



The Process of Decision Making in Chess

Volume 1
Mastering the Theory

Philip Ochman

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Volume 1- Mastering the Theory

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Dedicated to my chess students- your trust means the world for me. This book would not exist without you.

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My dear student,

This guidebook will teach you how to make correct decisions in chess at every phase of the game, whether you are a total beginner or an expert.

Designed to support my online students in their studies, it includes all the material being taught at the first part of the way to improve in chess- creating a solid foundation in the process of decision making in chess, upon which all future knowledge is based.

Understanding how to make correct decisions in chess, what to take into account, how to approach different kinds of positions and how to focus on answering the requirements of the position, will then be used to study everything else in chess- from the opening, through the middle game and all the way to the endgame.

We will study the process of decision making in the following basic outline:



Building on this structure, we will learn how to fine-tune the system for every position and for every playing level.

Having read this book, you will acquire all the tools needed to break down the complex (and often difficult!) question of "what should I do in a given position?" into a number of much easier and simple questions; Combining the answers to these questions, you will come up with the right plan and find the best moves in every situation.

-Philip Ochman, Dec 2012

Acknowledgement

This book was originally pre- released exclusively for my online students. I would like to thank each and every one of you for sharing your thoughts about the book with me, and for your very kind reviews.

Thank you all members of my study group on chess.com for your support and enthusiasm, you guys are the driving force behind all my online activity as a chess coach.

Special thanks to Mr. Michael Shpizner and Prof. Arthur Marlin for your help in editing and linguistic advice. If any mistakes remained, it would be only my laziness to blame.

Contact information

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Decision making process

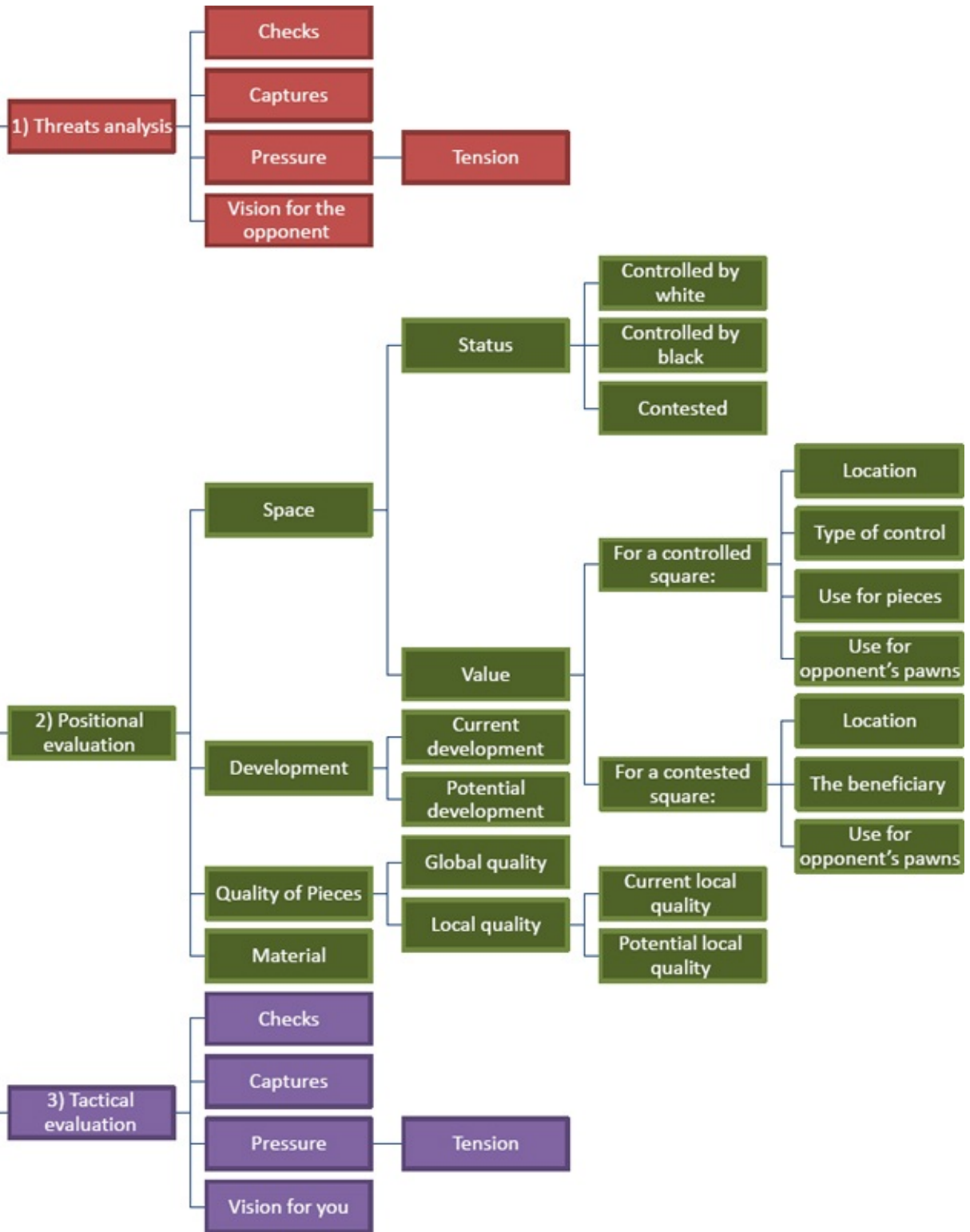


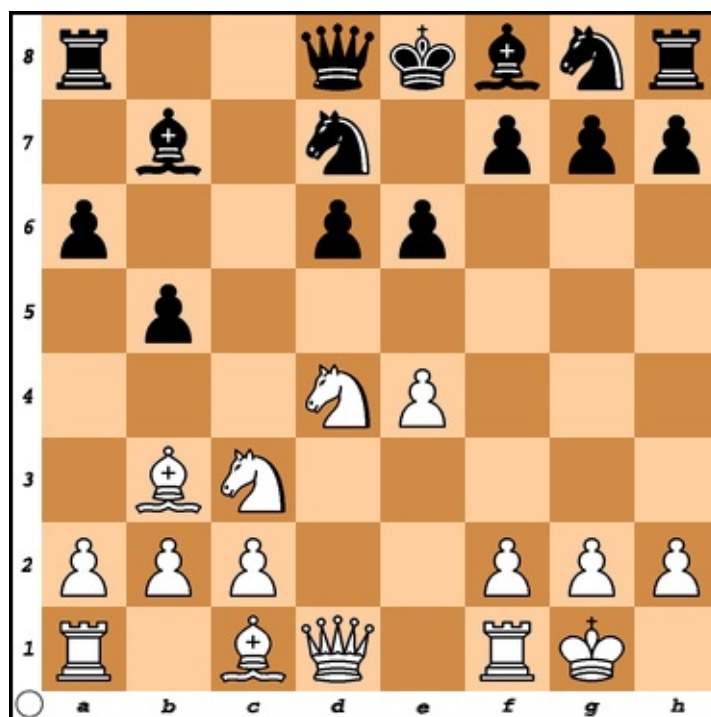
Illustration examples

Throughout the book we will apply every stage of the process on real positions, taken from the games of the top players in the world. The 3 case studies are sorted by the difficulty level of the decision, from beginner to advanced, and up to expert level.

In all examples the side with the move is shown by the color of the circle on the bottom left of the diagram.

Example 1- beginner level

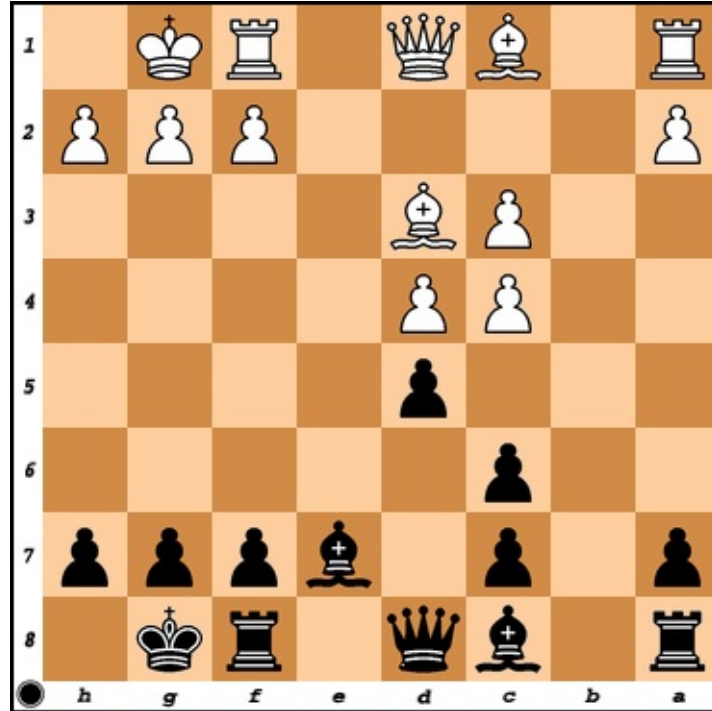
Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Hracek is a veteran Czech GM (top rating of 2625 elo) playing white against Wojtkiewicz, a very colorful figure in the chess world (until his untimely death in 2006), student of Mikhail Tal. Nicknamed "Wojo", his games were so instructive they're still being studied today on number of famous video series. Wojo was a Polish GM with the peak rating of 2595.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995

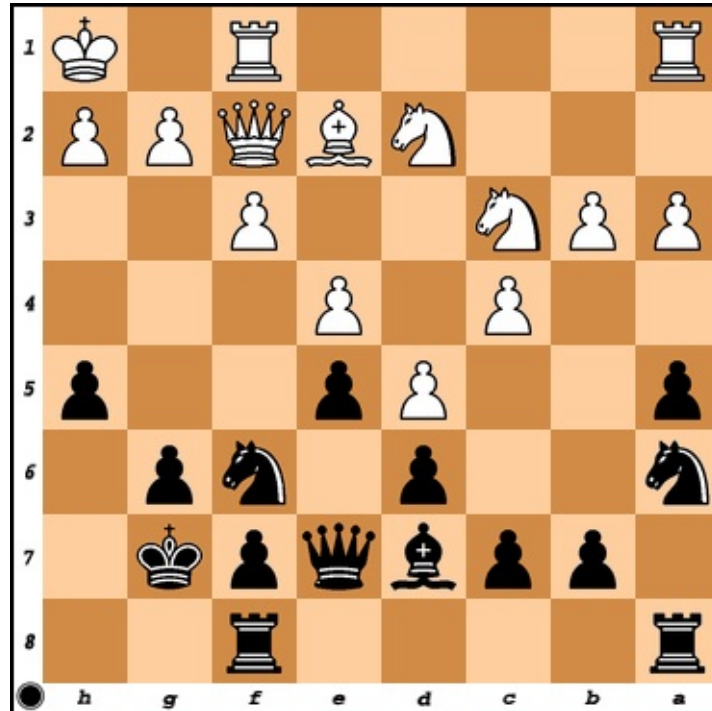


Vassily, a top international GM from Ukraine, has been in the chess elite since the early 90's, winning countless lucrative tournaments including 3 times in Linares, M-Tel, and Wijk aan Zee. One of the most unpredictable characters in the chess scene, he is often called "Chucky", and reached the peak rating of 2787.

Jussupow, a very talented chess writer and a Soviet Union born top international GM, is a long time veteran at the chess elite of the world. In 1979 he came second at the USSR championship behind the legendary Efim Geller. At his best, he reached the peak rating of 2680.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Gulko is a strong veteran GM, holding a positive score against Kasparov. At his strongest, he reached 2644 rating elo. Garry, who doesn't need any introduction, is regarded by many as the all-time best in the chess world. His top rating was 2851.

Stage 1: Threats analysis

Before thinking of any plan for us in the position we must make sure it's safe enough for us to proceed with our agenda.

We are going to divide potential threats on our position into two types- immediate and distant.

To find immediate threats, before we think of our own move in a position where it's our turn to play, we will look at what the opponent could do if the position didn't change. In other words, we shall play in our mind a second move in a row for the opponent, and if we find such a move that we can't respond to successfully after it happens, in such a way that our position doesn't become worse than the starting position of the variation (in terms of space, development, quality of pieces, material) - it would mean that that move is a real threat to our position.

Since we found this threat in a position that didn't change for us, where the opponent imaginably played a second move in a row, now we can start thinking of solutions to that threat- what to change in the position so that the opponent's dangerous move will either be prevented or stop being dangerous.

Of course, if we found that we have a good response for every potential threat by the opponent, that doesn't make our position worse than it was in the starting point of the variation, it would mean that the discussed move isn't a threat.

How to do it?

In a position where it's our turn to play, we will imagine a second move in a row for the opponent, giving him another move without changing our own position. We are going to look at 4 different tactical motifs, from the most forcing one down:

- 1. Checks- any move our opponent can play (as a second move in a row) to create a check.

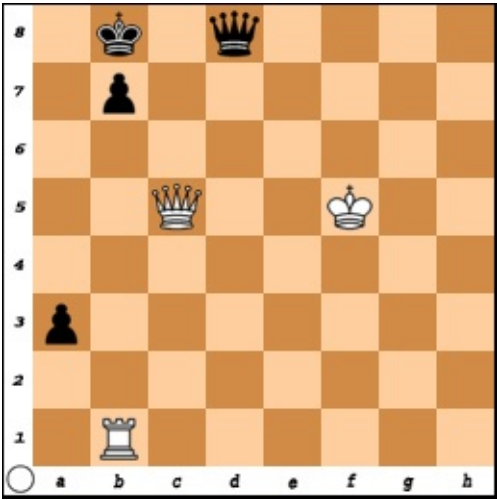


Diagram 1 –looking for checks we see Qd3+.

2. Captures- any move our opponent can play to capture our material, pawns or pieces.

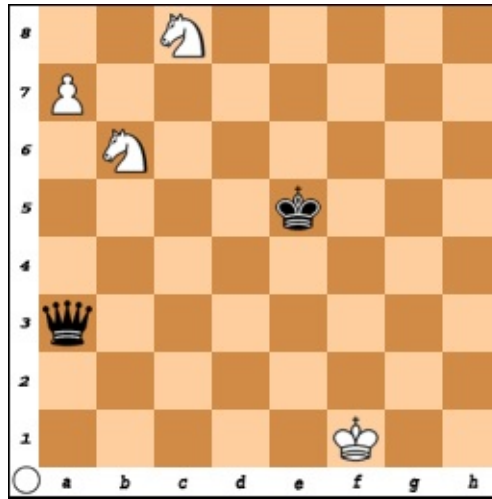


Diagram 2- looking for captures you spot $Qxa7$ which draws (therefore $a8=Q$ is impossible since $Qxa8$ also draws). Dealing with this threat we find an easy win- $Nc4+$.

3. Pressure- any move by our opponent that attacks our material- either pawns or pieces (and played by his pawns or pieces).



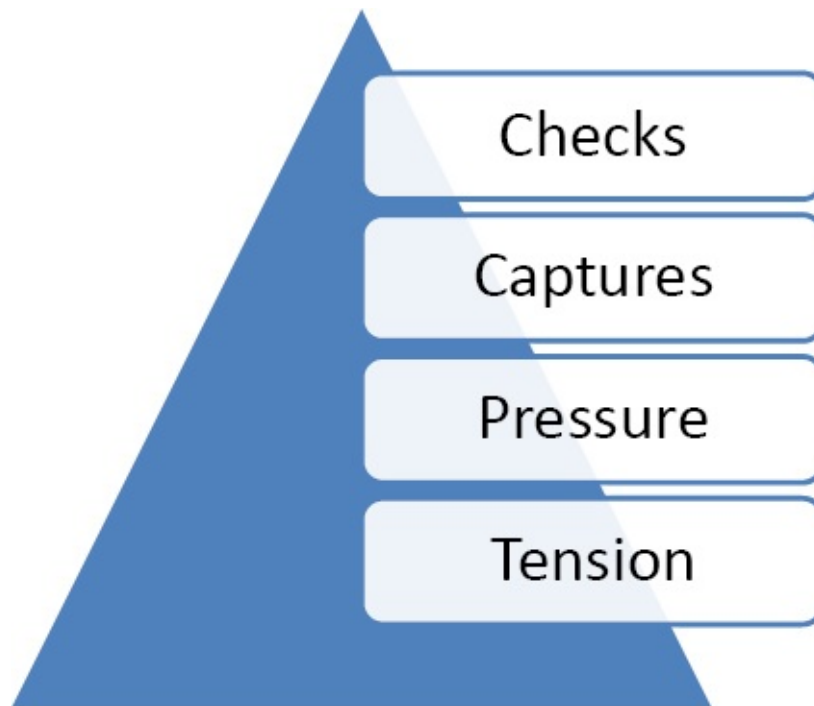
Diagram 3- looking for ways black can create pressure we find the deadly pin $Bg4$.

4. Tension- a sub-criterion of pressure, any move by the opponent that creates pressure and a mutual possibility to capture. This move not only puts pressure on the opponent's material, but now also what moved to create this pressure is also under pressure.



Diagram 4- before making a move we look at black's option to create tension with c5.

Going by this order is important for two main reasons. First- we learn more about the tactical nature of the position from the most forcing lines. Second- being ok in the most forcing line doesn't guarantee you're ok in the less forcing lines too, but it teaches you about the robustness of your position.



For each move in each type of tactical motif, once we found a move for the opponent to fit into the definition of that motif we will ask the question whether it's dangerous for us or not. And again, if you can find a good response to that move by showing the arising tactical variations and proving you're doing ok in all of them, it will mean the move is not a threat.



Diagram 5- potential threats- checks: Bb4, captures: Nxe5, pressure: d3, Bg4, Bf5, Be6, f6, Na5, tension: none. Now, which are dangerous?

Analyzing variations

When we analyze the arising tactical variations, we must calculate them all the way to the end, starting with the most forcing choices for us and the opponent. We must cover all of the opponent's possible choices at each stage he has them (for example- if the opponent has more than one way to recapture).

We will continue calculating looking deep into the variation until we reach the point of quiescence- the end of the variation, where neither you nor the opponent has any working tactical continuation.

The decision whether a move by the opponent is dangerous for us or not should be done at the point of quiescence. Only there we stop calculating and analyze the position, looking at changes from the starting position for both sides in space, development, quality of pieces and material (same criteria as in positional evaluation, which will be explained here later).

Any threats found should be kept in mind for the second stage of our process of decision making, where we will find solutions to those threats.

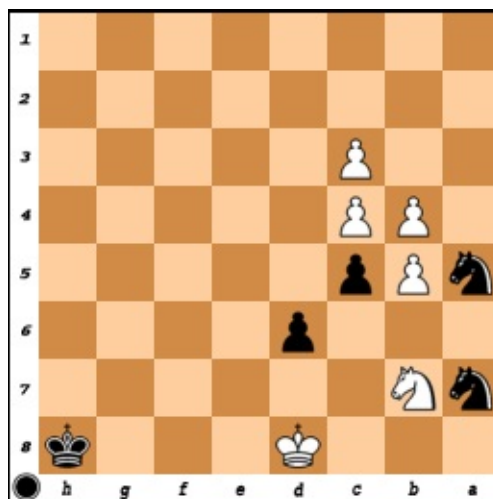


Diagram 6- looking deep into the variations in all the lines until the point of quiescence makes this position a fine example that not always the most forcing line is the best one. There is only one move for black to draw, and it's not the obvious Nxb7+ which quickly loses for black. Only move to keep an equal

position here is Nxc4, but to find it, or to believe my claim to be true, you must fully analyze 3 variations until the point of quiescence.

Distant threats

Not all of the opponent's threats are in the immediate time frame. Some could be in the foreseeable future (two moves from now), and some can be even farther away yet still be unavoidable and dangerous.

After looking at the immediate threats, we will search for any distant threats that might exist in the current position.

To accomplish this goal we are going to use **vision**- imagining the "dream position" for the opponent (in this part it's for the opponent, when we will reach the third stage of the process of decision making we will do the same for us).

What is a dream position?

A dream position is where it would be best for the opponent to steer his game to. We are going to imagine a sequence of up to 5-6 moves for the opponent, without changing our position, to try and see what the opponent is trying to reach in this position. We are going to look at potential attacks he can create, pieces he can mobilize to help any kind of attack, starting pawn-storms, breakthroughs, improvements of pieces or setting the ground for tactical variations.

After we reached this "dream position" for the opponent, we will determine whether this sequence of moves can be dangerous for us, and look at our resources to deal with it. In vision we aren't calculating concrete variations, but looking at concepts alone. In this stage these are concepts of attack for the opponent, and ideas of counterattack and defensive resources for us to deal with it.



Diagram 7- looking at potential distant threats, we use vision to imagine the future dream position for black to decide whether we are under some distant unavoidable threats, and what are our resources to deal with them. In the given position it's clear that black is going for a kingside pawn storm, possibly supported by both rooks. We reach this conclusion after looking at other long term plans for the opponent and selecting the ones who look most menacing to us.

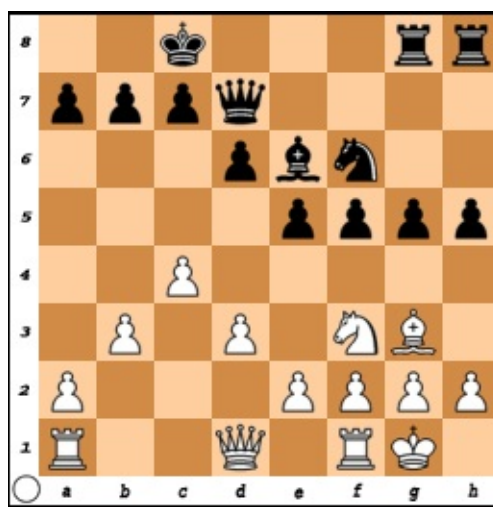


Diagram 8- using vision, we played here 3 moves for the opponent (making it total 4 moves in a row, since originally it's our turn to play). Reaching this position we ask if it's dangerous for us. Here, the answer is a clear yes. Now we will go move by move and try and find resources for us to deal with this plan.

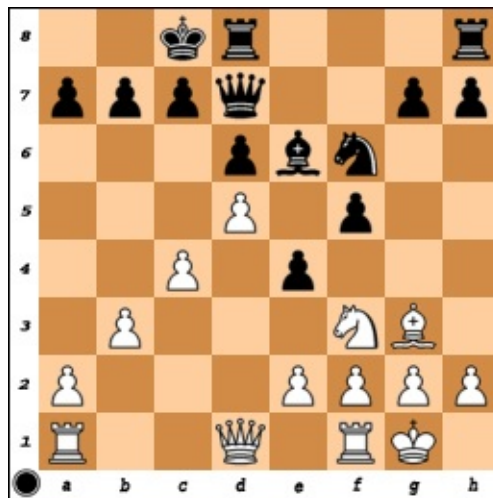


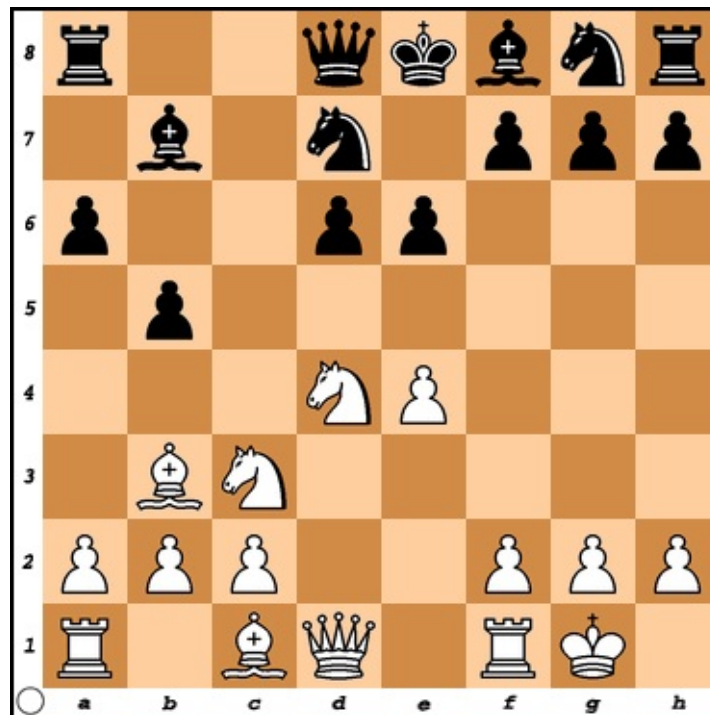
Diagram 9- going back, we found some defensive resources for white. In diagram 7 it's white to play, and after using vision we found a dangerous long term plan for black on the kingside. Thematically, here is an example where a flank attack is successfully met with a counterattack in the center. Starting from the position on diagram 7: d4!...e4, d5! And the game is totally equal, and the kingside pawn storm was successfully prevented.

Conclusions

Having completed this stage of threats analysis, we will move on to the second stage of the process of decision making in chess- positional evaluation. Whether the opponent has threats or not- that's going to determine the way we handle that second stage. We will either continue with our own agenda if we are safe, finding answers to the requirements of our position, or, if we are in danger we will choose the best responses to the threats we found.

Example 1- beginner level

Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Stage 1: threats analysis

Remember, we are looking at threats by the opponent, in a position that doesn't change for us (the opponent got the second move in a row). If we do find a real threat, we will know what has to be changes in our position (it's us to play) to deal with it and compare the solutions in the next stage-positional evaluation.

Checks

None.

Captures

No good captures for black, Bxe4 fails.

Pressure

- e5: only helps white, after Nf5... Qc7 white improves his position.
- Nc5- white is not worse than he is now after the f3 response (protecting the e4 pawn a second time, as it's attacked twice).
- Ngf6- again, f3 works the same.
- Qb6- Be3 and white wins a tempo.

