#). Fritz 9 rates 23...Qxe2 as a 19.5-pawn blunder (!) at 15 ply – in other words, Black is 19.5 pawns better after 23...Rxe2+ than after 23...Qxe2 at that depth, assuming best

play.

- *Trigger 1\**: No. Again, almost all good players would play 23...Rxe2+ in much less than 44 seconds because their analysis – and thus this trigger – would very quickly tell them it's clearly the best move.
- *Trigger 2*: Unfortunately for Black, he did not take the “normal” time to see that though he found a good move, he has plenty of time to look for a much better one.

**24.Qxe2?** This took White 43 seconds (again less than the increment).

- *Trigger 1\**: No. This should have been the trigger but, given the move played, it could not have been the one used because 24.Qxe2 is clearly not the best move (although nothing can save the game),
- *Trigger 2*: Nor was this trigger used because White has time to figure out a better move. Much better is to just move the king and let the white queen continue to guard the bishop on d4.

**24...Rxe2+** A very well-timed 8 seconds for this “only” move.

- *Trigger 1\**: Yes. Of course
- *Trigger 2*: Not here!

**25.Kg1** 6 seconds to choose this king move, not that the choice matters much.

- *Trigger 1\**: Yes, the move is at least equally best (Fritz likes 25.Bf2 slightly better, but it clearly does not matter since White is lost in either case).
- *Trigger 2*: No reason to take plenty of time trying to see if the other king move is much better given the situation.

**25...Nxd4** A reasonable 26 seconds to take the hanging piece.

- *Trigger 1\**: Of course, capturing the hanging piece is easy and no sense in wasting too much time.
- *Trigger 2*: Black does not need to use his available “normal” time since the capture is good and clearly winning.

**White resigned.** Note how both players failed to use their time efficiently both before the diagram – when they played way too fast – and after, when they still mostly played too fast, with the notable exceptions being Black’s 19<sup>th</sup> move, White’s 20<sup>th</sup>, and the last couple of mop-up moves.

In this game the play was tactical but not necessarily very complicated or unclear, so Trigger 1 *should* have been used more than it would have been in “quieter” positions where it is difficult to demonstrate the “best” move. I hope this example helped illustrate the theory!

Overall, the players played too fast in this game. Many students tell me, “What can I do? I sometimes just get impatient and move fast.” We have dealt with that question before, but it is so common and important that it will once again be the subject of a future Novice Nook...

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Dan welcomes readers’ questions; he is a full-time instructor on the ICC as Phillytutor.

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