- Rc8- no real threat to use the pressure on the c3 knight.
- B4- white improves after Na4 (or Nce2).
- D5- loses material for black in the most forcing line, the d5 pawn is under- protected.
- F4- also loses material, the e6 pawn hangs.
- Qh4- white is doing great after f3, protecting the e4 pawn.

No other ways to create immediate threats (including tension).

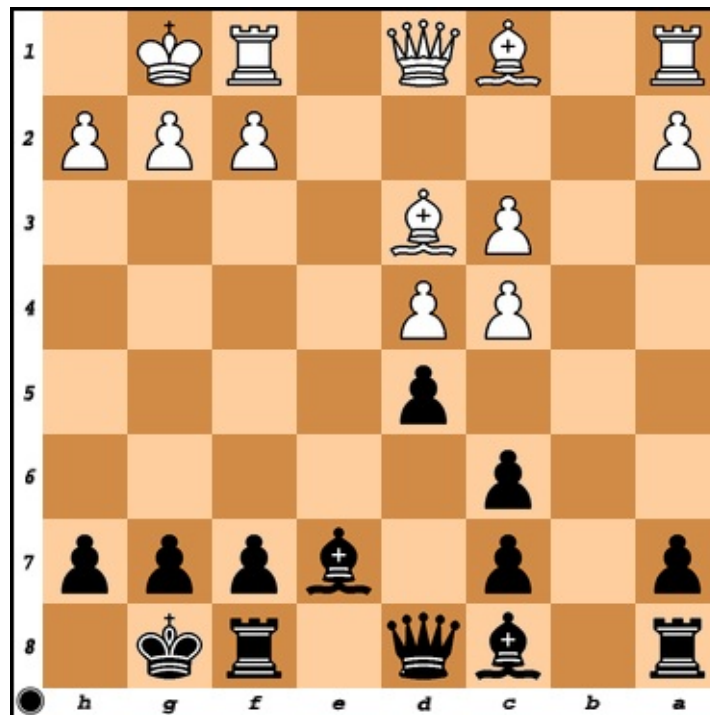
Vision for the opponent

- On the queenside- advancing the a6 pawn to a5-a4 is impossible, b5 will hang and after its capture a4 is impossible.
- In the center- nothing we haven't discussed as part of the immediate potential threats.
- On the kingside- black can dream of some kind of pawn storm with h5-h4-h3, maybe support the g pawn to advance as well with Be7. White shouldn't worry about black reaching this dream position though, since black's king is clumsy in the center, which can be opened by white.

Overall- white is safe to go on with his agenda not worrying about threats in this position.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995



Checks

- Bxh7- doesn't work after Kxh7, no strong continuation for white.

Captures

- Bxh7- already discussed.
- Cxd- not dangerous, we simply take back with the c6 pawn and black is ok.

Pressure

- Qa4- easily answered with Bd7.
- Re1- can be ignored, no real threat to take on e7. We can also easily over- protect the e7 bishop.
- Qc2- an easy response is h6.
- Qh5- not dangerous after g6, which can also start the maneuver Bf6-g7 here for black.

No other ways for white to create any potentially dangerous pressure or tension.

Vision for the opponent

- On the queen side- no way for white to reach any remotely dangerous looking setup.
- In the center- cxd followed by Qc2 (black plays h6 not to lose material), Bf4, Rc1, c4- eventually threatening cxd and a threat to the c7 pawn:



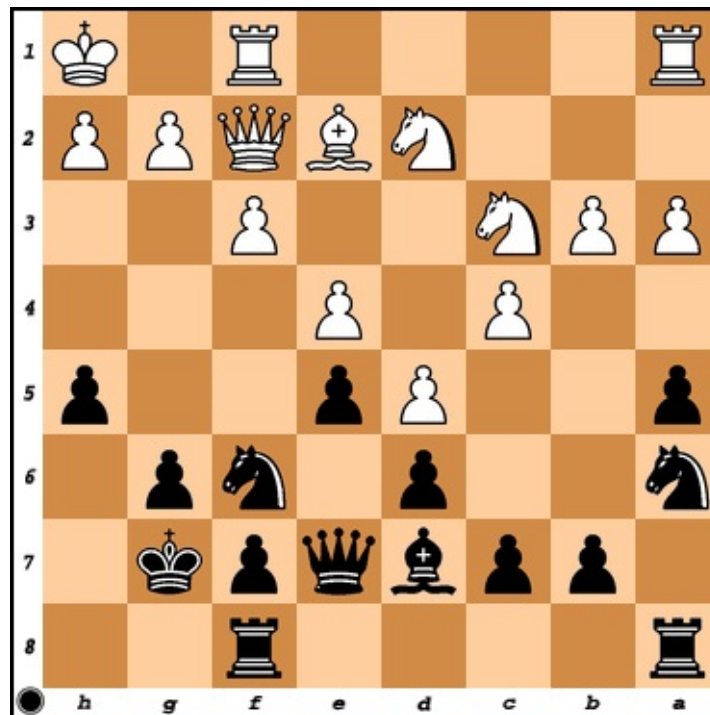
Even this position, where white got 5 moves in a row envisioning his dream position, is absolutely ok for black. After dxc and regardless of white's way to recapture (nothing else is better for him than to recapture on c4) black continues with Bd6 and it's about equal. It's clear that black has many resources to deal with any plan in the center for white in the original position.

- On the kingside- no dangerous setups or sequences are available on the kingside for white. We already discussed way of creating immediate pressure on h7, there were no continuations to that. Advancing pawns combined with any pieces transferred to the kingside doesn't create any real threats.

Overall- white has no threats in this position.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Checks

None.

Captures

None.

Pressure

- B4- ...axb, axb...Nxb4, Rxa8...Rxa8, Rb1:

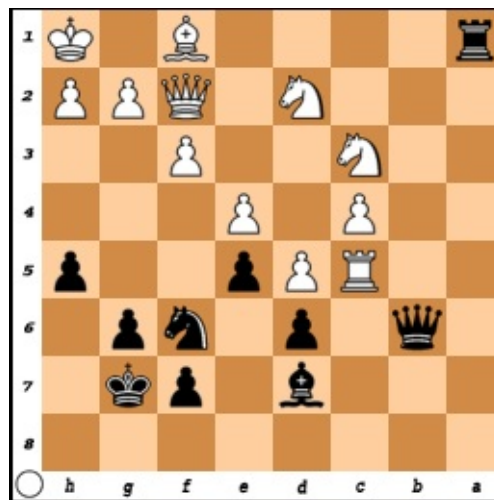


...Na6, Rxb7...Nc5, Rxc7...Ra1+, Bf1...Qd8 – now the rook is trapped and must capture on c5:



Does white simply get 2 pawns and a minor piece for the exchange sac, which is more than enough (after ...dxc5, Qxc5)? Not at all!

...Qb6!! And black is better:

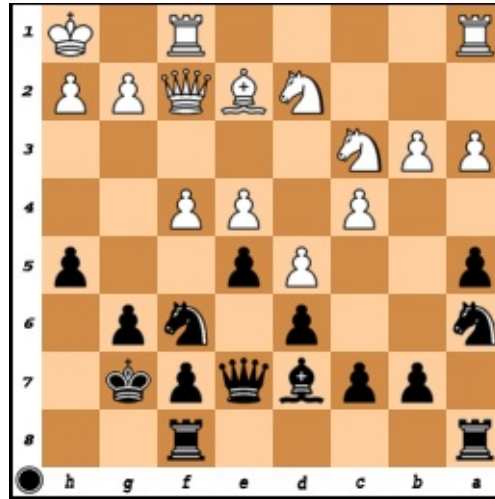


We can also see that if instead of Rxa8 white went immediately Rb1 it wouldn't have been better, after ...Na2! :



And black is better with threats of his own.
Overall, b4 isn't a threat.

- F4-



Black isn't in danger after ...exf4, Qxf4. The arising variations are safe for black, and Qxf6 isn't a threat since it's not dangerous.

- G4- only benefits black, since he's better prepared to use the h file for his rooks after the most forcing line hxg.

No other potentially dangerous ways for white to create pressure or tension.

Vision for the opponent

The original position:



- On the queenside- preparing better for b4 doesn't help white. Black can always play Rfb8 and not care about white capturing the a pawn (his a file pawns will be doubled, weak, and eventually a5 will be recaptured with the rook) or advancing to b5 (black just plays Nc5 and doing great).
- In the center- no serious possibilities for white, c5 is inaccessible and well-guarded. Any preparation for f4 also doesn't help make it dangerous (g3 fails to Bh3 breaking white's

coordination).

- On the kingside- no dangerous build- up or pawn storm is possible for white.

Overall, there are no real threats for black to worry about in the given position.

Stage 2: Positional evaluation

In this stage the goal is to come up with a plan and a candidate move to answer the requirements of our position.

The only reasons for a certain move must be to answer the requirements of our position, without any other influences on our objective judgment such as memorized positions, past experience with certain moves, playing style, mood or anything else. Only one guiding line should stand before us- **answering the requirements of the position.**

Positional evaluation breaks down the strategic part of the game into 4 criteria: space, development, quality of pieces and material. The order is not accidental; each criterion is the basis for the next one. We enable best development by controlling the right space. We allow good quality by correctly developing the pieces.

Material is somewhat of an outsider in this field. As important as it is, it's last in the order of criteria and not by chance, because we care about material last. We play squares and positions in chess, and the result isn't determined by the amount of material for each side.

Motivation

In order for us to find the correct plan and moves in a given position we need to understand the requirements of the position. In each of the 4 criteria of positional evaluation we will study how to determine which side has the advantage, and accordingly deduce the requirement for that criterion.

If in a certain criterion we learned that the opponent has got the advantage, the requirement would be to decrease it. If we are the ones to have the advantage in a specific criterion- the requirement would be to increase it.

In each criterion separately we will go over this process of evaluating who has the advantage, drawing out the requirements, and suggesting moves to answer these requirements.

Eventually, after we finished processing each criterion, we will end up with a list of moves, each answers one or more requirements. From that list we will choose the one move that answers the most number of criteria in the best possible way.

Later we will also discuss cases where the final choice isn't trivial.

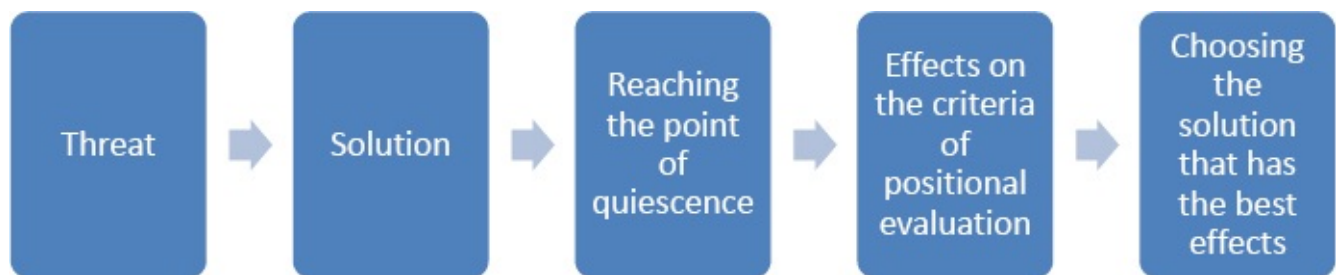


Approaching positional evaluation

The way we will use this stage of decision making depends on the results of the previous stage, the threats analysis.

If we are safe in the position, and there are no threats against us, we will go through the full process described above, finding out requirements and offering solutions in form of moves.

But if there are threats against us, we can use a "shortcut" version of positional evaluation. In that case, we can first suggest solutions to the threats, making sure they really either prevent the threats or make them not dangerous. Then, to choose the best response to the threats, we will compare them by looking at the effects of each solution on the criteria of positional evaluation, making this comparison once we reached the point of quiescence for each solution's variations.



Of course, even if there is a threat we can go on through the full process of positional evaluation and we should still reach the same conclusion, investing more energy in the process.

The difference between the two is that in the first option, which is the more thorough, we study the position in depth, going through a constructive method that assures us we will reach the best answer if done correctly. The "shortcut" method, used when there are threats against us, doesn't guarantee we will find the best solution as we depend on our own ability to look at all the possible answers to a certain threat. This is the reason that in the "shortcut" version of positional evaluation we must be thorough scanning the board for all the possible ways to respond to a threat.

Still, the "shortcut" version is absolutely ok to use when we are under threat, as the selection of moves is already very narrow- only moves that answer certain threats. For that reason, in case we aren't under threat, we will use the regular method, not the "shortcut" version, as there could be a much bigger number of options for us to choose from and our selection of moves can be very wide.



Diagram 10- this position is a typical case of when to use the short version. Here we must decide which reply would be best to the existing threat by black (...e4), and there are at least 3 moves to evaluate here. We will reach the point of quiescence in each arising variation, and only then compare between all the solutions based on the positive/negative changes that happened to each criterion of positional evaluation (space, development, quality of pieces, material).

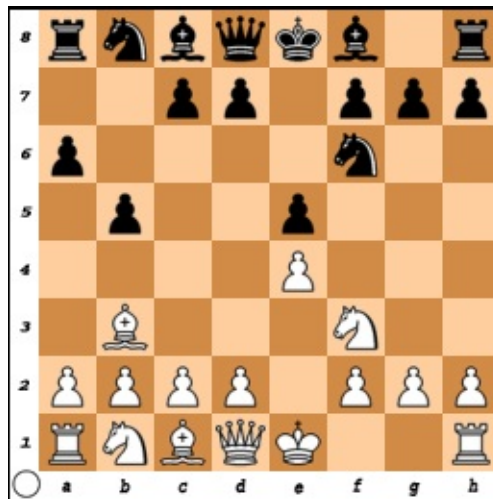


Diagram 11- *a typical position for the full version of positional evaluation. No threats by black (calculate what happens if Nxe4 here), purely a strategic position.*

Positional evaluation- full version

This is the regular way to use positional evaluation. This method first finds the requirements of the position, then offers solution for each requirement separately, creating a list of moves from which eventually the final product will be chosen.

First criterion of positional evaluation- Space

In this criterion we are going to learn who has the space advantage in the position and accordingly understand the requirement for this criterion.

We are going to look at squares each side controls or contests in his opponent's camp (white's camp- ranks 1-4, black's- ranks 5-8), count them and attach value to them. Combining their value and number, we will understand who is better in this criterion- you or the opponent, and accordingly draw the requirements. Later, when we will try to influence and improve the balance of space in the position to answer the requirements, we will try to influence the highest valued squares first, if the position allows it.

When we are evaluating this criterion we only care about the status of squares (who controls them or whether they're contested) and their value. The occupants of the squares don't play a role in evaluating this criterion, as there are no pieces in chess that can fight for the control of the same square they occupy. Fighting for squares can only be done by attacking them, and for that the attacker of a square must be outside that specific square.



Diagram 12- when analyzing the space criterion, to determine the status of a square we don't care about the occupant of a certain square. So what's the status of the c4 square? Contested of course! Black tries to control it with the d5 pawn, white with the b3 pawn and the f1 bishop. The occupant doesn't matter, and as long as there is at least one pawn from each side contesting for a square it will remain contested, regardless of any other contesting factors such as the f1 bishop here.

Status of squares

There are 2 types of statuses for squares:

1. **Contested**- both sides equally fight for the square, no one can claim ownership. We address 2 types of contest:
 - Contest between pieces- both sides have an equal number of pieces competing for the square. Both sides can use that square for other pieces than the ones contesting for it.
 - Contest between pawns- both sides have at least one pawn fighting for the square. As long as this is the case, the status will be contested regardless of any other pieces or pawns that also participate in the contest. A contested square between pawns can never be used by either side's pieces without losing material.
2. **Controlled**- one side claims ownership of a certain square. This can be achieved in 2 different ways:
 - The controlling side is the only one attacking the square.
 - A contest over a square has been won by one of the competing sides. Either one side has more pieces than the other fighting for the square, or one side fights for the square with a pawn against the other side's any number of pieces. We will discuss the reasons why a pawn wins any contest against any number of pieces in the "value" part of space. In this case, where the contest is already won, the square will be classified as "controlled".



Diagram 13- the g5 square is equally contested between 2 pieces from each side. C4 however is controlled by black. C5 here is contested between a pawn and a piece, and therefore the contest is already won and the status of c5 is controlled by white.

Value of squares

Attaching value to squares is not only important to determine who has the space advantage, enabling us to formulate the requirements for the space criterion, but mainly for us to know which squares we are going to fight for in the position. We want to fight for the most valuable squares, to get the maximal effect on the general balance of space in the position.

The overall value of a square ranges between high medium and low, including the in- between values.

Attaching value slightly differs between controlled and contested squares in the method and in the maximal possible value. The most value that a contested square can have is medium; it can't have a high value because it's not controlled.

It's important to understand that each side claims value only for squares controlled or contested by him in his opponent's camp.

The value of a square depends on 4 different criteria:

For controlled squares

1. **Location-** it asks the question whether the square is central or not. We refer to the c-f files squares of the fourth and fifth ranks as the center. If the square is central the value increases, if not- it decreases. We value the center because from there the pieces can reach their maximal potential for affecting other squares.

We also give some value for this criterion to squares on central files (c-f) but not a part of the central rectangular, on other ranks than 4-5.

2. **Type of control-** here we ask the question of how is the square being controlled- with a pawn or with a piece? If it's a pawn that controls the square, the value increases. If it's a piece- the value goes down.

The reason for this distinction is that a control by pawn is the strongest type of control in chess, and it can be contested only with a pawn.

3. **The use of the square for pieces-** here we ask 2 questions:

1. Can we use the square for our pieces in the foreseeable future (up to 2 moves from now), without losing control of the square?
2. Did we prevent the opponent from using the square for his pieces in the foreseeable future?

It is enough to get one positive answer in this criterion for the value of the square to increase.

These questions refer to having the potential to use the square by either side as long as having a piece on that square can make sense in any position that can arise from the given position. We don't ask whether it's a good idea or not to really play the sequence of moves that would put the piece there in 2 moves from now; only whether we have the option to do it or not.

4. **The use of the square for the opponent's pawn-** the question here is whether the opponent can immediately occupy the discussed square with his pawn, without losing material. If he can- the value decreases. If he can't- it increases.

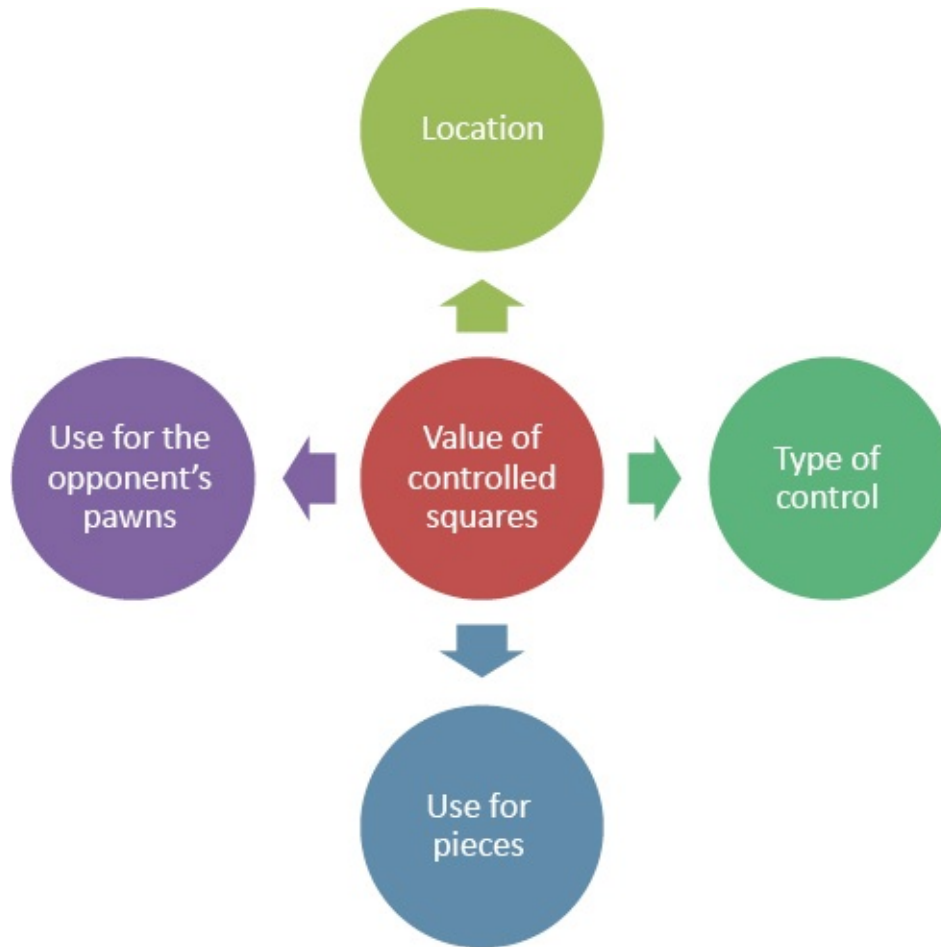
Notice that by occupying the square with his pawn the status of the square doesn't change, as we don't care about the occupant of a square when we discuss space. The reason that we do incorporate this criterion here is that by advancing a pawn on a square you control or contest, the opponent can immediately change the nature of the position from strategic to tactical, as doing so can involve creating pressure on the controlling/contesting pawn/piece of yours. This means that the opponent can grab the initiative; therefore if he can do it without losing material the value of that square, claimed by us, will decrease.

To answer this question correctly though, we need to look at the arising tactical variation, in case advancing the pawn on that square creates one, and reach the conclusion only

when we reach the point of quiescence of the variation. In two special cases the answer will always be negative:

- If there is already an opponent's pawn on the square.
- If there isn't even a theoretical way for the opponent's pawn to occupy the square (for example, if there are no opponent's pawns on the square's file).

In both cases, the reason for the automatic negative answer is that no fight for the initiative is possible for the opponent by advancing pawns.



We will now summarize how many criteria out of the four increased the value, and accordingly attach a label between high-medium-low:

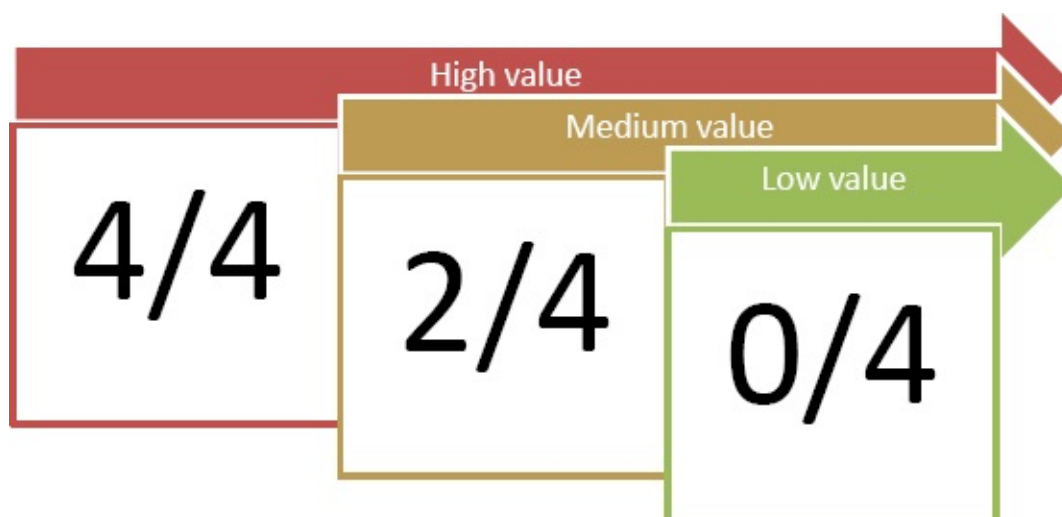




Diagram 14- examples of controlled squares:

By white- g5 (2/4 medium), d5 (high 4/4), b5 (medium 2/4), f5 (high 4/4).

By black- g4 (medium 2/4), f4 (high 4/4), d4 (medium-high 3/4), b4 (medium 2/4).

For contested squares

1) **Location-** same as in controlled squares, see above.

2, 3) **Type of contest and use for pieces-** when talking about contested squares, we cannot draw any information from looking at the same second and third criteria as in controlled squares. The reason for that is that in both types of contest (between pieces or between pawns) both sides either can use the square for other pieces (in a contest between pieces) or cannot use the square at all for pieces without losing material (in a contest between pawns).

Therefore, we need another way of looking at these two criteria. If we combine both criteria into one, and ask the question "who benefits from this type of contest?", only then we can draw information about the square regarding its value.

Type 1: contest between pieces

Nature of the contest- theoretically, both sides can place another piece on that square (other than the contesting piece) and not lose material.

The beneficiary- as we are playing practical chess, the one who benefits from this nature is the one who can in reality use the square for his pieces in the foreseeable future. Again, we discuss having this option as long as the discussed piece has indeed a role being on that square. We don't ask here whether it's a good plan to really take two moves and do it right now, only whether the option is there or not.

If it's the same for both sides, both benefit or both suffer, we will not regard this criterion at all and take it out of the equation.

Type 2: contest between pawns

Nature of the contest- nobody can use the square for his pieces without losing material.

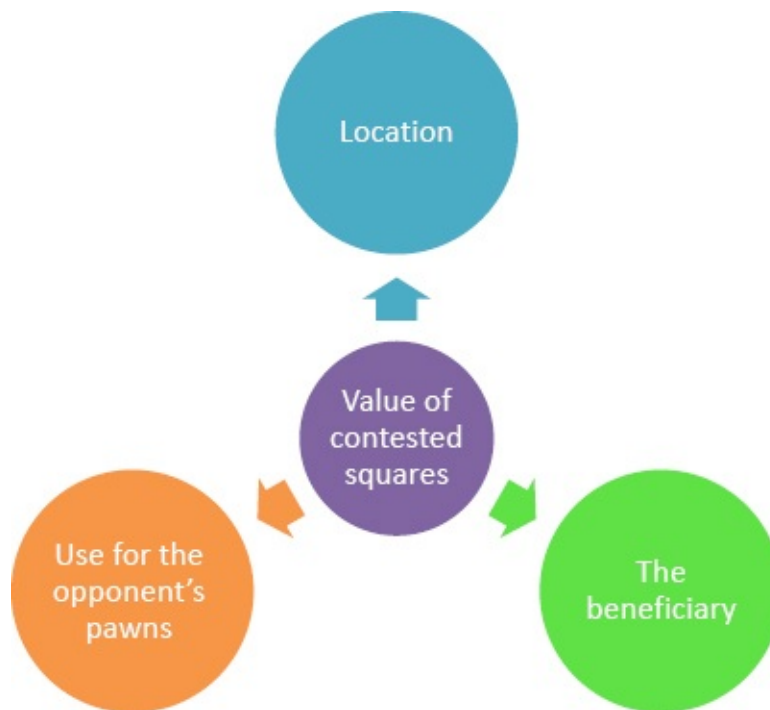
The beneficiary- so who can benefit from not being able to use a square for his pieces? First, we check for both sides- who could otherwise use the square for a piece in the foreseeable future? If we see that one side could do it had it not been for the contest, but now he can't, this means that he lost an option for his pieces. In that case, the side who benefits from this type of contest is the one who didn't lose any options.

In other words, the one who benefits from this type of contest is the one who couldn't use the square for his pieces to begin with.

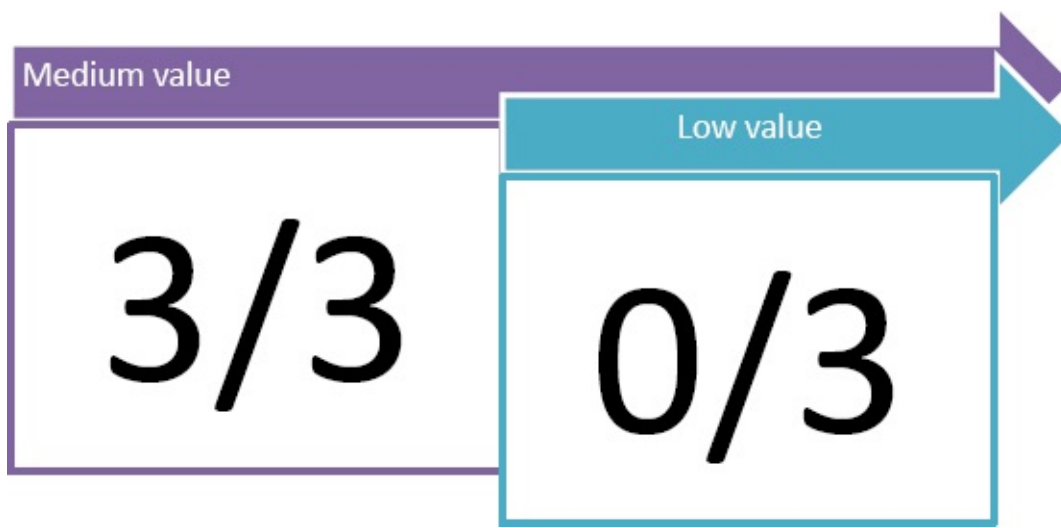
Finally, same as in the first type- if it's the same for both sides, both benefit or both suffer, we will not regard this criterion at all and take it out of the equation.

If the side you are analyzing for benefits from a certain type of contest, the value of that contested square increases. If it's a case where the one who benefits from the contest isn't the side you're analyzing for, the value decreases.

4) **Use of the square for the opponent's pawns**- same as in controlled squares.



We will now summarize how many criteria out of the three increased the value, and accordingly attach a label between medium-low:

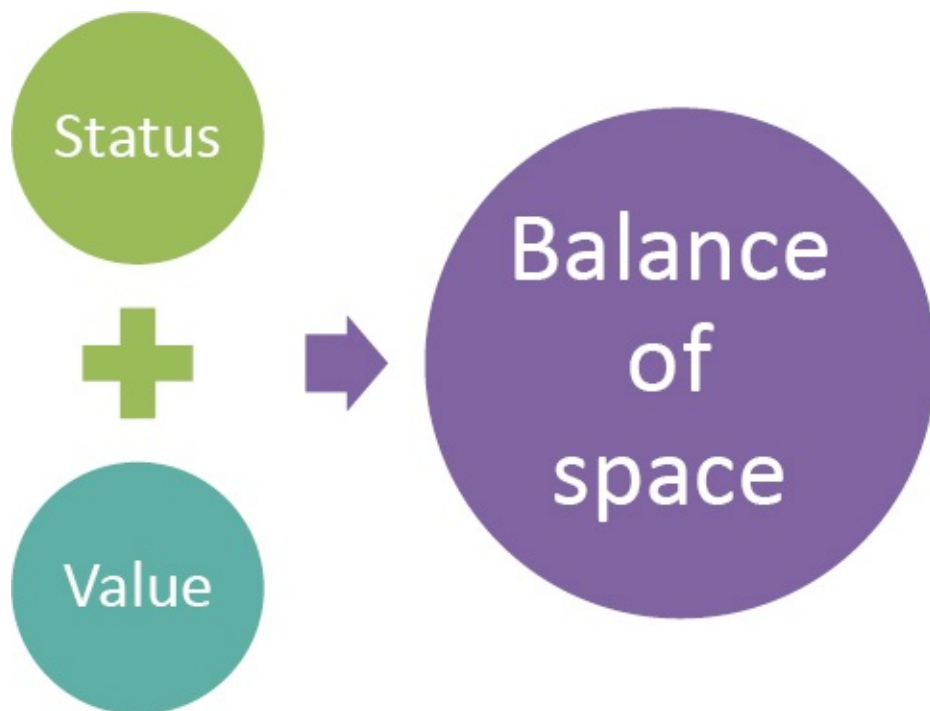


In case the second criterion (the beneficiary) was excluded, we remain with 2 criteria where 2/2 would be a medium value.

Conclusions

Having assembled the balance of space, we will now sum up the values of squares for each side separately, and the one who has the highest score is the one with the space advantage.

Another way of understanding who has the space advantage is eliminating in our mind the equally valued squares from the board, and being left with a smaller number of squares we can determine who has the advantage in space, of course combining both the number and value of the remaining squares.



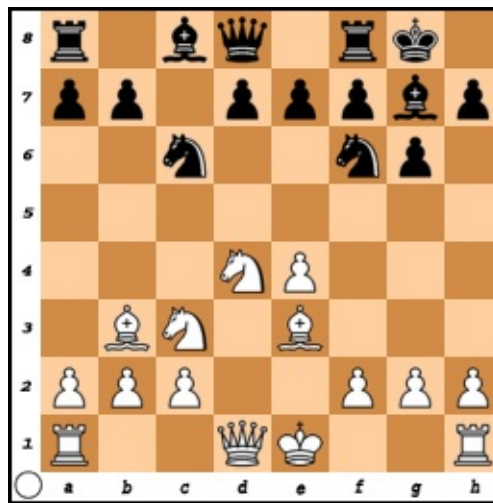


Diagram 15- in this example white controls d4 (high 4/4), g4 (medium 2/4), b4 (medium 2/4), and contests for h6 (medium- low 1/3), f5 (2/2 medium).

Black controls only b4 (medium 2/4), and contests g4 (medium- low 2/3), e4 (medium 2/2).

Here, it's very clear by looking at the total balance of space that white has the space advantage.

Answering the requirement

Now that we know which side has the space advantage, we automatically got the requirement for this criterion. If we have the advantage, we shall increase it. If the opponent has the advantage, we shall decrease it. We will attempt to do that by fighting for the most valuable squares possible.

There are two ways for us to answer the requirement about space, and influence the balance of space:

1. Fight for squares the opponent controls or contests in our camp.
2. Control or contest new squares in the opponent's camp.

For us to be constructive in doing so, we must first decide which squares to fight for in the position.

We already know we want to fight for the most valuable squares; this was the main reason for us to attach value to squares. But often we will see a number of equally valuable squares, and fighting for each will have the same effect on the balance of space.

Which squares to fight for?

Among the most valuable squares we can fight for, either in our or the opponent's camp, we will choose the ones to concentrate on based on the ease with which we can fight for them. In other words, between equally valuable squares, we will fight for those which are the easiest for us to influence.

We use 2 criteria to determine which squares to fight for:

1. **Our pawn structure-** the strongest type of control is by pawn, so we will try and see which

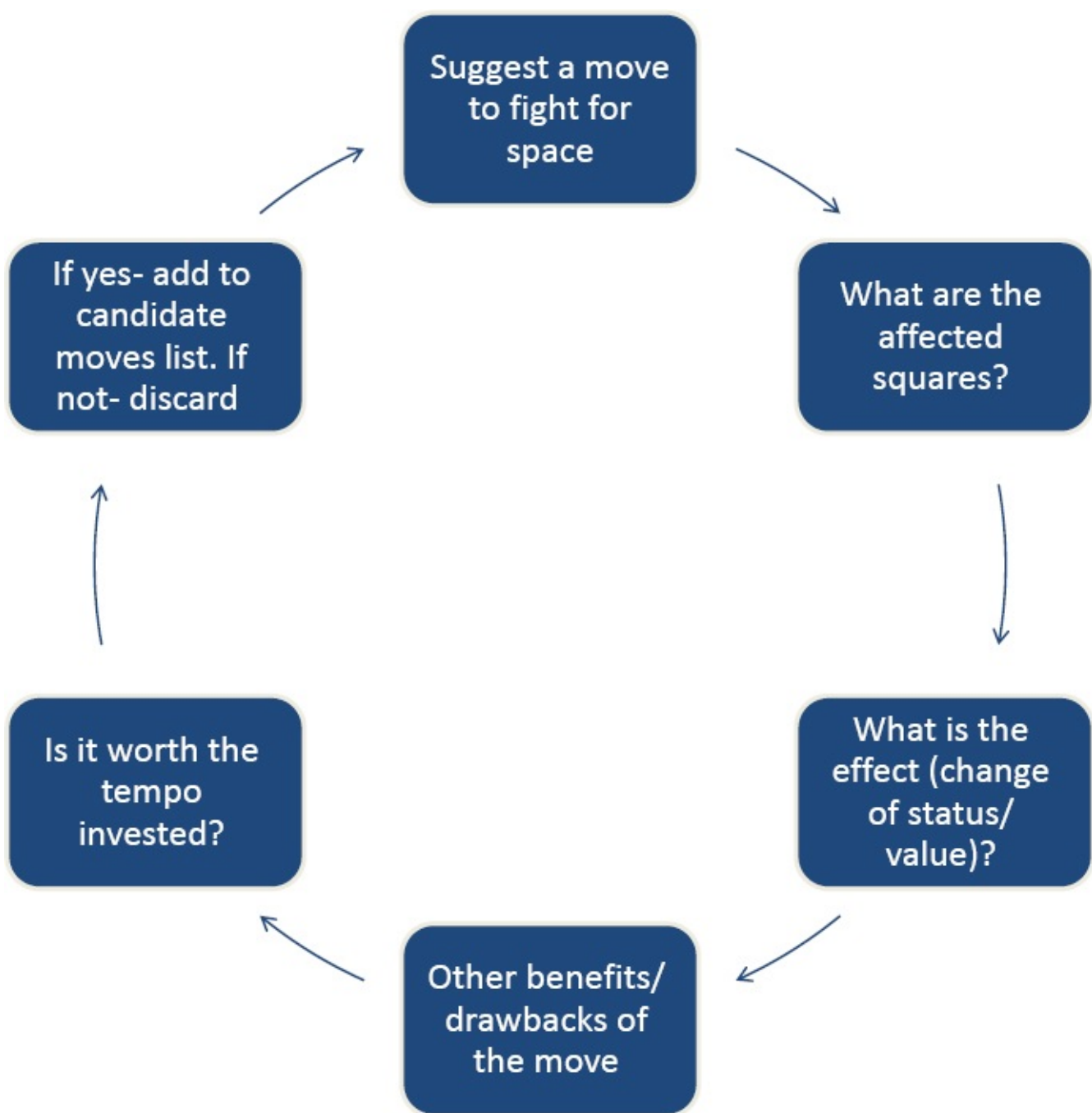
valuable squares are already affected by our pawn structure. This will give us indication which squares to fight for, as some squares may already be contested by our pawns.

2. **Our piece coordination-** piece coordination is defined by having two or more pieces attacking (right now or potentially) certain squares. It will be easy for us to fight for these squares over which there is coordination, as regarding the pieces' position the ground is already set to fight for them.



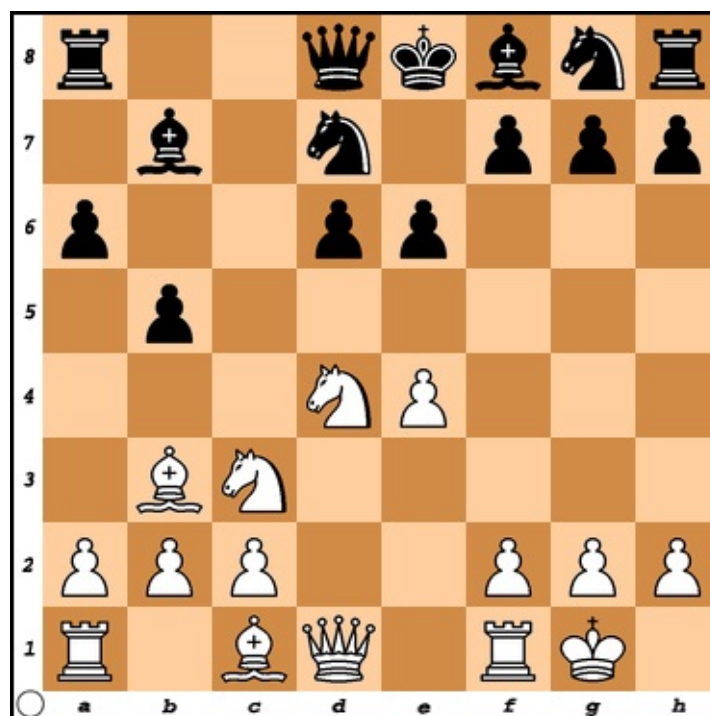
Finally, we will suggest moves to answer the requirement, based on fighting for the most valuable squares that we decided to fight for. Each suggestion shall be judged based on the effect it has on the balance of space- which squares are affected? What is the effect on each (change in status/value)?

It's also very important that we keep an open eye on other benefits or drawbacks of a certain move regarding other criteria such as development, quality of pieces and material. On the next pages we will study the other criteria in greater detail.



Example 1- beginner level

Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Stage 2: Positional Evaluation, first criterion (space)

For white

- H5- controlled, 0/4 low.
- G5- - contested, 0/2 low.
- F5- contested, 1/3 medium- low (closer to low).
- D5- contested, 2/2 medium.
- C6- contested 1.5/3 medium- low (half a point for being on a central file).

For black

- H4- controlled, 1/4 medium low (can be used by black's pieces in the foreseeable future without losing control of the square with Be7-Bh4, but it's not beneficial for black to have a bishop on h4 so we don't count it).
- E4- contested, 3/3 medium.
- C4- controlled 4/4 high.
- A4- controlled, 1/4 medium low.

Overall- black has the space advantage.

Requirement- decrease the opponent's advantage in space.

Solutions

- F3.

Affected squares:

- E4- converts to controlled by white. We are looking for a minimal effect of roughly one medium valued square (creating at least one new medium valued square to control or contest in the opponent's camp, or taking a medium valued square the opponent controls or contests in our camp back to our control, or having an overall positive effect on 2 criteria of value for all squares affected by the suggested move) for the suggested move be worth the tempo invested. Here- the initial value black claimed for e4 was medium, and after the move black doesn't claim any value for the square; therefore, f3 is worth the tempo investment.

Other effects- benefits and drawbacks to other criteria (a better understanding of other criteria of positional evaluation will be obtained in the next chapters):

- Development- none.
- Quality of pieces- reduces the local quality of white's queen (negative effect), reduces the global and local quality of the b7 bishop (positive effect), slightly reduces the local quality of our king (king's safety, black has pieces to use the diagonal a7-g1).

Overall- local quality gets mixed effects, but global quality has a very positive effect, making it a good total effect on quality of pieces.

- Material- no effects.

Judging by the effects on space and other criteria, we will add f3 to our list of possible moves.

• F4.

Affected squares:

- G5- converts from being contested to controlled by white. Previous value-low. New value-medium high (3/4).
- E5- becomes contested, medium low (2/3).

It's clear that the effect is enough to justify the tempo investment.

Other effects:

- Development- none.
- Quality of pieces- decreasing local quality of the opponent's d7 knight, increasing the local quality of the f1 rook, decreasing the local quality of the white king, decreasing the local quality of the c1 bishop. Overall- mixed effects in local quality.
- Material- no effect.

Judging by the effects on space alone, we can add f4 to our list, since there were no serious drawbacks in other criteria.

• A4.

Affected squares:

- B5- becomes contested. The value of b5 is medium low (1/3).

The difference of value (from 0 to 1) is not quite enough to justify the tempo investment if the opponent ignores the tactical motif created here (pressure).

Taking a closer look, we see that in this particular case, the opponent can't simply ignore the pressure we created on b5, since he will necessarily lose material after our next move axb.

There is nothing he can do to beneficially recapture on b5. Therefore, the opponent has to respond either tactically by taking on a4, or advancing b4. These are his only 2 options possible here.

It's clear that taking on a4 only benefits white, simply improving his pieces. A stronger try would be the b4 response, where after white moves the c3 knight away from danger he ends up with a significant improvement in the balance of space to his favor- now a4 and c4 aren't controlled by black anymore, and a3 and c3 become contested. The effect on space is very considerable after black's best response, therefore overall a very positive effect of the a4 move on the balance of space, more than enough to cover for the tempo investment.

Other effects:

- Development- immediately develops the a1 rook.
- Quality of pieces- improves the local quality of the a1 rook.

Overall, we can safely add A4 to our list of possible moves.

- Re1.

Affected squares:

- E4- converts to controlled by white (3/4 medium-high, previously contested 3/3 medium).
The effect on space is on the edge of being enough for the tempo, we will decide about adding the move to our list based on the effects on other criteria.

Other effects:

- Development- none.
- Quality of pieces- improves the local quality of the f1 rook.
- Material- no effects.

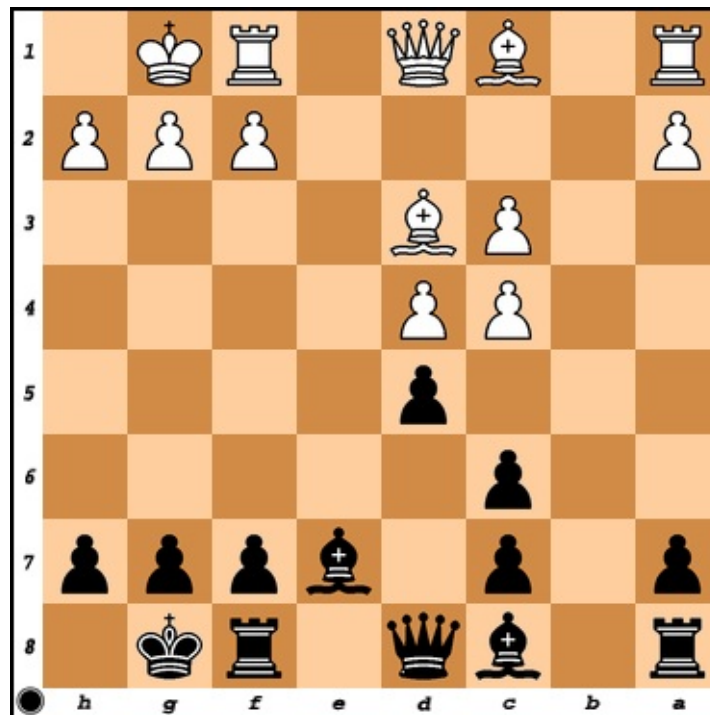
Since there are only positive effects of the move, we can add it on our list.

There is no other reasonable way for white to fight for space in the given position. We will keep looking at other criteria's requirements next ending up with the full list of moves from which we will select the one that answers the most number of requirements in the best possible way.

For now, we still don't decide between the moves suggested as solutions, only adding them to our forming list. Continuing to other criteria, we will see whether we can add more moves to the list.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995



Stage 2: Positional Evaluation, first criterion (space)

For white

- H5- controlled, 1/4 medium-low.
- H7- contested, 2/3 medium-low (closer to medium).
- F5- contested, 2/3 medium low (closer to medium).
- E5- controlled, 4/4 high.
- D5- contested, 2/2 medium.
- C5- controlled, 3/4 medium-high.
- B5- contested, 1/2 medium-low.

For black

- H4- controlled, 1/3 medium-low.
- G4- contested, 0/2 low.
- E4- controlled, 3/4 medium-high.
- C4- controlled, 4/4 high.
- A3- contested, 0/3 low.

Overall- white has the space advantage.

Requirement- decrease the opponent's space advantage.

Solutions

- Qd6 or Bd6- these moves have nice effects on space, but both can't be played as c5! Nullifies any effect with tempo for white. Both are discarded at this stage.
- Rb8.

Affected squares:

- B2- becomes contested, 1/2 medium-low. The effect is on the edge of being enough for the tempo investment; let's have a look at the effects on other criteria to help us decide about adding the move to our list.

But even before we look at these other effects, let's do a quick safety check of the arising position, as we see that the immediate Qa4 creates pressure on a7 and c6 at the same time, threatening to capture possibly.

Looking closely, we find that combining Qa4 with first playing c5 to fix black's weak pawn structure significantly improves white's position with no resources for black to keep white from improving his position on black's expense.

The move is discarded.

- F5.

Affected squares:

- G4- converts to controlled by black, the new value is 3/4 medium-high.
- H7- black regains control of h7, denies white the previously claimed value of 2/3 medium low.

Other effects:

- Development- no effect.
- Quality of pieces- improves local quality of the f8 rook, decreases the local quality of the opponent's d3 bishop. Decreases the local quality of the c8 bishop. Overall- mixed effects on the local quality.
- Material- no effect.

Altogether we can add the f5 move to our list of moves, with benefits to space and no significant drawbacks.

- G6.

Affected squares:

- H7- black regains control of h7, denies white the previously claimed value of 2/3 medium low.
- F5- black regains control of f5, denies white the previously claimed value of 2/3 medium low.
- H5- converts to controlled by black, white is denied the value of 1/4 medium-low.
- H6- white gains control of the square, valued 0/4 low.

The overall effect on space is enough for the tempo; now let's look at other effects:

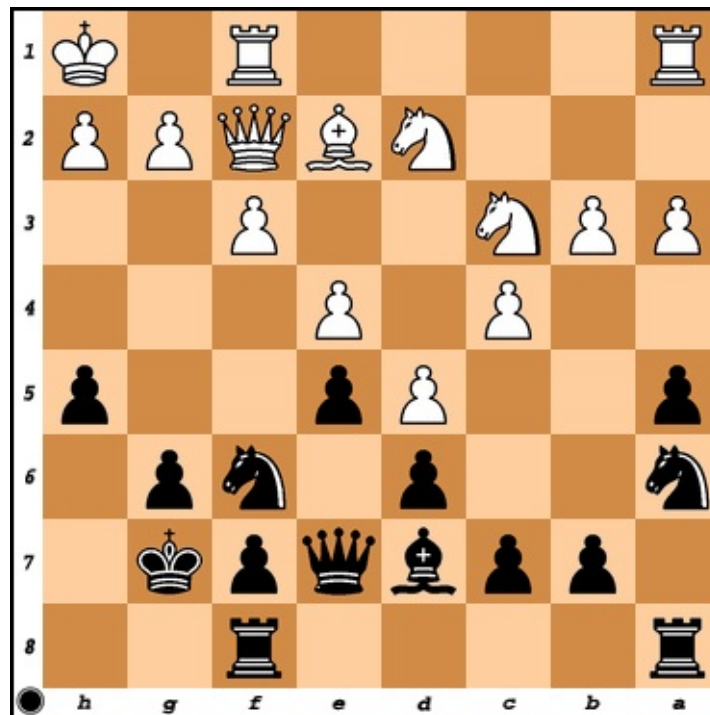
- Development- no effect.
- Quality of pieces- decreasing the local quality of the opponent's d3 bishop, increasing the

local quality of the opponent's c1 bishop. Overall mixed effects.

We can add g6 to our list of moves.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Stage 2: Positional Evaluation, first criterion (space)

For white

- F5- contested, 3/3 medium.
- E6- contested, 2.5/3 close to medium.
- D5- controlled, 3/4 medium-high.
- C6- contested, 1.5/3 medium-low.
- B5- controlled, 3/4 medium-high.
- A7- contested, 1/2 medium-low.

For black

- G4- contested, 1/3 medium-low.
- F4- controlled, 2/4 medium.
- D4- controlled, 4/4 high.
- B4- contested, 1/3 medium-low.

Overall- white has the space advantage.

Requirement- decrease the opponent's space advantage.

Solutions

- C6.

Affected squares:

- D5- converts to contested, new value- 3/3 medium (was medium-high before).
- B5- converts to contested, new value- 0/2 low (was medium-high before).
- B6- becomes in white's control, 2/4 medium.

The overall effects on space are enough to consider the move.

Other effects:

- Development- no effect.
- Quality of pieces- slightly improves white's queen.
- Material- no effect.

Since the move is also a tactical motif, creates pressure, we must check what happens in the possible arising tactical line:

Dxc... bxc, with no significantly useful continuations for white, Overall it's ok for black. Taking back with the d7 bishop instead isn't better, the bishop loses local quality.

To conclude, c6 can be added on our list, with no significant drawbacks.

- Nc5.

Affected squares:

- B3- becomes contested, 1/2 medium-low.
- D3- becomes contested, 1.5/2 almost medium.
- A7- white is denied the contest for the square that was valued 1/2 medium- low.

The effects on space are enough for the tempo invested.

Other effects:

- Development- none.
- Quality of pieces- improves the local quality of the knight we moved, decreases the local quality of white's queen.
- Material- no effects.

Since we allow pressure to be created (b4 this time threatens to win material), a close look at the arising most forcing line we find black is doing fine at the point of quiescence with no worries whatsoever.

Overall, we can safely add Nc5 to our list.

There seem to be no other apparent way to fight for space in the given position.

Second criterion of positional evaluation- Development

In this criterion we will understand who is ahead in the game by tempos. The definition of development is placing pieces from the starting squares onto better squares.

The definition narrows the number of development squares. Not every square a piece can go to is a development square; it is, only if the piece's quality is better on that square than on the original starting position square (we will discuss quality of pieces in greater detail in the next chapter).

Development divides into two sub- criteria:

1. **Current development-** the actual move of a piece from the original square to a development square. At this part, we will count the number of pieces that have already moved to better squares.

Note that although some pieces can be active and play a role already from the starting square, we will not regard this as being already developed, but give the piece quality based on what the role it has. We will do that in the next criterion- the quality of pieces, not here in development.

A special case of development is the rooks. In some cases, they can be developed by moving forward the pawn in front of them. We will call it development only if the quality of the rook improves due to the advance.

The advantage in current development goes to the side which already developed more pieces than the other.

2. **Potential development-** the number of tempos required to develop the remaining undeveloped pieces.

In this sub- criterion we ask the question "how fast can the rest of the pieces develop?" and to answer this we must compare same pieces for both sides, to understand which can be developed faster (in less tempos).

The advantage in potential development goes to the side who can complete development fastest.

Notes about potential development:

- Potential development is valued less than current development for an equal number of pieces.
- Potential development for more than one piece is valued roughly equal to current development of a single piece.
- In this sub- criterion we only ask how fast a certain development can happen as long as it's on a development square, and regardless of the number of development squares available.

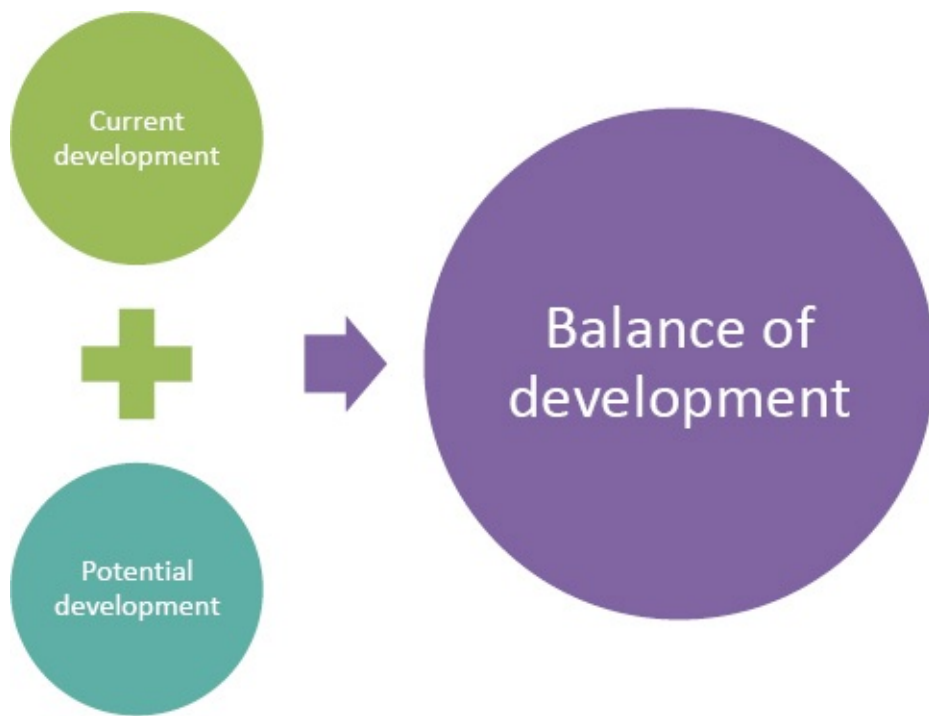


Diagram 16- current development: black is ahead by 1 tempo (1 piece has already developed).

Potential development: h file rooks- equal, black can castle quicker, but here castling doesn't develop the h file rook. Light squared bishops- both can develop in 2 moves, equal. C1 bishop and b8 knight- both can develop immediately, equal. The a file rooks- the a1 rook can develop immediately, advantage to white. Queens- both can develop immediately, equal. Kings- black can castle immediately, advantage to black. Overall- potential development is roughly equal.

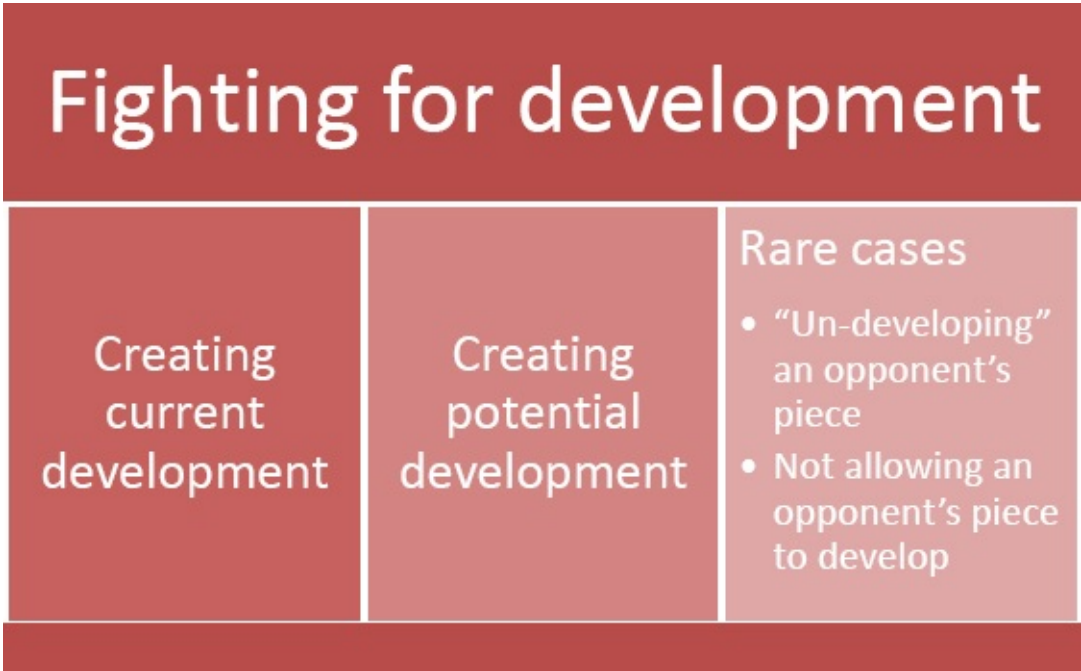
Therefore, the advantage in development goes to black here.

Answering the requirement

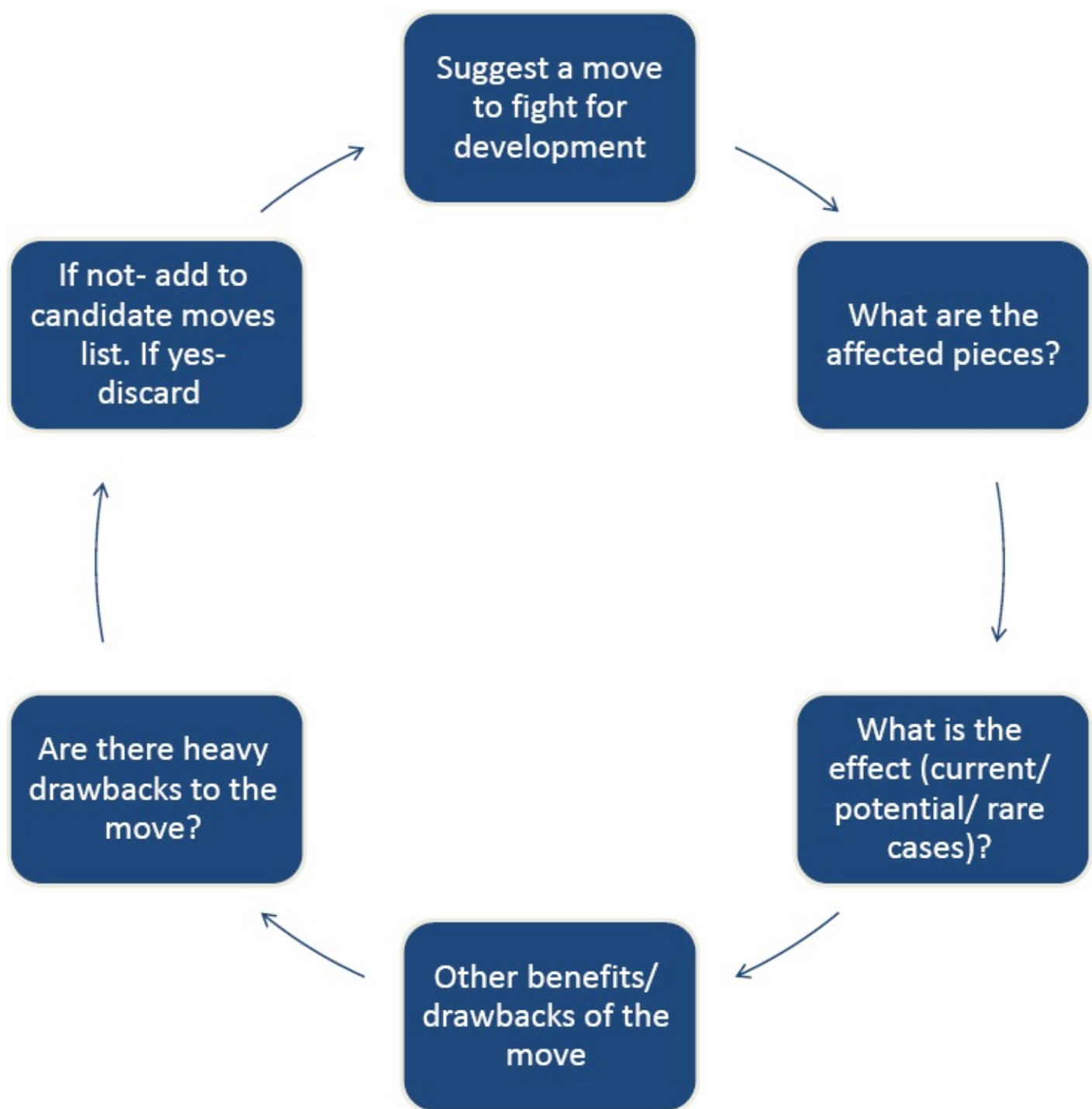
Having determined which side has the advantage in development, we know the requirement about this criterion- again, if we have the advantage the requirement is to increase it; and if the opponent has the advantage, the requirement is to decrease it.

There are four ways to influence development:

- 1. **Creating current development**- simply developing a piece.
- 2. **Creating potential development**- decreasing the time it will take to develop one or more of the undeveloped pieces, allowing for either their immediate development on the next move or just making their development happen more quickly. Creating potential development for more than one piece is about equal to creating current development for one piece.
- 3. **"Un-developing" an opponent's piece**- a rare case where you can play a move that obliges the opponent to retreat a certain piece to the original starting position square.
- 4. **Not allowing development**- a rare case where you can prevent a piece of your opponent's from being developed at all.

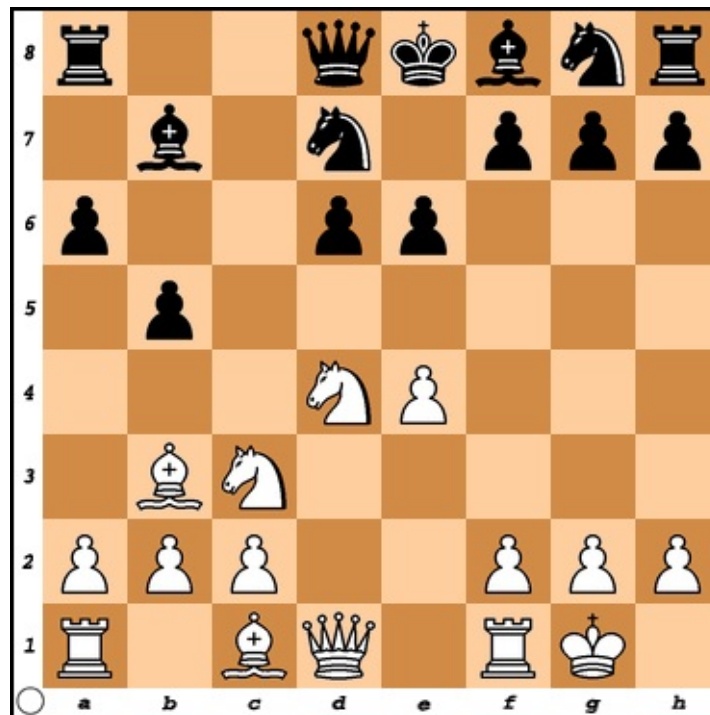


We will suggest all the possible moves to answer the requirement of the position regarding the criterion of development, as usual filtering out the moves with heavy drawbacks. The ones that do answer the criterion will be added to the list of candidate moves we started assembling in the previous criterion.



Example 1- beginner level

Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Stage 2: Positional Evaluation, second criterion (development)

Current development

White is ahead, only 3 undeveloped pieces compared to 6 for black.

Potential development

Equal, every undeveloped piece can develop immediately.

Overall- advantage to white.

Requirement- increase our advantage in development.

Solutions

- A4- creates current development for the a1 rook.

Other effects- have already been discussed when the move came up as a solution to space, improvement of the local quality of the a1 rook.

The move is already on our list, now we notice it answers a second requirement.

- Be3- creates current development for the bishop.

Other effects- the move also improves the local quality of the bishop.

Having no drawbacks to the move, we will add it to our list.

1. Q to any square along the e2-h5 diagonal- creates current development for the queen.

When looking at other effects, we see there are drawbacks to any movement of the queen from its starting position at this stage:

To h5/g4- loss of tempo after black's Nf6.

To f3- loss of tempo and an inconvenient position after black's Nc5.

To e2- takes away an important square from the c3 knight.

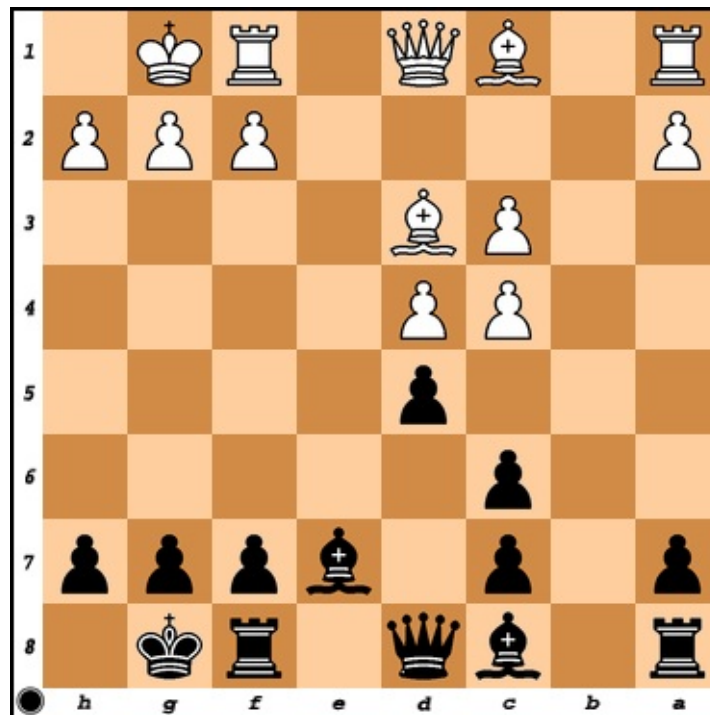
Also, Qd2 blocks the c1 bishop, and Qd3 also loses tempos after Nc5.

Therefore, currently it's too early to commit the queen for white, and we will not consider it at this stage.

There are no other successful ways for white to fight for development in the given position.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995



Stage 2: Positional Evaluation, second criterion (development)

Current development

Both have 3 undeveloped pieces (Ra8, Bc8, Q for black, Ra1, Bc1, Q for white), equal.

Potential development

White is slightly better, the only difference here is the queens. White's queen can develop immediately, while black's queen can't (there are currently no development squares for it, Qd6 only loses a tempo to c5, too early to commit the black queen).

Overall- a very small advantage to white, since we are only discussing differences in potential development of one piece the advantage is really minimal.

Requirement- decrease the opponent's advantage in development.

Solutions

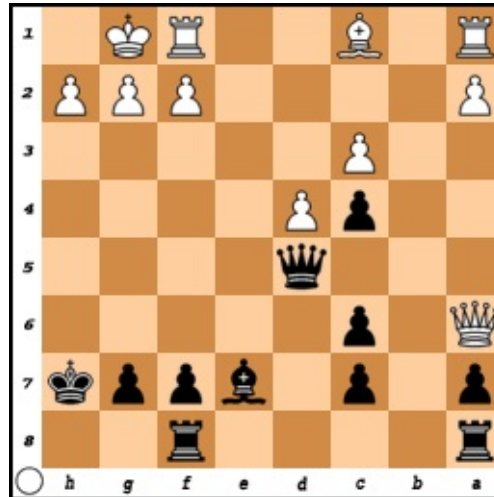
- Rb8- creates current development for the a8 rook.

The move was discarded due to safety reasons before, and wouldn't be considered.

- Ba6- creates current development for the c8 bishop.

Before further discussing the move, let's do a quick safety check, again considering white's possible Qa4:

...Ba5, Qa4... dxc, Bxh7+... Kxh7, Qxa6...Qd5



And black plans to play c5, but it's prevented after Ba3!, making the position significantly better for white. You can make sure that it's not better to take on c4 with the bishop instead: ...Ba6, Qa4... Bxc4, Bxc4... dxc, Qxc6 and white is better.

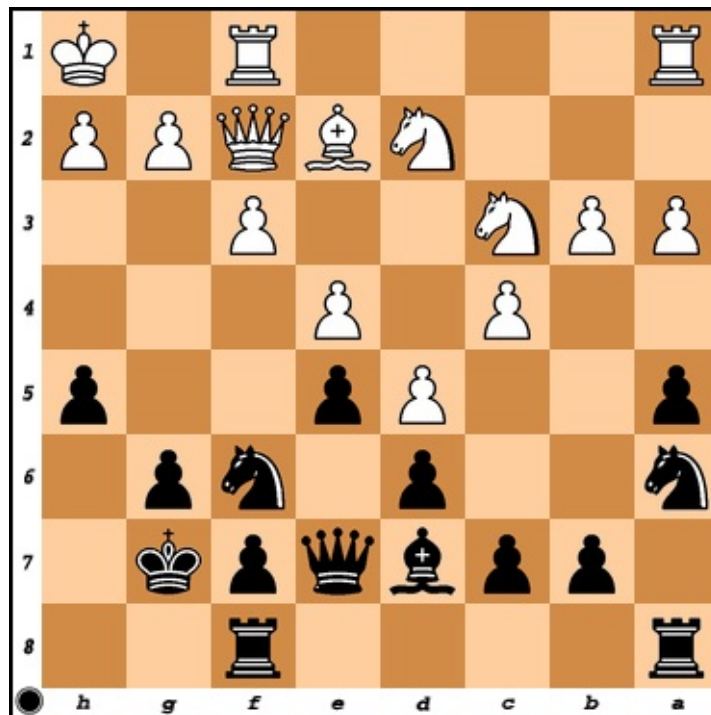
For these reasons, we won't consider playing Ba6.

- Be6- e6 is currently not a development square for the c8 bishop, since after c5 the bishop isn't better (the local quality doesn't change). The move won't be considered.

Overall, in this position there isn't a single good way for black to fight for development.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Stage 2: Positional Evaluation, second criterion (development)

Current development

Both have all the pieces already developed.

Potential development

Irrelevant, all pieces are developed.

Overall- in this position development is equal.

Requirement- since no one has the advantage here, there isn't a specific requirement. Also, since all pieces have already developed, the only way possible for us to fight for development is un-developing an opponent's piece, which is impossible in the given position.

Therefore, the analysis of development stops at this point.

Third criterion of positional evaluation- Quality of pieces

Quality of pieces is the most important criterion of positional evaluation. The reason is that eventually, having high quality of pieces allows us to be active and press to win games.

This criterion divides into two sub- criteria:

1. **Global quality**- answers the question "how good can the pieces ever be in the game?", and the answer depends on the pawn structure and the pieces owned by each side.
2. **Local quality**- answers the question "how good the pieces currently are?", and the answer depends on the number of effective squares for each piece.



The results of this analysis help us understand the true value of each piece, in practice and in a specific game or position. This point of view is used in this criterion as opposed to defining pieces by their absolute value by counting material weight, which only gives a theoretical answer regardless of the practical use of a certain piece in a given position.

The absolute value of pieces will be discussed in the next criterion of positional evaluation-"material".

In each sub- criterion we will evaluate who has the advantage, and according to the requirements offer solutions.

Global quality

Before approaching the global quality of pieces, we must understand that global quality eventually determines the local quality. If a piece has high global quality, regardless of the current local quality

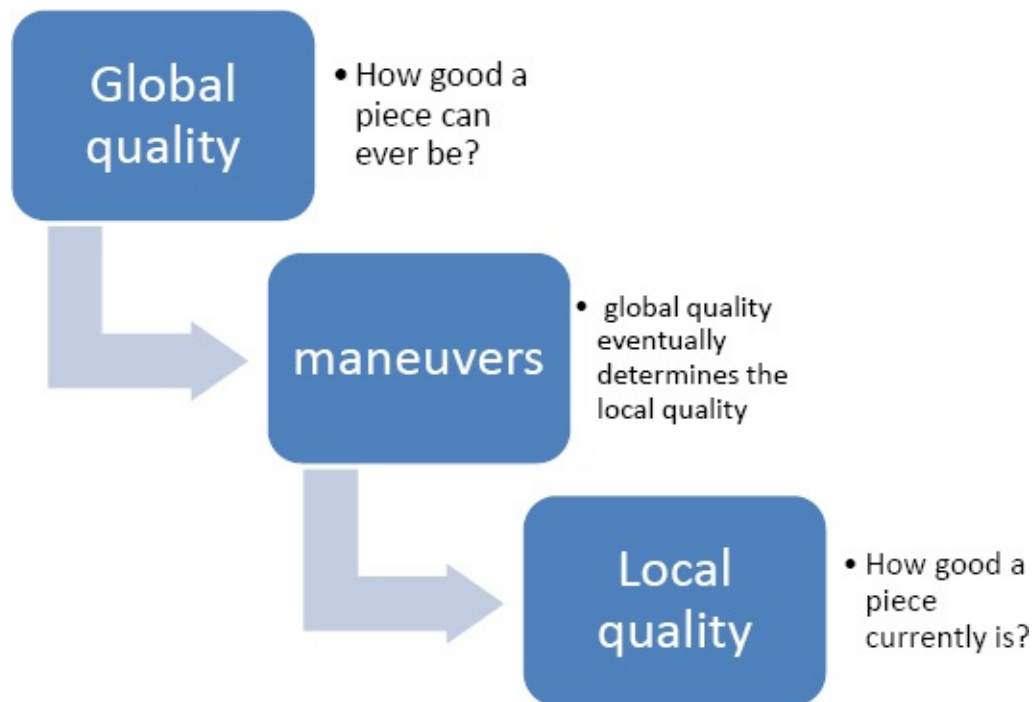
situation of it, eventually the piece will have the chance to have high local quality, after relocating it to the proper squares.

Global quality discusses long lasting effects and conclusions about this criterion for each piece. We will not include here properties that can easily or quickly change.

We can't imagine a situation in which a piece has low global quality (the piece can't be "good" in the position), and at the same time has a high local quality. It's simply a contradiction.

However, we can easily imagine a low local quality piece having high global quality. It would simply mean that the piece can be very good, and has to be repositioned to convert its potential of being a "good" piece.

Since the quality of pieces is the most important criterion of positional evaluation, and the global quality eventually determines the local quality, we can see that the global quality of pieces is the most important criterion of strategy. For that reason, whenever we will encounter a position where we can beneficially affect the balance of global quality we will tend to do it, refraining only when there is a very specific reason, such as heavy drawbacks on other criteria.



Analyzing the global quality

Approaching this criterion, we will first look at the pawn structure and its effects on both sides:

- 1. What is the nature of the pawn structure?
 - An open position is characterized by open diagonals and files. This kind of position favors bishops and rooks accordingly.
 - A closed position is characterized by having all/most of the diagonals and files closed. This kind of position favors knights.

We also need to notice different effects of the nature of the pawn structure on each side, as there can be situations where the position is open, but only one of the sides can use the open diagonals.

- 2. Which pieces does each side own? Now we will determine how the pawn structure fits the pieces owned by each side. The ones it fits well have high global quality, the ones it doesn't- low global quality.

The pieces we are looking at are mainly the bishops, which depend on open diagonals to have good global quality and the rooks, which need open files to have high global quality. The knight's global quality is very rarely affected, since it can jump around the board to find good squares and therefore doesn't depend on the pawn structure to eventually have good local quality.

In the following table we can see which pieces benefit from different kinds of pawn structure:

Pawn structure		
Open		Closed
Open diagonals	Open files	Knights
Single color diagonals	Diagonals of both colors	Rooks
Same color bishop	The bishop pair	

Advantage in global quality

In this sub- criterion we don't give the advantage to the side that has good global quality pieces, but to the side that doesn't have the lower global quality pieces. In other words, the side that has bad global quality pieces has the disadvantage. It doesn't matter how good one's other pieces, as long as a player has a single bad global quality piece and his opponent doesn't- the advantage goes to his opponent.

We must go piece by piece to see what is the effect of the pawn structure on that piece- whether or not the pawn structure allows the piece to have high local quality in the future.

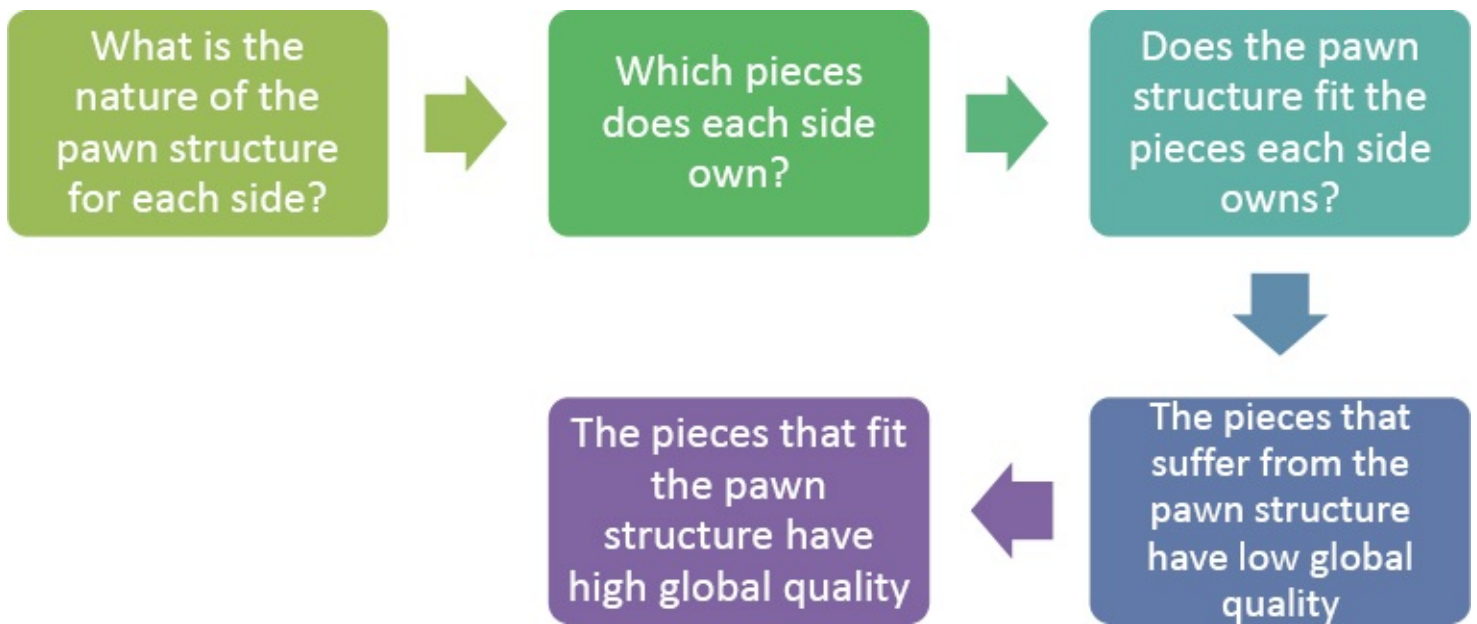


Diagram 17a- finding the advantage; pawn structure- for white the position is closed on the dark squares, with only one dark squared diagonal open (e1- a5). The c file is semi open. For black the position is closed on the light squares, no open light squared diagonals at all. The d file is semi open. Both sides can easily alter the nature of the pawn structure to open more diagonals (by playing c5 for black, and e4 for white).

Effects on the pieces: the d3 bishop has a good global quality, with an open light squared diagonal. The

bishop on c1 has also a good global quality- surprising? When discussing global quality, we need to be careful to distinguish between temporary state and long lasting state. Global quality only deals with long lasting states, and the bishop on c1 is only temporarily blocked by his own pawns in this position. Here we can open another diagonal by easily playing e4, even immediately. Also, we can see that the rook on a1 has a good global quality, as there's a semi open c file, ending at a backward pawn. For black we can see the bishop on b7 is currently blocked, but again, this is only temporary, since c5 is possible here. Therefore, the global quality of the bishop on b7 isn't bad. Also, we see a semi open d file for the black rook on a8, and 2 open diagonals for the bishop on e7.

Overall, the global quality in this position is equal, no pieces on the board that suffer from the pawn structure for the long term.

Answering the requirement

As always, having determined who has the advantage in global quality, drawing the appropriate requirement is easy; if it's you- increase it. If it's the opponent- try to decrease it.

The uniqueness of this criterion is that not always, not even in most cases, will you have the ability to influence the balance of global quality. For that reason, whenever you do have that chance, not doing it requires especially good reasons- such as heavy drawbacks on other criteria resulting from the suggested solution.

Any solution for the requirement of this criterion has to involve altering the pawn structure, and all must have a lasting effect, not an easy one to reverse.

Increasing your advantage

When we are the one with the advantage in global quality, for us to increase it we will concentrate on the opponent's worst piece and try to make it even worse if possible, creating as long lasting effect as possible trying to render the piece useless.

We can achieve it in 2 ways:

1. Altering the pawn structure (by making a pawn move) to block the remaining future options of the targeted piece. For example- closing the last remaining open diagonal of the opponent's bad global quality bishop.
2. Forcing the opponent's next move to be a pawn move that blocks the targeted piece (a rare case).

Decreasing the opponent's advantage

If the opponent is the one who has the advantage in global quality, it means one or more of your pieces are bad. In that case, if the safety of your position allows it, the top priority would be to increase the global quality of that piece (or those pieces), again, by altering the pawn structure.

Same as before, we have 2 ways to achieve it:

1. Altering the pawn structure to allow your bad piece to eventually have good local quality. For example- force the opening of a diagonal for your bad bishop.
2. Forcing the opponent's next move to be a pawn move that releases your bad piece to have better future local quality (a rare case).

Fighting for global quality

Changing your pawn structure

- To improve your pieces
- To make the opponent's pieces worse

Forcing changes on the opponent's pawn structure

- To improve your pieces
- To make your opponent's pieces worse



Diagram 17b- answering the requirement; as we determined in 'part a' of this diagram, the global quality in this position is roughly equal. Therefore there is no specific requirement, only to try and find a way to affect the balance of global quality in our favor.

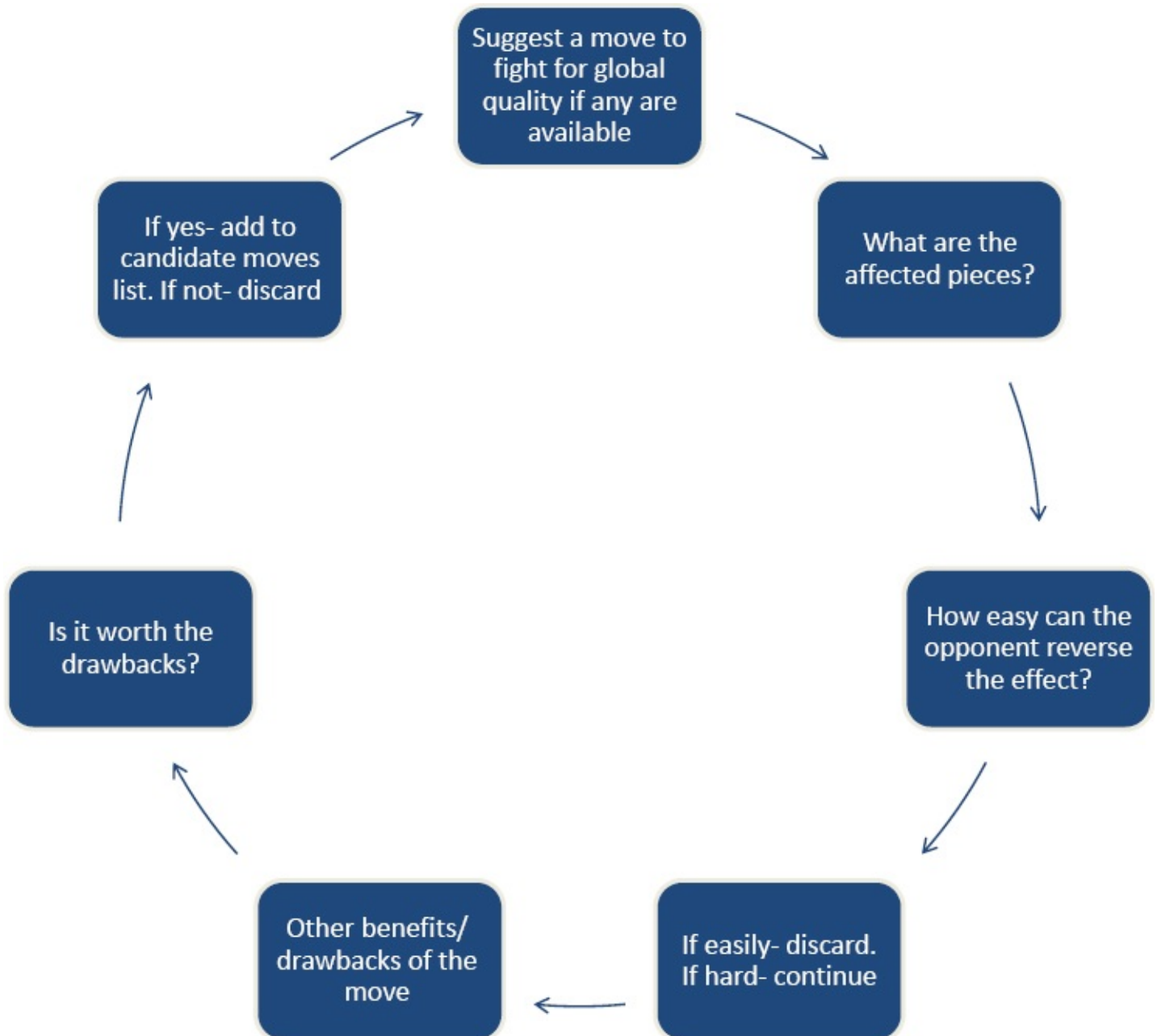
We can't improve the global quality of our pieces, since although the bishop on c1 is currently blocked we proved its global quality is ok, the opponent can't prevent us from opening the c1-h6 diagonal for the piece, and as long as that's true the global quality of the c1 bishop remains good.

However, we notice that in this position we have a chance to make an opponent's piece have a low global quality. Before, we said the bishop on b7 has a good global quality since it can be easily opened by playing c5, which means it being currently blocked is only temporary, therefore the good global quality we gave it. Not allowing it to open will create a long lasting effect and therefore influence the global quality. Here, the only way to create an open diagonal for the b7 bishop was to play c5. If we, as white, prevent c5 from happening for a long time, we will make the bishop have a low global quality, thus beneficially influence the balance of global quality in our favor.

In this position, the way to do it is the immediate b4!

And as we said, we will have to combine other effects of the move on other criteria of positional evaluation to ultimately decide to play it on the board. Still, we shall keep a very positive opinion on the move as long as there weren't any substantial drawbacks to it, not playing it only if there were some very serious drawbacks to the move.

Global quality Is the most important criterion in chess, and not always we have the chance to beneficially affect it. But when we do, it's going to take some very serious reasons not to, such as significant drawbacks to other criteria of positional evaluation caused by the move.



Local quality

In this criterion we will understand which pieces are currently "good" and how fast we can improve our "worse" pieces.

Local quality is directly affected by global quality, as good global quality enables a piece to eventually be "good", and bad global quality means that in the current pawn structure the piece can't be "good" at all.

The local quality of pieces divides into 2 sub- criteria, structured like the development criterion:

1. Current local quality- how "good" is a piece right now in the current position.
2. Potential local quality- how fast we can improve a piece that can be improved, in terms of tempos.

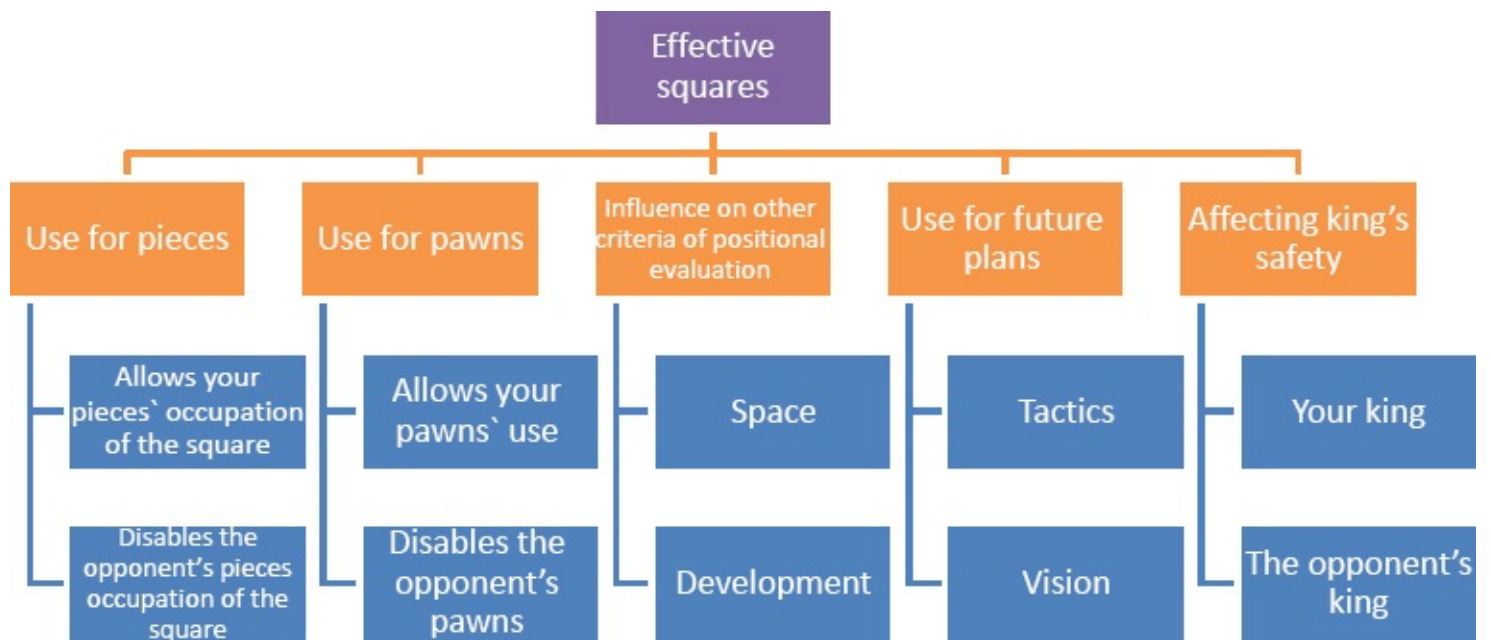
How "good" a piece currently is?

We evaluate the current local quality of a certain piece by counting the number of **effective squares** the piece attacks or points to.

What is an "effective square"?

Effective squares are squares a certain piece points to, that as a result of the piece pointing to them we have good effects on our position. These are squares that by pointing at them you:

1. Allow one or more of your pieces or pawns including the attacking piece, to occupy them (in case it benefits your position in imaginable reasonable scenarios).
2. Prevent the opponent's pieces or pawns from occupying them (in case it would have benefitted the opponent's position).
3. Influence other criteria of positional evaluation, such as space or development.
4. Enable beneficial tactical variations.
5. Enable long term vision plans.
6. Help secure your king if under threat.



Local quality of the king

The king is an exception in this criterion. For the king, we consider not only effective squares (which is one of the basics of endgame theory) but also safety, in case a threat on the king is possible. This will be determined in the first stage of decision making- threats analysis.

Potential local quality

Potential local quality deals with pieces that aren't near to their maximal possible local quality, and asks the question "how fast can these pieces improve?"

We will count the number of tempos needed to significantly improve a piece, where the lower the number is the higher potential local quality the piece has.

Potential quality is a complementary criterion to current local quality, and any advantages in potential local quality are valued less than in current local quality.

Local quality

Current local
quality

Potential
local quality

Effective squares

King's
safety

Tempos needed
to improve pieces



Diagram 18- the local quality of the c8 bishop is 5 effective squares, the whole diagonal d7-h3. The c6 knight currently has 2 effective squares: e5 and b4. The f6 knight has no effective squares at all, since in this position the effects of the pin of the knight to the queen are very crippling for the knight.

If we would compare the kings here, both have an equal local quality, both are equally safe and do not have any effective squares.

The g2 bishop currently has one effective square, h3 (influence on the space criterion), and a very good potential quality, since in only 1 tempo it can improve significantly.

Similarity to development

It could be argued that development is itself a sub- criterion of the local quality of pieces, since the goals of each are similar, where one only applies to the opening part of the game.

Therefore, in the opening stage, we may find that the same moves that answer the requirement of development also answer the requirement of local quality of pieces.

However, we still make this separation between these two criteria of positional evaluation, since local quality is general and applies to all stages of the game, while development has its subtleties and cases of irrelevance, as will be discussed later.

The advantage in local quality

To evaluate which side has the advantage in local quality of pieces, we must compare pairs of same pieces (knights, same color bishops, rooks etc.) and the remaining non- same pieces (remaining knight vs. remaining bishop, having covered all the same pieces each side owns), to determine which is better in local quality- both current and potential. Pair by pair, we will see which side has more pieces that are better than the ones of the opponent. Naturally, there could be cases of equal quality of pieces; both will be removed from the equation. We will concentrate only on how many better pieces each side has.

The overall advantage in local quality goes to the side that has more "better pieces".



Answering the requirement

As we did before, we will determine the requirement for this criterion based on which side has the advantage. Again, if it's you- increase it. If it's the opponent- find ways to decrease it.

Fighting for local quality

Improve your pieces

- Add effective squares to your pieces
- Improve your pieces' potential quality

Make the opponent's pieces worse

- Take away effective squares from the opponent's pieces
- Reduce your opponent's pieces' potential quality

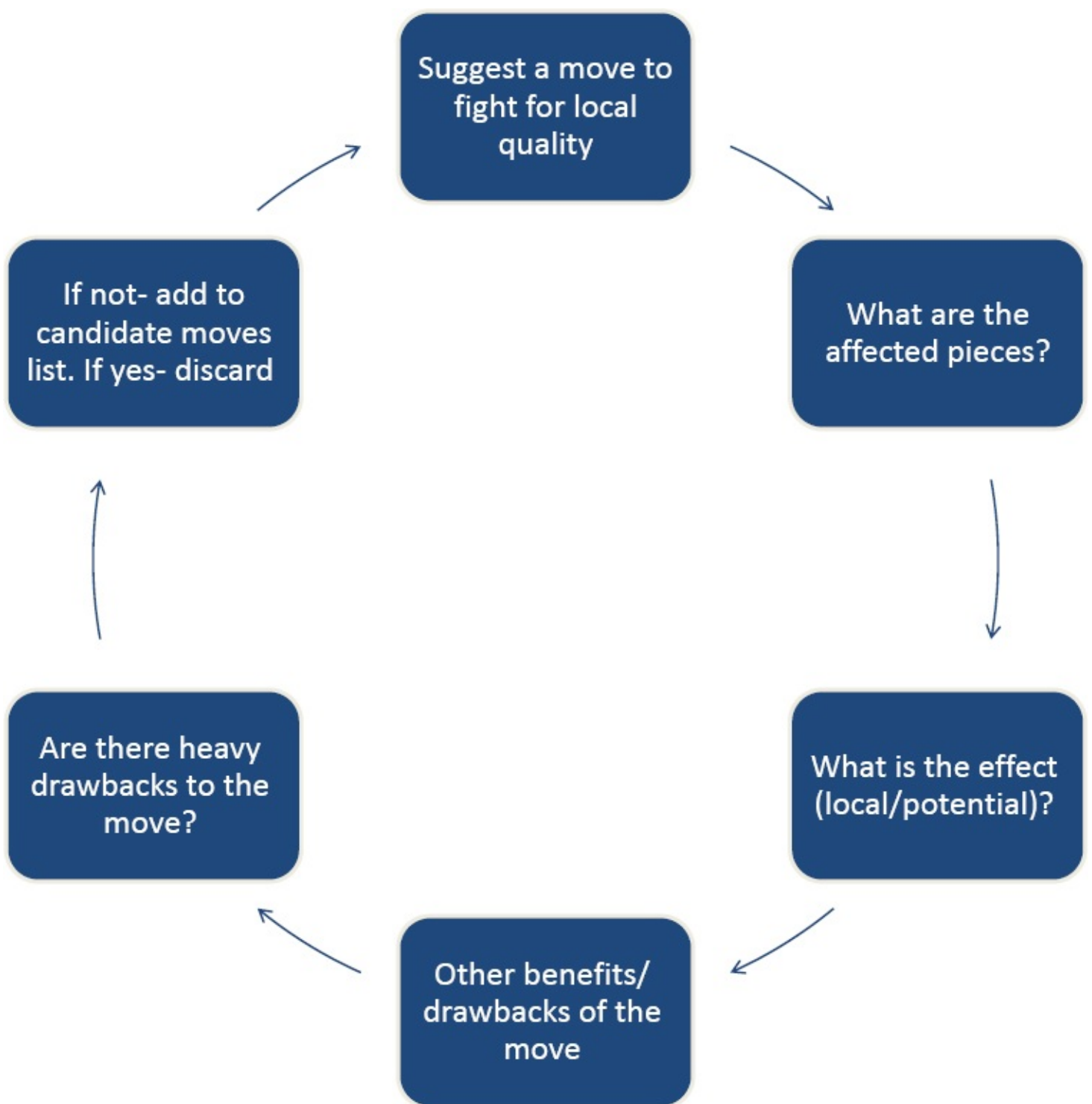
Affect king's safety

- Improve your king's safety
- Decrease the opponent's king safety

There are a number of ways to influence the balance of local quality:

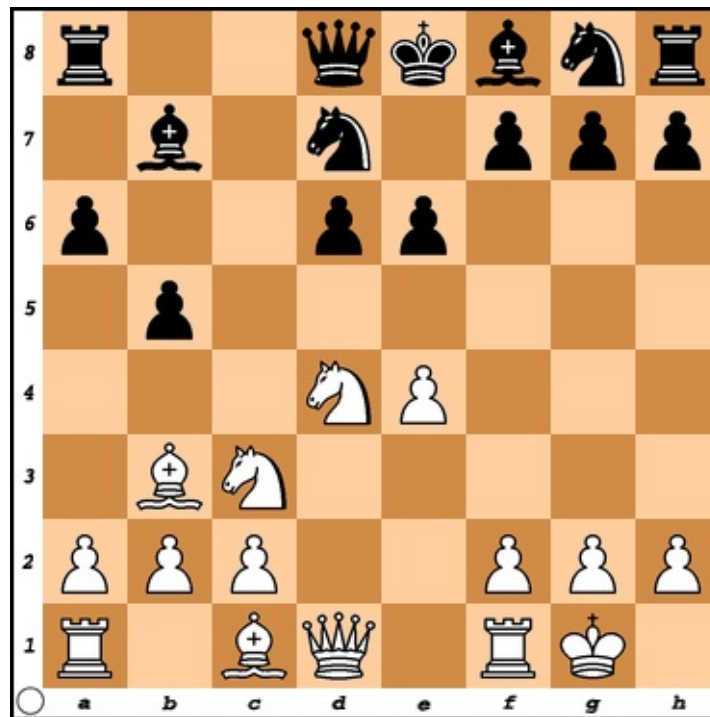
1. Increase the number of effective squares for your piece- either by changing the pawn structure of the position, maneuvering other pieces, or repositioning the piece itself.
2. Decrease the number of effective squares for an opponent's piece- can be achieved by controlling them or forcing the opponent's piece to move to an inferior position.
3. Increase your piece's potential quality- enable it to improve faster either by moving it, changing the pawn structure, or moving other pieces that were in its way.
4. Decrease the opponent's potential quality- make it more difficult for the opponent's pieces to improve, either by taking away its effective squares on which it could be better, or by not allowing the opponent to clear the way for that piece by not allowing him to move the relevant blocking pieces or pawns.
5. In case threats analysis showed your king might come under attack, not only in the immediate future, improve the king's safety by either castling, or dealing with the potential threat in other relevant ways.
6. Not allowing safety for the opponent's king- reducing its local quality when you have the chance to keep the opponent's king in a dangerous environment, such as open files. This can be achieved by not allowing the opponent's king to castle, or by opening its position in case you have the means to use that for a direct attack.

We can summarize for the local quality criterion:



Example 1- beginner level

Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Stage 2: Positional Evaluation, third criterion (quality of pieces)

Global quality

- Nature of the pawn structure

For white: closed on the light square diagonals, open on the dark squares, a single semi-open file.

For black: open on the light and dark square diagonals, a single semi-open file.

- Pieces each side owns

Both still have all the pieces on the board.

- Pieces affected by the pawn structure (long lasting effects)

For white: the b3 bishop has a low global quality, no open diagonals, a long lasting effect.

For black: none of the pieces suffer from low global quality, the bishop on f8 has a dark square diagonal (d8-h4).

- Advantage in global quality (determined by the pieces having the worst global quality): black.
- Requirement: decrease the opponent's advantage in global quality.

- Solutions:

- A4- tries to create an open light square diagonal for the b3 bishop (the worst piece on the board in terms of global quality).

The plan fails after black responds with b4, and the following a5 only creates another open light square diagonal for black's light square bishop.

- F3- shuts down the only open light square diagonal for the b7 bishop, significantly reducing its global quality.

The move is already on our list, no other way to fight for global quality in the given position.

Local quality

- Advantage- a quick analysis of the effective squares by comparing pairs of same pieces from each side shows white has the advantage here.

- Requirement- increase our advantage in local quality of pieces.

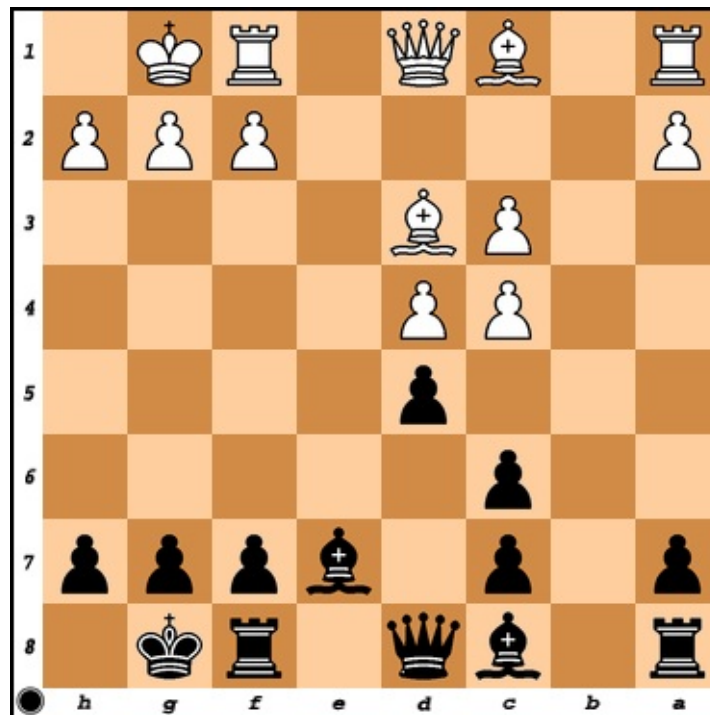
- Solutions:

- Be3- improving the current local quality and the potential local quality of the c1 bishop. The move is already on our list.
- A4- immediately improves the local quality of the a1 rook, already on our list.
- F3- mixed effects: slightly decreases the local quality of the b7 bishop, significantly decreases the local quality of our queen. The move doesn't answer the requirement for local quality.
- Re1- improves the local quality of the f1 rook. The move is already on our list (also answered space requirements).

No other solutions to the requirement.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995



Stage 2: Positional Evaluation, third criterion (quality of pieces)

Global quality

- Nature of the pawn structure

For both sides: open diagonals of both color, 2 open files.

- Pieces each side owns

Both have the bishop pair.

- Pieces affected by the pawn structure (long lasting effects)

The pawn structure fits the pieces both sides own, the global quality is high for all the pieces on the board.

- Advantage in global quality (determined by the pieces having the worst global quality): equal.
- Requirement: since the balance of global quality is equal, we will simply try to find a way to create benefits in global quality.
- Solutions:

There are no ways in the given position to create long lasting effects in global quality.

Local quality

- Advantage- comparing same pieces for both sides white's queen is better, the light square bishops are roughly equal, black's dark square bishop is better. The rest of the pieces are roughly equal.

Overall, the difference between the queens is so great it tips the balance towards white, awarding them an advantage.

- Requirement- decrease the opponent's advantage in local quality of pieces.

- Solutions:

- Re8- improves the potential local quality of the rook (now we can improve it significantly in only one move).

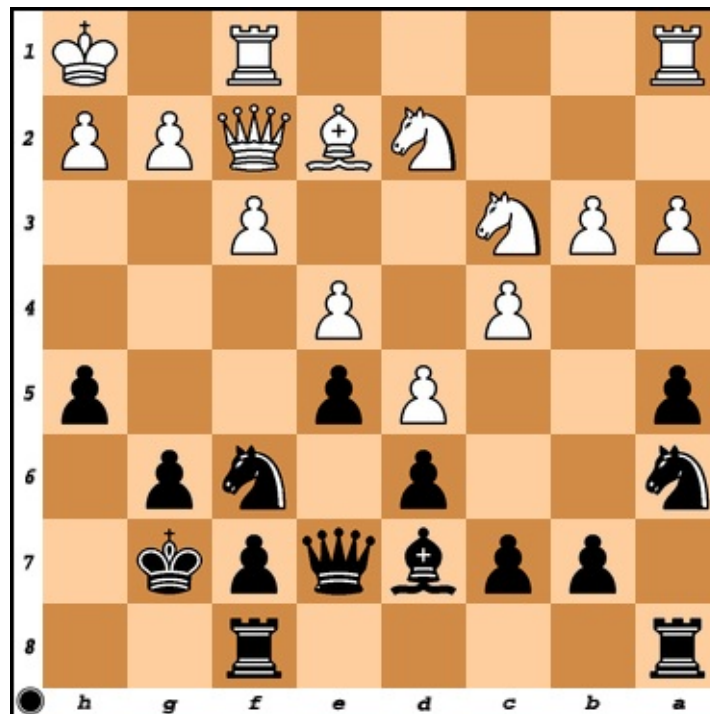
There are no other effects of the move, and since there are also no drawbacks we will add it to our list.

- H6- slightly decreasing the local quality of the opponent's light square bishop, and slightly improves the local quality of our king (king's safety). No other effects, we can add the move to our list.

No other successful ways to fight for local quality in the position.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Stage 2: Positional Evaluation, third criterion (quality of pieces)

Global quality

- Nature of the pawn structure

For white: closed on the light square diagonals, open on the dark squares, no open files.

For black: open on the light square diagonals, no open files.

- Pieces each side owns

Both have the same pieces, and the light square bishop.

- Pieces affected by the pawn structure (long lasting effects)

For white: the light square bishop has a low global quality, no open diagonals, a long lasting effect.

For black: none of the pieces suffer from low global quality.

- Advantage in global quality (determined by the pieces having the worst global quality): black.

- Requirement: increase our advantage in global quality.

- Solutions:

There is no way to beneficially affect the balance of global quality.

Local quality

- Advantage

- The f file rooks- black's rook is better.
- The a file rooks- equal.
- A6, c3 knights- black's knight is better.
- F6, d2 knights- black's knight is better.
- Bishops- black is better.
- Queens- white is better.
- Kings- black's king has more effective squares.

Overall- black is significantly better.

- Requirement- increase our advantage in local quality of pieces.

- Solutions:

- Rh8- immediately improves the current and potential local quality of the f8 rook. No other benefits/drawbacks, we can add the move to our list.
- Nc5- improves the local quality of the a6 knight. The move is already on our list (also answered the space requirement), no drawbacks or other effects.

No other ways to fight for local quality in the given position.

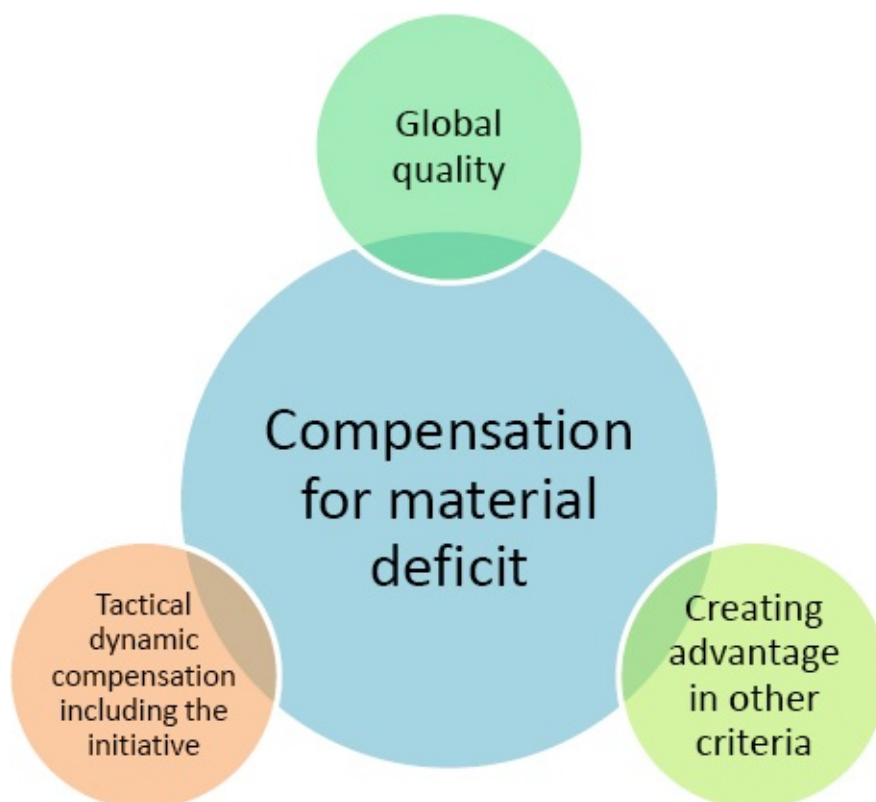
Fourth criterion of positional evaluation- material

Material is by far not the most important criterion in positional evaluation. The reason for that claim, as we already studied, is that in chess we play for squares and positions, not for material per say. Therefore, and not by chance, it's the last criterion of the four, somewhat an observing outsider in this group.

One of the main reasons to evaluate this criterion in positional evaluation is to provide another criterion of drawbacks/benefits to certain strategic moves and ideas, such as positional pawn sacrifice, or positional exchange sacrifice. In these cases, you will have a drawback in this criterion, so for the idea to be worthwhile it must get enough compensation for the material in the other criteria.

We will look for the following compensating factors for one's deficit in material:

1. A very positive effect on the balance of global quality of pieces for the side which is down in material.
2. Strong compensation for sacrificed material in at least 2 other important criteria for a particular position (the importance and effect of different criteria on a certain position will be discussed later).
3. Tactical compensation in terms of forced variations that at the point of quiescence benefit the initiator. This includes fighting for initiative and activity in a given position.



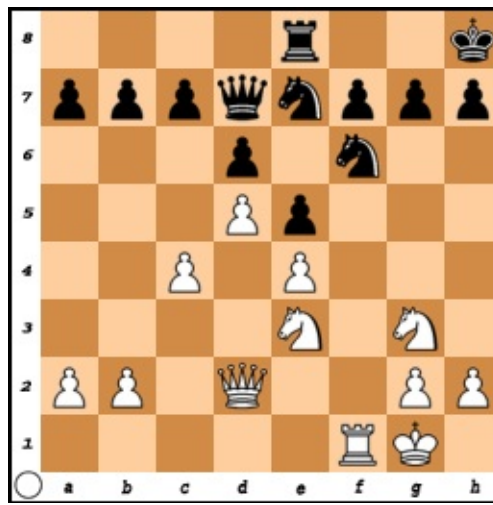


Diagram 19a- in this position white is a pawn behind in material, but does he have enough compensation? There are no threats by black, white has a small space advantage, and development is equal. White has an advantage in global quality since the f file rook has a semi open file, and a small advantage in local quality as well. Altogether we see enough compensation for one pawn.

But white wants more. What if white gives even more material, on top of that single pawn, to try improving his position?

Let's look at the following variation: Rxf6...gxf, Qf2...Ng8, Nf5 and we reach the following position-



Diagram 19b- white is now even more behind in material than in diagram 19a, having sacrificed the exchange as well. Does he have better compensation? White increased his space advantage, white has the advantage in development having "undeveloped" black's knight back to g8 after threatening the f6 pawn with Qf2. White also increased his advantage in local quality of pieces, but now global quality is equal. Overall now white is better, having much more than enough compensation for a pawn and the exchange.

The advantage and requirements of material

Judging strictly on the theoretical value of pieces, we will be able to determine which side has the material advantage (in cases of pawn imbalances, exchange sacrifices etc.).

If one side has the advantage, we will determine the requirements just as we did in all other criteria; if

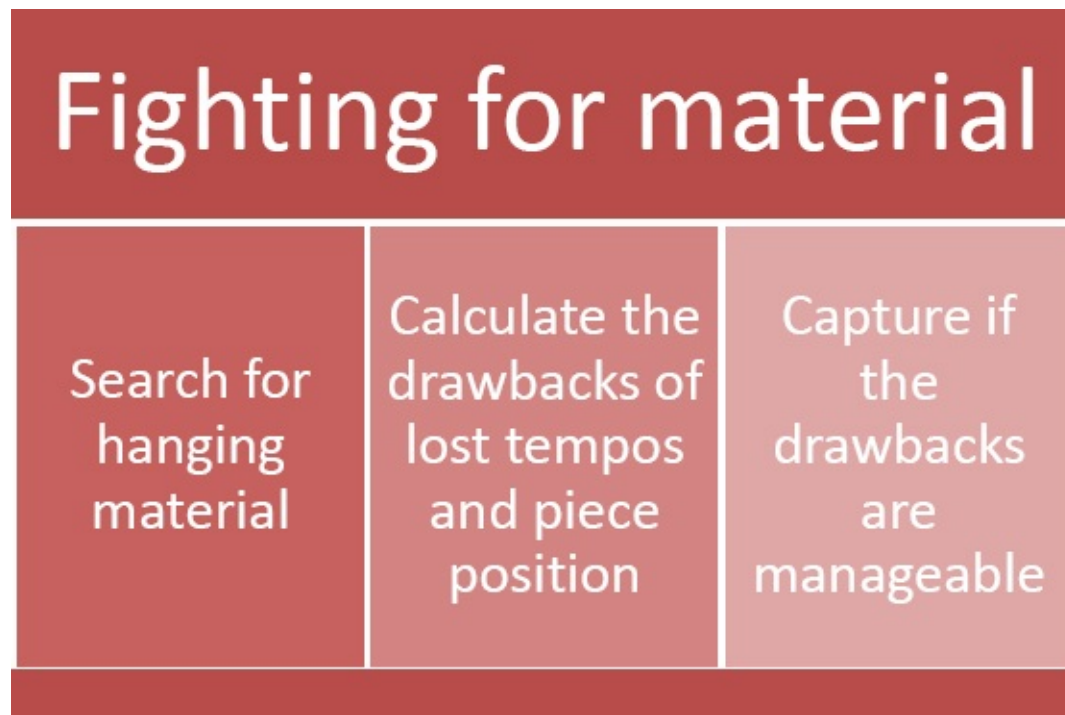
the opponent is ahead in material, try to decrease his advantage. If we are ahead, try to increase the advantage.

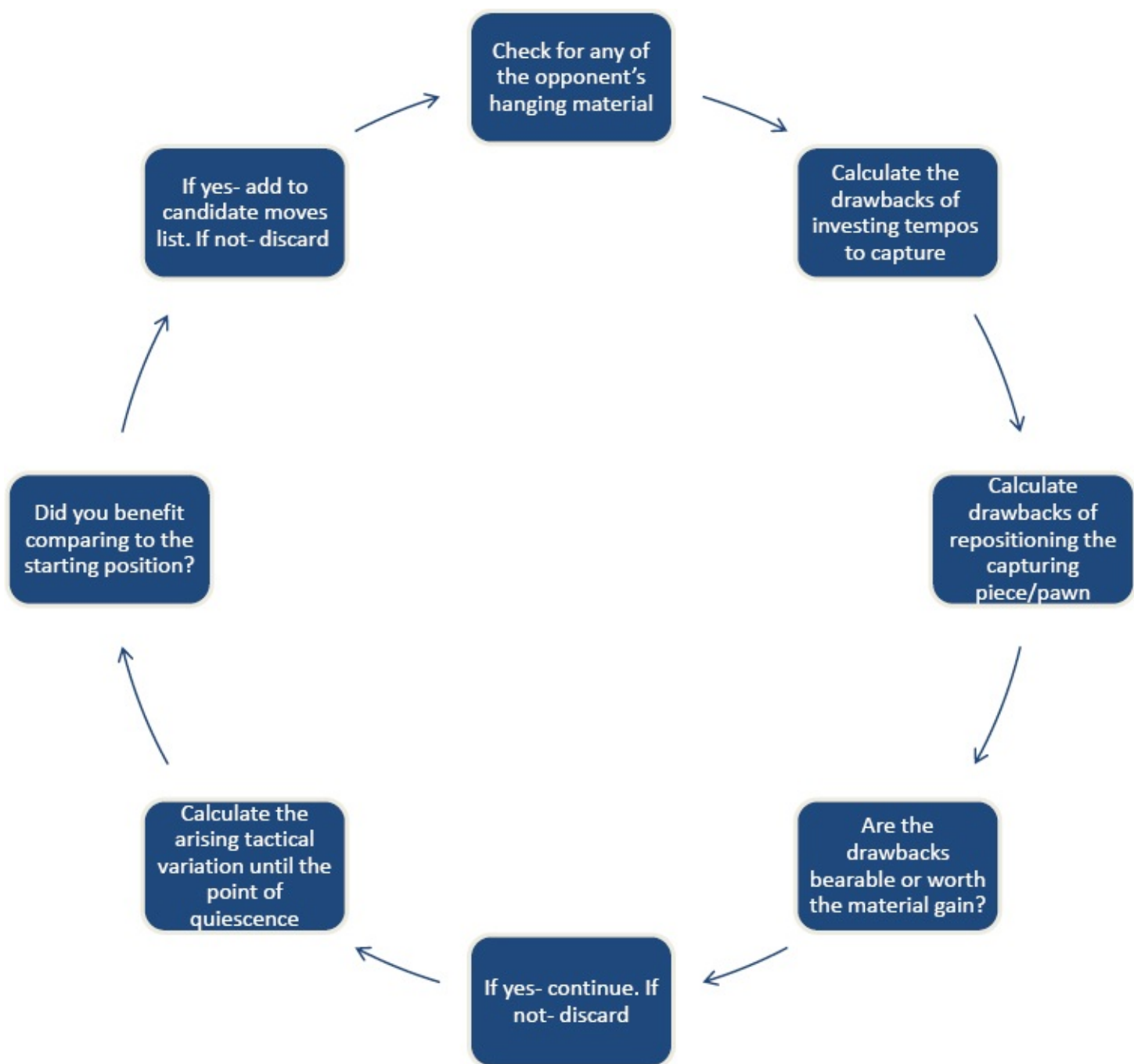
In case the balance of material is equal, we will look for ways to create an advantage for us, by checking for the opponent's possible hanging or unprotected pawns or pieces we currently attack, and considering a capture.

Fighting for material costs us the tempo of capturing the opponent's material. Therefore, we need to be really careful not to create heavy drawbacks in other criteria while taking our time wasting tempos to grab the opponent's material and changing the position of the capturing piece/pawn.

Also, by capturing any of the opponent's material we initiate a tactical variation, be sure you benefit from going into it by reaching the point of quiescence in your calculations and evaluate the differences from the starting position.

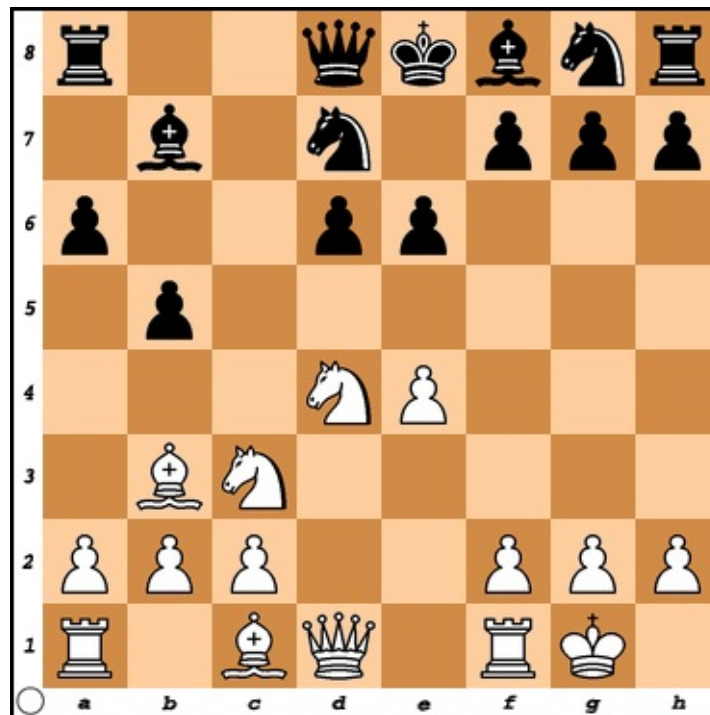
In this criterion we will not go for long tactical lines, but mainly concentrate on unprotected material and short variations. The tactical part of our game is discussed deeply in the third stage of the process of decision making- the tactical evaluation.





Example 1- beginner level

Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Stage 2: Positional Evaluation, fourth criterion (material)

Advantage- material is equal.

Requirement- since there isn't an advantage to either sides, there isn't a specific requirement dealing with compensation for material imbalances. We will look for ways to create benefits in material, such as hanging pawns/pieces.

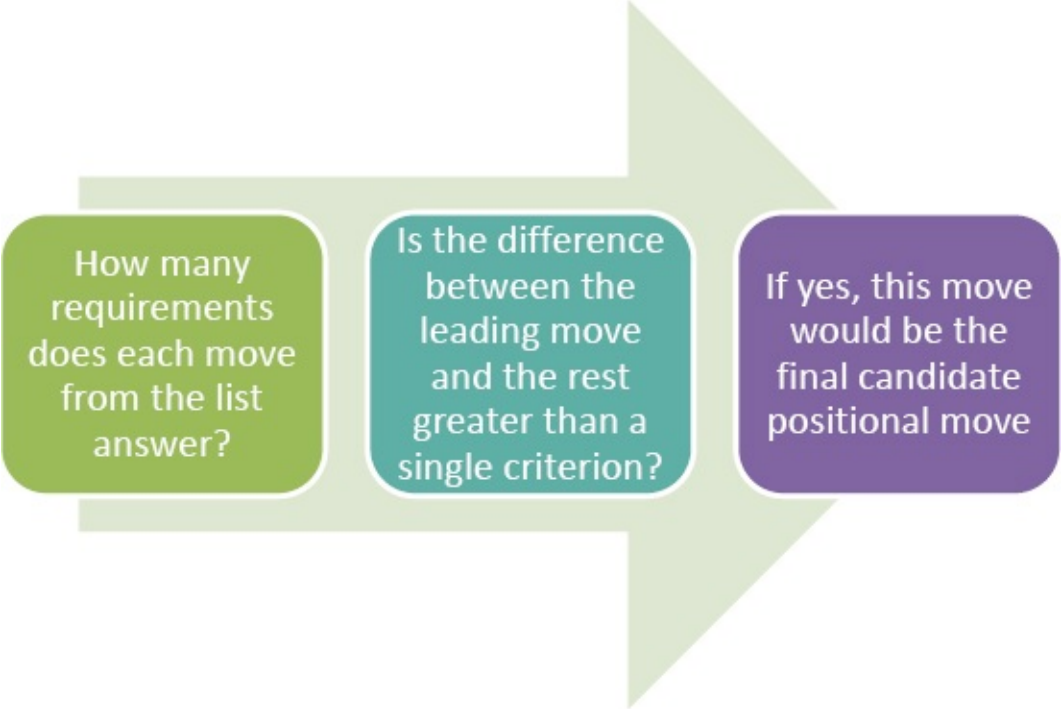
Solutions- looking at the position we see no way to beneficially affect the balance of material.

The fourth criterion is the same in all 3 study case examples we are discussing, effectively the material criterion doesn't participate in any of them.

Positional evaluation- choosing the final candidate positional move

Having finished evaluating the position by four different criteria, we now have a list of possible candidate positional moves; each answers one or more requirement.

From that list of moves, we will now choose the one which answers the most number of requirements in the best possible way to be the final product of the second stage in our process of decision making.



Not an easy choice

Differences of one requirement aren't significant. for example if all potential candidate moves from the list answer between 2-3 requirements they will all be regarded as roughly equal in strength.

In these cases, where we need to choose one candidate move among a number of equal moves, we will need more tools to be able to filter some moves out of the list.

We will now discuss two more filters to help us pick our final candidate positional move.



Diagram 20a- having gone through the process of decision making, we ended up in this position with a list of moves containing Rc8, Qb6, Ne7, and f6.

Rc8 answers 2 requirements (development, local quality), *Qb6* answers 3 requirements (space, development and local quality), *Ne7* answers 2 requirements (development, local quality), and *f6* answers 2 requirements (space, global quality).

Since it's only one criterion that separates between all the moves (all answer between 2-3 criteria's requirements), we still can't produce the final candidate positional move.

We must apply filters to narrow down our choice.

First filter- the concept of urgency in chess

An urgent move is a move that unless played right away, the opponent can prevent it from happening on the next move.

Moves that can't be prevented by the opponent from happening will not be regarded as urgent.

The way the opponent prevents the move must also not hurt the opponent's position, or else we will now be able to find new moves using the degradation of his position, no longer being interested in our previous plan.

Preventing a move divides into two main categories:

1. Preventing a move from happening- not allowing the move to happen without serious drawbacks to the moving side.
2. Preventing the ideas behind the move- changing the position in such a way that if the move happens after the changes it doesn't answer the same number of requirements as it did before.

We shall look at each move from our list of positional candidate moves, having already filtered out the ones that answered significantly less requirements than the remaining ones, and determine which are urgent.

In case there is only one urgent move- this would be the final product of positional evaluation. But if there is more than one urgent move, or no urgent moves at all, we will move on to the second filter- the importance of criteria.

```
graph TD; A[Looking at the list of equally strong positional candidate moves, we will find the urgent moves] --> B[A move is urgent if either the idea behind the move or the move itself can be prevented by the opponent unless played right away]; B --> C[A single urgent move would be the final candidate positional move. More than one urgent moves or no urgent moves at all- move on to the second filter];
```

Looking at the list of equally strong positional candidate moves, we will find the urgent moves

A move is urgent if either the idea behind the move or the move itself can be prevented by the opponent unless played right away

A single urgent move would be the final candidate positional move. More than one urgent moves or no urgent moves at all- move on to the second filter



Diagram 20b- let's see if there are any urgent moves from our list:

Rc8- can't be prevented by the opponent if we don't play it right away, not urgent (in case we play something else, say *Ne7*, *Qb3* doesn't prevent *Rc8* since it's only an in-between move, and after *Qd7* we allow *Rc8*. The move *Qb3* here only delays *Rc8*, not prevents it).

Ne7, *f6-* both can't be prevented.

Qb6- can't be prevented. ...*Ne7*, *Qb3*..*Qb6*, *Qxb6*...*axb6* and an equal game.

The urgency filter didn't help narrow down the possible selection here; we will have to use another filter.

Second filter- the importance of criteria

As important as it is to fully understand the position by taking all the criteria into account, at some phases of the game and in some kinds of positions not all of the criteria are as relevant or the center of concentration.

Having filtered out the non- urgent moves, we remain with a smaller list containing only urgent moves in case there were any, or the original list of equally strong moves, each answers one or more requirements of the criteria of positional evaluation.

The importance or relevance of each criterion's requirement is dynamic, and depends on the kind of position and the phase of the game:

1. Space- the weight of the space criterion depends on the amount of pieces still present on the board.
We try to control more space to allow our pieces to reach more squares, and to allow other pieces to maneuver inside our camp freely without congestion. Therefore, the fewer pieces there are on the board, the less weight we will give to space and its requirements.
2. Development- the weight we give to this criterion and its requirements depends on the opponent's state of development, and the amount of pieces already developed by both sides.
If we are behind in development by not more than one tempo, and we are safe, the weight of the requirements for development will decrease. Also, the more pieces that have already been developed, the less weight we give to development, as any increment affects the equation less than before.
3. Quality of pieces- the weight of this criterion depends on the state of the opponent's quality of pieces. If it's at least roughly equal for us, we can give less weight to this criterion.
4. Material- if we are having enough compensation for being down in material compared to the opponent, or if we are ahead in material, the weight of the requirements for this criterion decreases.

Ignoring criteria

Space	Development	Quality of pieces	Material
• few pieces left on the board	• Not more than one tempo behind the opponent • Most of the pieces have already developed	• Equal balance of local quality • Global quality shall not be ignored	• We have enough compensation for material deficit • We are ahead in material

Remember, we aren't going to neglect these criteria automatically if the situation is as described. We shall do it only when there is a need for a second filter at the final point of picking a candidate positional move.

We will deduce from each move the answers to requirements for "not important" criteria, effectively ignoring these criteria with their requirements, in a number of cases that allow us to do so. After this process, the number of requirements answered by each move will decrease, enabling us to remain with the moves that answer the greatest number of "important" requirements for the given position.

Left with one candidate move that after this process answers the greatest number of requirements- this would be our final positional candidate move.

If still more than one move survived this filter, you can choose either of the remaining moves as they are absolutely equal, as we just proved by going through the full process of positional evaluation.

Having found the best positional move, we will still not play it immediately. We must first go through the third stage of the process of decision making, the tactical evaluation, to try and find a tactical solution to the position and see which one is the better solution- the positional or the tactical approach to the given position.



Diagram 20c- having remained with 4 moves as possible positional candidate moves, we will try to filter out criteria that don't play a major role in this position.

Space- only one piece left the board for each side, space is still important.

Development- black isn't more than one tempo behind in development; it plays a secondary role in the given position.

Quality of pieces- local: roughly equal, can be ignored. Global: white is better, here global quality plays a major role.

Material- equal, no requirements on material in the position.

Overall, we are left with requirements on space and global quality. The only moves from our list to deal with these requirements are f6 (space, global quality) and Qb6 (space-only minor effects).

It's clear from the requirements each move of the remaining moves answer that the chosen positional candidate move would be f6! And indeed, it's the best move in this position (since tactical evaluation doesn't produce any better plans we keep the positional candidate move and play it in the game).

Positional evaluation

In each criterion we suggested moves to answer the requirements



List of moves

Having looked at all 4 criteria, we assembled a list of all moves that answered any requirement



Final selection

As the final candidate positional move, we select the one that answered the greatest number of requirements in the best possible way



Urgency

If we ended up having number of roughly equal candidate moves, we keep the urgent ones, that unless we play them right away our opponent can prevent them

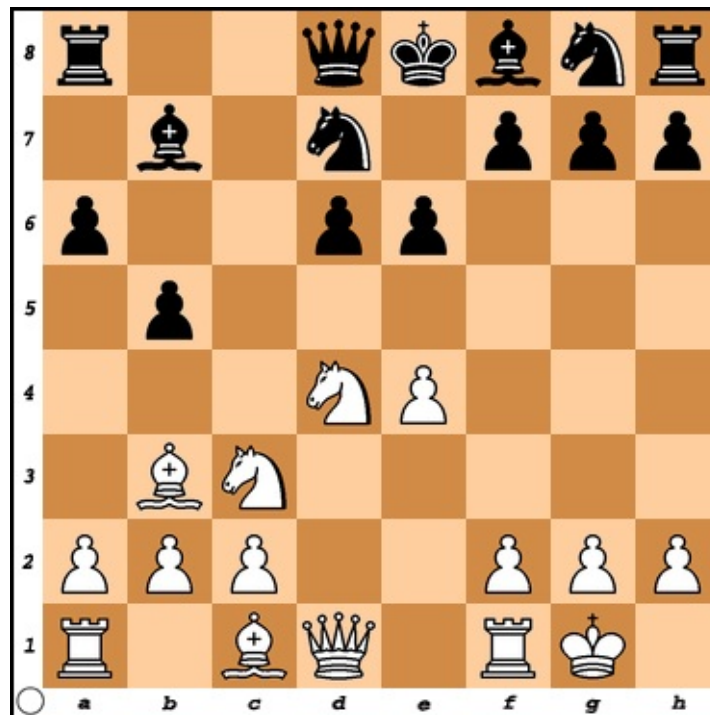


Importance of criteria

If there were no urgent moves, or more than one urgent move, we will compare them again- this time ignoring criteria that aren't crucial for the position

Example 1- beginner level

Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Stage 2: Positional Evaluation, choosing the final candidate positional move

List of candidate positional moves:

- F3- answered the requirements of space and global quality (overall 2 requirements).
- F4- only answered the requirements of space (overall 1 requirement).
- A4-answered space, development, local quality (overall 3 requirements).
- Be3- answered the requirements of development and local quality (overall 2 requirements).
- Re1- answered space and local quality (overall 2 requirements).

Final decision

The greatest number of requirements a single move on our list answers is 3. Therefore, we can already discard f4, since it has a larger than 1 difference in the number of requirements answered compared to the leading move (here it's a difference of 2).

We end up with all the moves that answer between 3 and 2 requirements, not enough difference to make a decision right now.

Urgency

From the remaining moves on our list we will look for urgent moves.

- F3- can't be prevented.
- A4- can't be prevented.
- Be3- can't be prevented.
- Re1- this move can't be prevented as well.

Overall, the urgency filter didn't help narrow down our selection. We will move on to the next filter:

Importance of criteria

- Space- still plays a significant role; all the pieces are still on the board.
- Development- since we are not more than one tempo behind (we are ahead), we can neglect this criterion.
- Local quality- we are ahead; can be neglected.
- Global quality- we never neglect global quality.
- Material- doesn't play a role in the position, has no requirements or solution.

Filtered list:

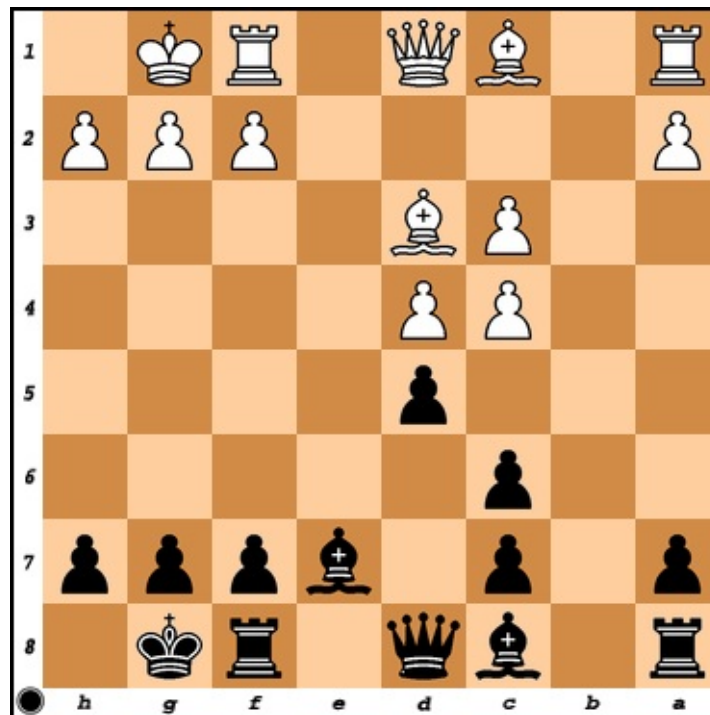
- F3- space, global quality; overall 2 requirements answered.
- F4- space; overall 1 requirement answered.
- A4- space (the other requirements were filtered out); 1 requirement total.

The 3 moves above are the only surviving moves, from which we can see f3 answers the most number of requirements.

Therefore, f3 is the final positional candidate move.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995



Stage 2: Positional Evaluation, choosing the final candidate positional move

List of candidate positional moves:

- F5- answered the requirements of space (1 requirement).
- G6- answered the requirements of space (1 requirement).
- Re8- local quality (1 requirement).
- H6- answered local quality (1 requirement).

Final decision

Every move on our list answers only a single requirement. We must apply filters to select the final positional candidate move.

Urgency

- F5- not urgent.
- G6- not urgent.
- Re8- not urgent.
- H6- not urgent.

Urgency didn't help us decide between the positional candidate moves.

Importance of criteria

- Space-2 pieces have already come off the board, space still plays a role but its importance has reduced.
- Development- no move on the list addresses development.
- Local quality- black is behind, can't be neglected.
- Global quality- no move from the list addresses global quality.
- Material- doesn't play a role in the position, has no requirements or solution.

Overall, since space plays a lesser role at this stage, between the 2 remaining important criteria we will prioritize local quality.

Filtered list:

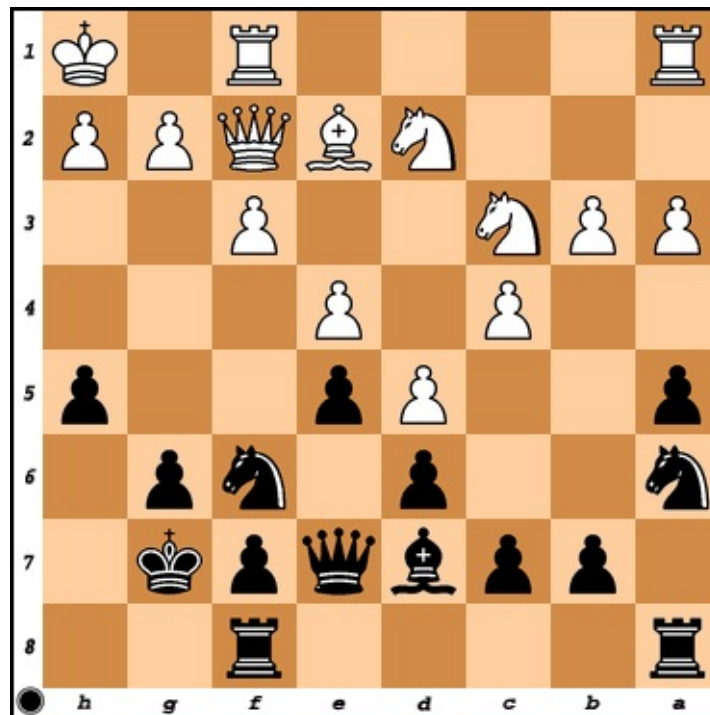
- Re8- local quality.
- H6- local quality.

Between the 2 remaining moves the one with the more significant effect is Re8, creating a very strong potential local quality for the f8 rook (after Re8, in only one move the local quality of the rook significantly improves).

Re8 is the final positional candidate move in the given position.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Stage 2: Positional Evaluation, choosing the final candidate positional move

List of candidate positional moves:

- C6- answered the requirements of space, slightly decreases the quality of pieces (1 requirement).
- Nc5- answered the requirements of space, quality of pieces (2 requirements).
- Rh8- local quality (1 requirement).

Final decision

Already at this stage we can discard c6, since it only answers a single requirement while decreasing our balance of local quality. We are left with Nc5 and Rh8, both answer between 1-2 requirements, not enough difference between them to make a decision.

Urgency

- Both remaining moves can't be successfully prevented by white (b4 or Na4 only benefit black).

Urgency didn't narrow down our selection.

Importance of criteria

- Space-only a single piece left the board for each side, space is still very important.

- Development- development has finished for both sides, can be ignored.
- Local quality- black is ahead, can be ignored.
- Global quality- no move from the list addresses global quality.
- Material- doesn't play a role in the position, has no requirements or solution.

Overall, we are left only with requirements on space.

Filtered list:

- Nc5- answers space.

The only move that answers the remaining requirements having applied the filter is Nc5, the final product of positional evaluation.

Positional evaluation- short version

The "shortcut" approach works backward- here you first suggest the moves, then analyze how good they are.

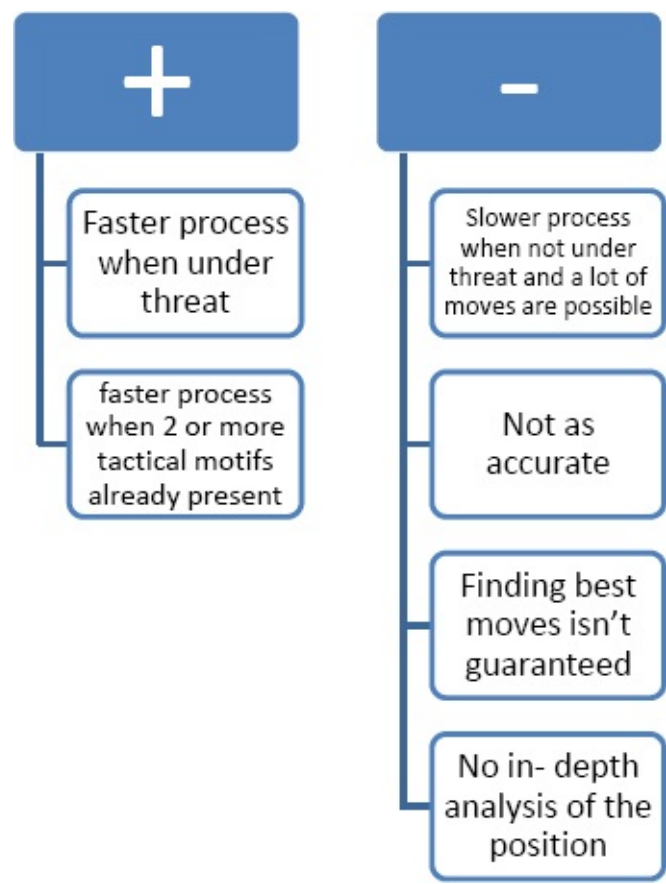
This version of positional evaluation is a "manual" approach to finding strategic moves in chess. Here, finding the moves isn't as constructive as in the full version, as finding them here is your job. Therefore, for start, you must find all the possible moves in the position that can have any use for the position.

For each move you found, you note the benefits and drawbacks on each of the original four criteria of positional evaluation.

The selected positional candidate move will be the one that has the best effect on the criteria of positional evaluation.

When encountered with equally strong moves, you can use the "importance of criteria" filter to narrow down your selection of possible strong moves. Using "urgency" has no meaning, since we aren't selecting between candidate positional moves, but candidate answers to threat(s).

Benefits and drawbacks of the "shortcut" method



When to use?

This method is recommended to use only when under threat, as the selection of answers to the threat is very limited.

Therefore, when under threat, we will search for all the possible solutions that either prevent the opponent's move from happening, or moves that allow his move to take place without being dangerous to us. This will require making sure that each suggested solution indeed solves the threat, by not having a worse position at the point of quiescence of the arising variation than the one we had at the beginning of it.

Among all the possible solutions we will select the one that has the best positional effect.

Using the full version is absolutely ok as well when under threat, and at the cost of investing more time you are guaranteed to find the solution with the best positional effects. Deciding to go through the full version when under threat, you must make sure that every move you offer as an answer to a criterion's requirement also solves the threat.

The more you practice and deeply understand the full process, the more experience you get at understanding the requirements of your position, the easier it will be for you to use the "shortcut" version for positional evaluation for every kind of position.

Using tactical evaluation after the "shortcut" version

When under threat, either playing a position with a tactical nature or being in the middle of a tactical variation already, we use the shortcut version of positional evaluation to find the best way to prevent threats against us.

However, sometimes we can find that allowing the threat to happen, while creating threats of your own- will bring better results.

To find out whether this is the case in the discussed position, once we've found the best way to solve the threat (if one was available), we shall proceed to tactical evaluation to find out if we have a strong counter threat, counter attack, an in- between move or a diversion that can bring better results than the solution to the threat.

Deciding which is better, as always, is done by comparing each variation at its quiescence point to the starting position, and choosing the one in which the position changed in the way that benefits us the most (or hurts us the least).



Diagram 21a- doing threats analysis, we found one threat in this position, the deadly Bf4. Going through the short version of positional evaluation we found all the possible solutions: g3, Kb1, Qd3, and Ne2.

G3- improves space, quality of pieces (king's safety).

Kb1- improves quality of pieces (king's safety).

Qd3- improves quality of pieces.

Ne2- negative effect on quality of pieces (the knight was better on c3, now the f1 bishop is blocked, but the d6 bishop is denied the f4 square), king's safety.

We narrowed down the choice between g3, Kb1, Qd3. We will now use the "importance of criteria" filter, to further narrow down our choice.

In this position the king isn't safe on c1, and this is the reason the opponent has Bf4 as a threat. Therefore, king's safety (part of quality of pieces) is most important here. Space- only one piece from each side has left the board so far, space is still important. Development- white is ahead, can be ignored. Quality of pieces (that doesn't affect king's safety) - our pieces stand better than black's, can be ignored. Material- equal, can be ignored, no effects on material by the suggested moves.

Overall, we are left with king's safety and space. The response that deals with these criteria the best is g3, answering space and king's safety (local quality of pieces). That's currently the product of the short version of positional evaluation we applied here.

Moving on to tactical evaluation, we look for tactical motifs (checks, captures, pressure, tension) available for us to play that also deal with the threat (either tactical solutions missed by us in the short version of positional evaluation, or diversions and in-between moves).

In this position we find no good checks or captures, but a very strong way of creating pressure- Nd5! That also solves the threat. Training our tactical eye we would find moves like that already in the short version of positional evaluation, but for now tactical evaluation serves also as a safety net for us to find slightly more complex resources to deal with the opponent's threat. Calculating the arising variations until the point of quiescence, white is doing ok after anything black chooses to respond (lines that start with ...Qa5, or ...Qb8).

Nd5...Qa5, a3...Bc5, Nc7+...Qxc7, Qxc5:

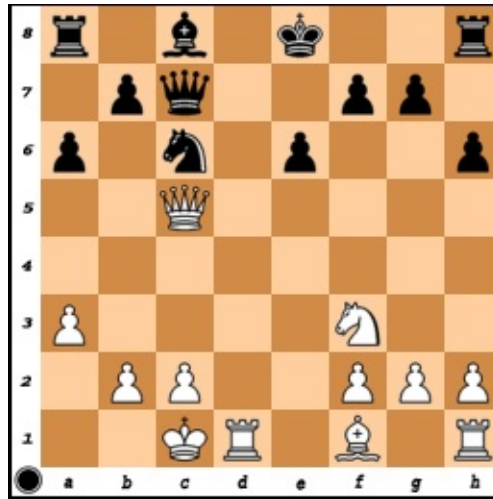


Diagram 21b- *the point of quiescence of one of the variations that follow the Qa5 response (with best play by black), white's position has improved on space and quality of pieces.*

Looking at other variations of the lines that follow Nd5, we see white significantly improves. Compared to the previously chosen b3 response, we prefer the positions that follow Nd5 having analyzed the point of quiescence in every variation.

Final best solution to the threat- Nd5!

Positional evaluation- short version

Find all possible moves in the position first



Benefits and drawbacks

Are there any benefits or drawbacks on each of the four criteria (space, development, quality of pieces, material)?



Final selection

The final candidate positional move has the most number of benefits and least number of drawbacks



Importance of criteria

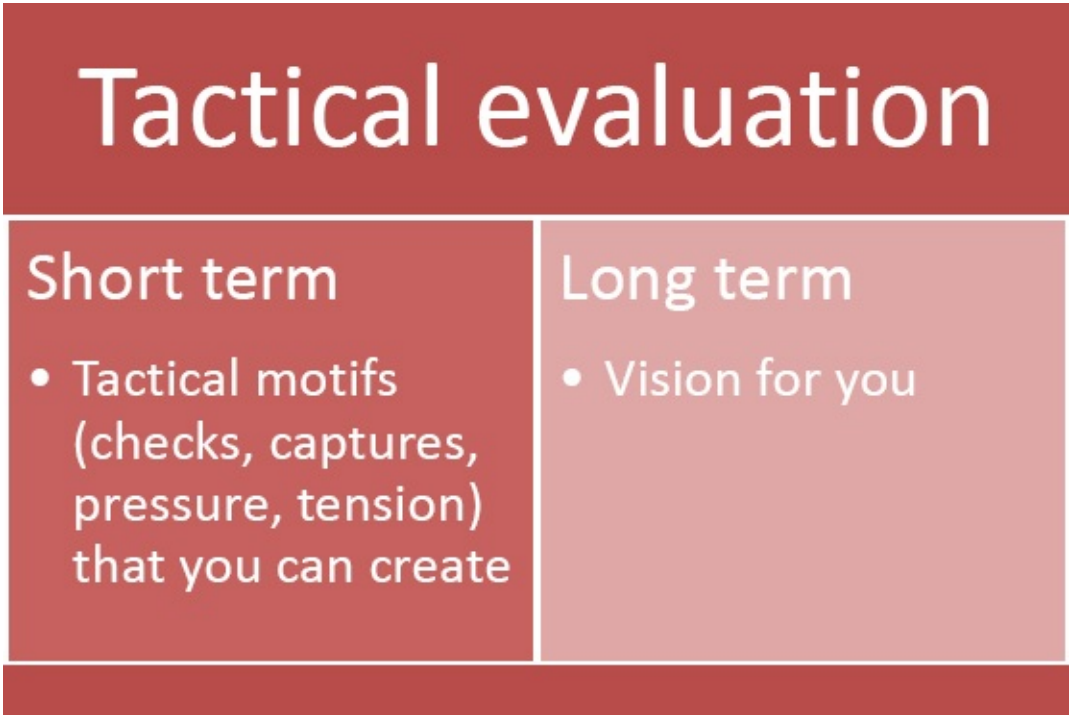
If there were no urgent moves, or more than one urgent move, we will compare them again- this time ignoring criteria that aren't crucial for the position

Stage 3- tactical evaluation

Having found the best positional solution to a given situation, we shall now look for a better solution in a tactical approach to the position.

Some positional moves carry tactical motifs in them. We will not look here again at tactical moves we talked about already during our discussion of positional evaluation, but rather we will try to find new tactical moves.

Essentially this stage is exactly the same as threats analysis (stage 1 of the process), only now we look for threats we can create instead of threats the opponent could create.



As always, we will decide whether or not a line is good for us only after evaluating the position at the point of quiescence. Based on that we will select the best tactical line we can play, if any are available.



Diagram 22- Stupak- Naiditsch, Warsaw 2012. Approaching tactical evaluation, black has already selected the top positional move Nhf6, after which white is significantly better. Trying to find a better plan using the tactical approach, Arkadij Naiditsch, a super- GM and Germany's first board, started searching for tactical motifs black can play here. He started with the most forcing lines first:

Checks: Bd4- white is doing great after Be3 with no continuation for black. No other checks possible.

Captures: Bxc3- only benefits white; black's left with dark square weaknesses and white has the dark square bishop, exactly the piece to use these weaknesses. No other reasonable captures.

Pressure (and/or tension): Nhf6- already found in positional evaluation.

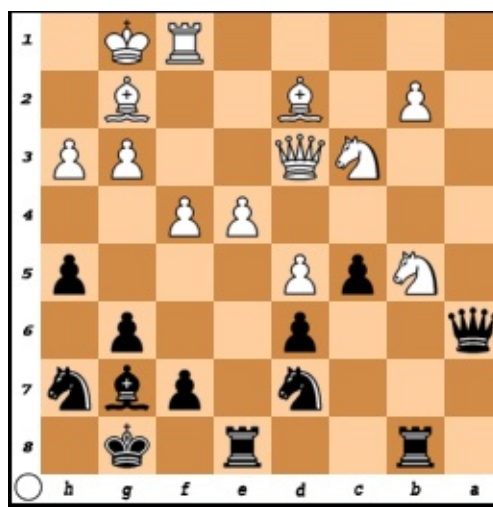
B5- looks at first that the b5 square is protected 4 times by white, and the advance is supported only twice. Still, we must check this option until the point of quiescence in all the arising variations. As always, we shall look at the most forcing lines first, covering every choice the opponent has:

Line 1...b5, axb...axb, Naxb5...Qb6



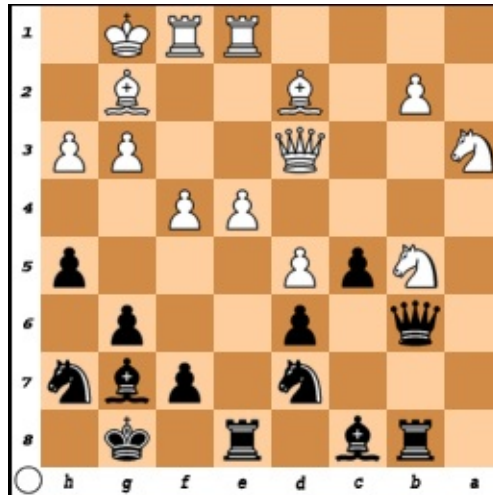
White has to deal with a very serious threat here, at the temporary cost of a single pawn for black. Black's Ba6 can't be prevented on the next move, and it's deadly. White will have to return material to deal with Ba6 and black will end up much better:

Ra1...Ba6, Rxa6...Qxa6 (point of quiescence) and material is roughly equal with a minor piece and a pawn compensation for white's exchange sacrifice. But black stands much better now, and has a small but significant advantage:



There were other options for white instead of Ra1 such as e5, but you can check to make sure that in all other lines black is still significantly better.

Line 2...b5, axb...axb, Ncxb5...Qb6:

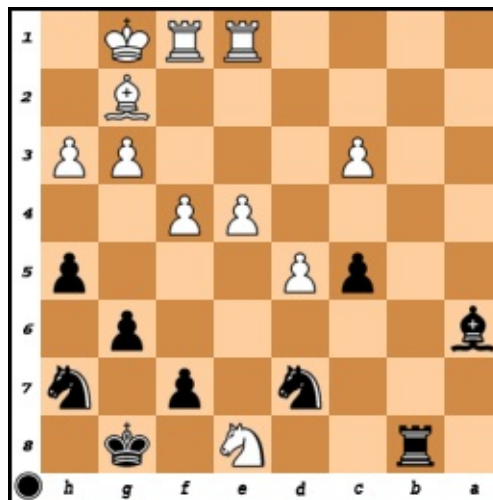


Black has the same threats after Ba6, but here the difference is that white captured on b5 with the c knight. What's the difference, you ask? Huge difference. Now white has just enough time to get everything off the pin of the a6 bishop:

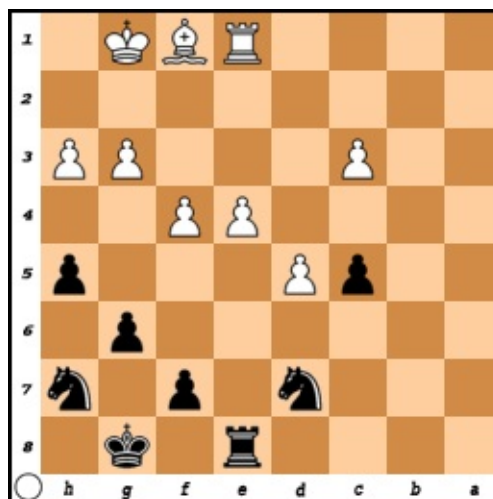
Bc3!...Ba6, Bxg7...Kxg7, Qc3+...Kg8, Nc4!



Now everything is forced: ...Qxb5, Nxd6...Qb4, Nxe8...Qxc3, bxc3

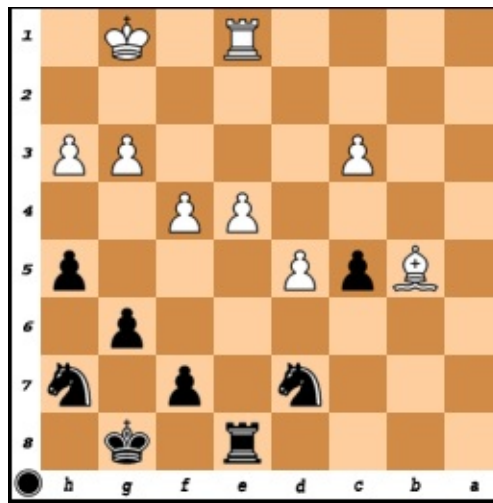


...Bxf1, Bxf1...Rxe8:



Point of quiescence where white has only 2 pawns for a minor piece? Not at all!

Bb5!



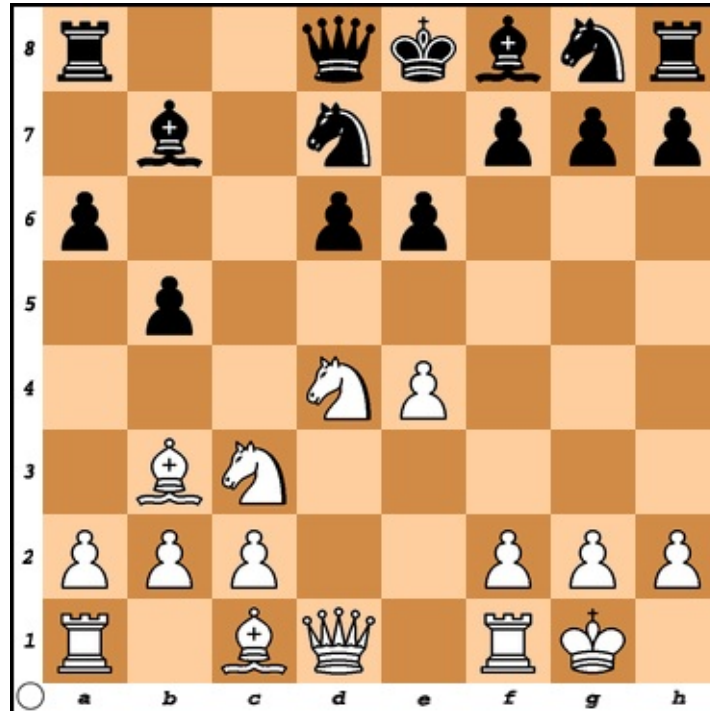
At this point white has more than enough compensation for the minor piece, 2 rolling pawns, initiative, and black will have to pay with one of his knights to stop white's pawns.

Overall, we had to look very deep into this variation to find white's best move Ncxb5 instead of Naxb5, and even here (we make our decision based on the worst case scenario where the opponent also plays only the best moves on each stage of the variation), far along the way, black has plenty of chances.

To conclude, we covered 2 forcing lines after ...b5 (other lines aren't better for white, but must be calculated as well- take a minute to look at other options for white after ...b5 and you'll reach the same conclusion). In both lines black is doing better than after the best positional move in the original given position (Nhf6). Therefore, the chosen approach in the position would be the tactical approach with b5, giving the best chances for black.

Example 1- beginner level

Zbynek Hracek- Alexander Wojtkievicz, New York open 1995



Stage 3: Tactical Evaluation

Checks

None are available for white.

Captures

- N(d or c)xb5- fails to ...axb5, Nxb5... Nc5:



And white doesn't get enough for the piece, we discard the variation.

- Nxe6... fxe6, Bxe6...Ngf6, Bf4... Nc5, Bd5:



Going through the line shown above after Nxe6, we can clearly see that here as well white hasn't got enough compensation for the piece. A quick look at other variations after Nxe6 and we see that nothing helps changing this conclusion.

The variation is discarded.

- Bxe6... fxe6, Nxe6... Qc8, Nxf8... Nxf8, Qxd6 (quiescence):



Effects on positional evaluation:

- Space- significant improvement.
- Development- mixed effects.
- Quality of pieces- global: we got rid of our low global quality light square bishop, significant improvement.

Local- white lost the local quality of the d4 knight, but significantly improved the queen and also the black d7 knight is now worse. Black's queen also improved, making it overall mixed effects on local quality.

- Material- remains roughly equal, with 3 pawns for the piece.

Since Bxe6 has benefits with no significant drawbacks comparing the position at the point of quiescence to the starting position of the variation, we can keep the move as a tactical candidate move.

No other captures to consider in the given position.

Pressure/ Tension

There is no successful way to create pressure/ tension by white that hasn't been discussed already in the second stage (a4).

Vision

Since we found immediate successful tactical motifs for us, we don't see any other long term plans that don't involve the plans we have already discussed.

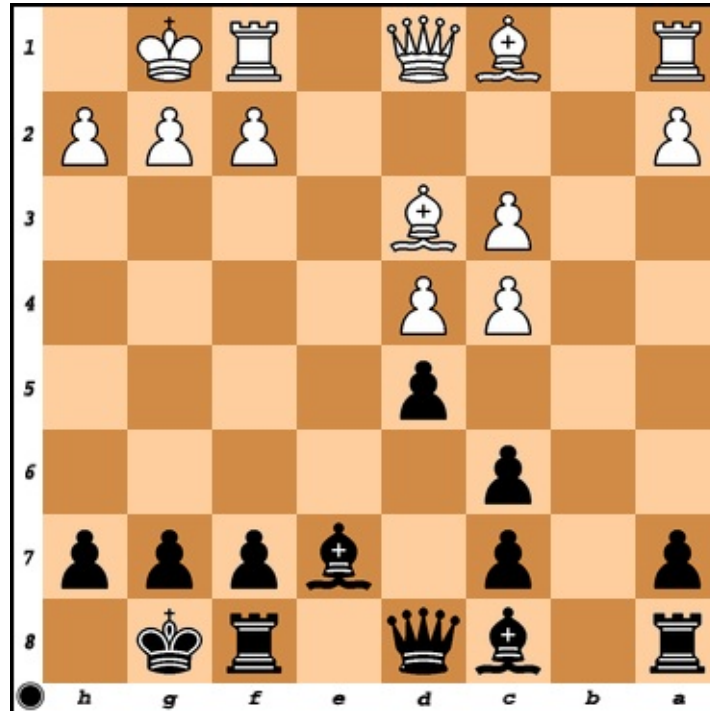
To conclude, the product of tactical evaluation is Bxe6, the best tactical candidate move in the given position.

The next step would be to compare the effects each approach has on the position- the best positional move and the best tactical move, selecting the one that influences the criteria of positional evaluation in the best way. As mentioned, for the tactical move this decision is made by looking at the position at the point of quiescence.

It's also important to select the worst case scenario in tactical evaluation, analyzing the position at the point of quiescence of the variation where the opponent plays the best moves. To find out what's the worst case, we need to check all the opponent's choices while going through the variation.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995



Stage 3: Tactical Evaluation

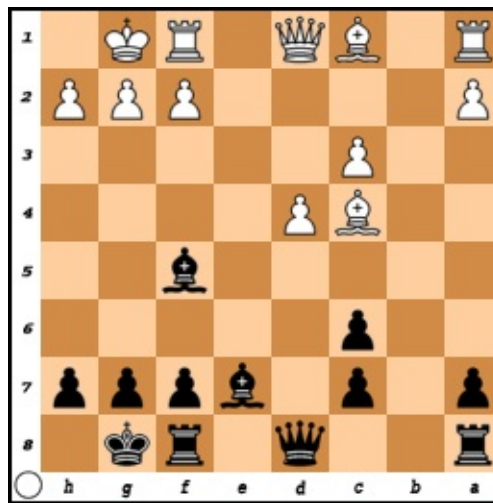
Checks

None are available for black.

Captures

- ...dxc, Bxc4
 - ... c5, and black is doing absolutely ok in every way white responds, liquidating his pawn structure weaknesses.
 - ... Bd6, black improves his local quality of pieces; otherwise Bd6 is impossible due to c5.
 - ... Bf5, again, significantly improving the local quality of his pieces, black didn't have a square as good as f5 for the bishop otherwise. Also, unless black plays it immediately after Bxc4, it can be prevented later by white returning his bishop to d3. Therefore, we will select this continuation for black.

The position after ...dxc, Bxc4... Bf5:



Effects on positional evaluation:

- Space- mixed effects, overall the balance remains roughly as before.
- Development- an improvement for black.
- Quality of pieces- black improves the local quality of his light square bishop and the king (safety), the opponent's light square bishop becomes worse.
- Material- remains equal.

Overall, dxc and the variations that follow give black benefits in 2 criteria, with no apparent drawbacks. We will keep the move as a tactical candidate move.

No other captures are possible.

Pressure/ Tension

- C5- white has plenty of good responses (cxd/ Be3/ Qh5 / Qc2). Analyzing the arising variations in every line (take a minute to look at each option) we can see that the main beneficiary from entering these lines is white. Practically in all of them white improves development and quality of pieces, with some minor benefits for black in space.

Clearly, dxc is superior to c5. Therefore we will not consider c5 as a tactical option in the given position.

There are no other ways for black to create tactics in the given position.

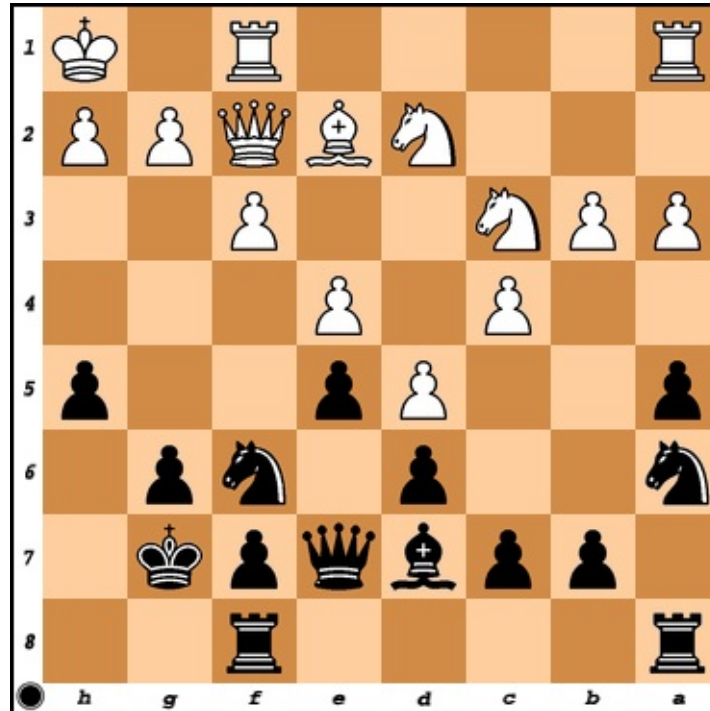
Vision

There are no other long term plans available that we haven't covered yet.

To conclude, the final candidate tactical move here is dxc.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Stage 3: Tactical Evaluation

Checks

We have no checks available.

Captures

No captures in the position worth mentioning (Nxe4/d5 doesn't help us whatsoever).

Pressure/ Tension

- A4- allows the desired b4 by white, highly beneficial only for the opponent.
- B5- loses material with no compensation.

There are no other new ways here for black to create pressure. So far, we found no candidate tactical moves

Vision

On the queenside

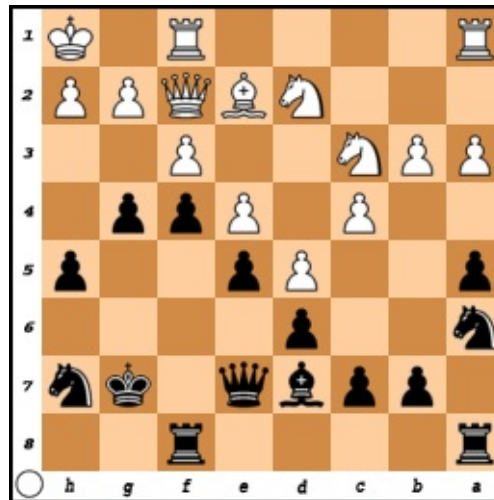
- B6 followed by Nc5- there is no reason for us to prefer this on playing Nc5 right away. We do get the option to retreat the knight to b7 if the opponent goes b4, but we don't benefit from it compared to the a6 retreat that could be made otherwise.

In the center

We can make no progress in the center that doesn't involve plans we already discussed.

On the kingside

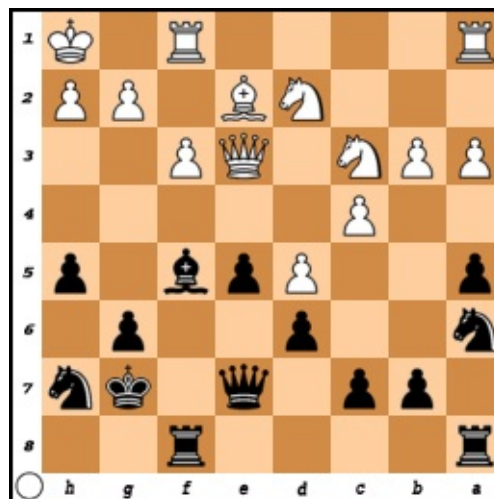
- Nh7-f5-f4-g5-g4:



Black improves his position, can continue with Qg5-Nf6 further improving. However, it seems that although 5 moves have been played by black in a row there is still no significant real threat on white, only improvement of black's position, which is enough to be considered further.

Let's see which resources white could use in the meanwhile.

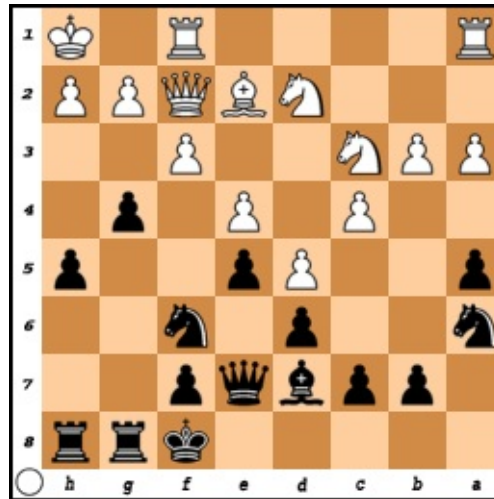
First it looks like after Nh7 white benefits from moving the queen from the same file black's rook occupies, preparing to meet f5 with exf... Bxf5:



White now has the e4 square for both of his knights, and seems to be the only one to

benefit from this sequence of moves. We will discard the Nh7-f5 option.

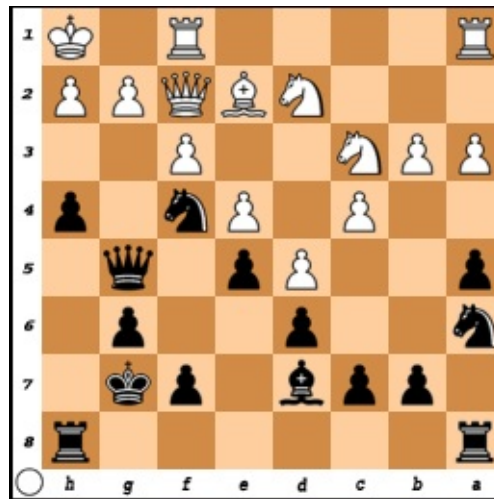
- G5-g4-Rh8-Rg8-Kf8:



Black hasn't got any real threats. Gxf answered with Qxf to white's benefit. G3, hxg...h4, g4 and the files on the kingside remain closed, with no better plans for black. Now it's white who can use black's pieces' absence from the queenside with b4! or the immediate Qa7.

This plan will also be discarded.

- H4-Nh5-Nf4-Rh8-Qg5:



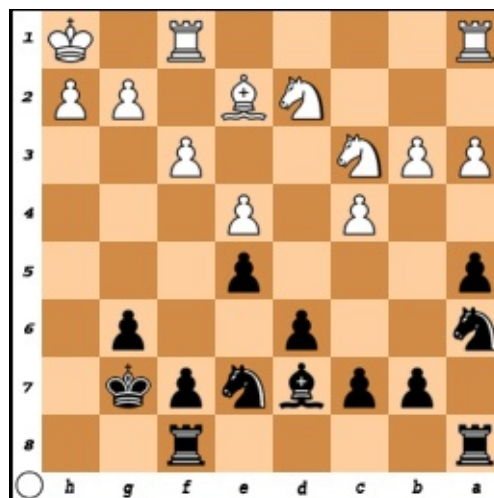
This vision plan offers a huge improvement in black's position in terms of space, and local quality, plus the creation of real threats (Nxg2 attacks the d2 knight). Also, it allows for the a6 knight to significantly improve in only 2 moves, with Nc5-Nd3.

Can white interfere with this plan? First, let's remind ourselves the original position:



Now, let's check white's resources to deal with the h4 plan:

- The most obvious Qxh4 fails tactically- ...H4, Qxh4... Nxd5 and white has to exchange queens or lose the c3 knight, so Qxe7... Nxe7:



And black is better here, with improved global quality for his rooks by opening the h file.

- Another forcing response to black's h4 is the immediate f4. Black follows: ...h3! And white has 2 options- g3 or f5. Let's start with g3:



Now black opens the e file with exf, and regardless of how white retakes we'll play Nc5! Bringing another piece into the action, with a very promising position for black.

After f5 by white, instead of g4:



...hxg+, Qxg... Rh8 with the threat to play Bh3 if white takes g6:



Rf2 (allowing fxg)... Rg8 (preparing Kf8 after fxg, recapturing with the rook) and black is doing absolutely great, with better chances to use the kingside open files, with a safer king.

The overall effects of the h4 plan are significant improvements in space and local quality in all lines, and in some, if black allows, even creating an advantage in global quality (for example, if white plays Qxh4).

The h4 plan is the best tactical approach to the position; we will later compare it with the positional approach based on their effects on the criteria of positional evaluation in the way we mentioned above.

Final decision- positional or tactical?

Having found the best positional and the best tactical moves you can play in the position, now it's time to choose the one to be played.

We will compare the two arising positions, one after the positional move, and the other at the point of quiescence of the variation arising from the tactical move (where both sides played their best lines). The way for us to make this comparison is by evaluating the changes in the criteria of positional evaluation between the starting position and the final position in both approaches.

For the positional move- we already know the effects, as we know which requirements were answered by the move or which criteria were affected and in which way- positive or negative.

For the tactical move- by comparing the position at the point of quiescence with the starting position, we will find positive or negative changes for each criteria of positional evaluation.

Finally, we will choose the move whose effects on the criteria of positional evaluation were the best. This is the move we will play in the game.

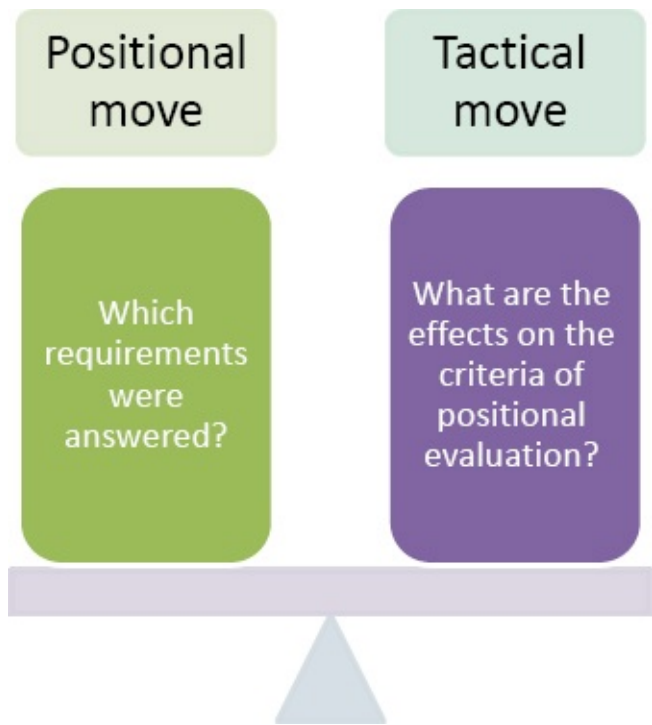




Diagram 23- Kozul- Tratar 2011. It's time for Zdenko Kozul, the 2006 European champion and top seed in Croatia, to decide between the 2 possible approaches in this position against the Slovenian GM Marko Tratar. The top positional move he found was Rae1, and the top tactical move here is Qh4.

Rae1 improves space, development, and significantly improves the local quality of the pieces. Qh4 (pressure) wins material. Playing only best responses for black (worst case scenario) we reach the following position:

Qh4...Nd5, Qxe7...Nxe7, g4!...Bxg4, Nf6+

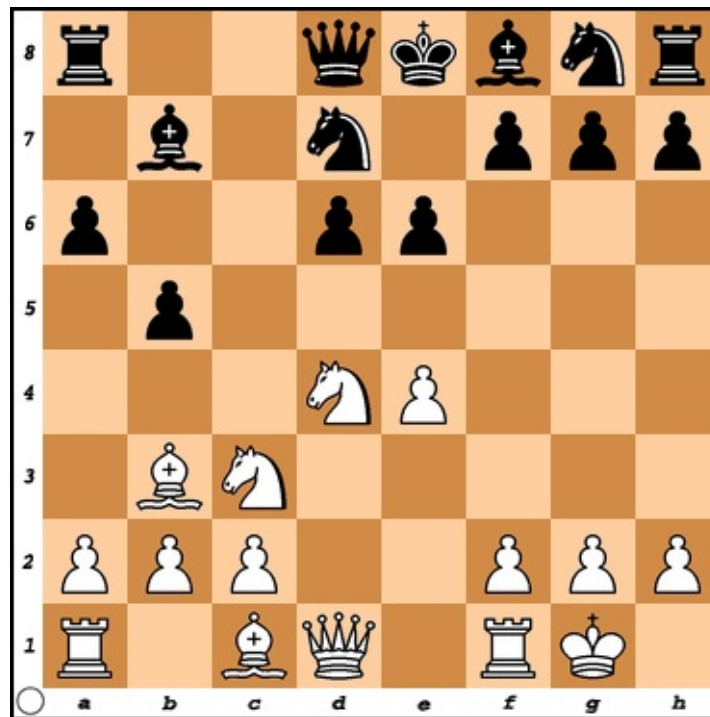


And the g4 bishop is lost. The tactical approach has the better effects on the criteria of positional evaluation at the point of quiescence of all the arising variations than the positional Rae1, with significant gain in material and thus also in local quality of pieces, since black has no sufficient compensation.

The position is winning for white in both cases, but Zdenko, a heavy smoker, couldn't wait to light up a cigarette and chose the fastest way to finish the game: Qh4- the tactical approach.

Example 1- beginner level

Zbynek Hracek- Alexander Wojtkiewicz, New York open 1995



Final decision- positional or tactical approach?

The best positional move

f3, Has benefits in space, global quality.

The best tactical move

Bxe6, has benefits at the point of quiescence in space and global quality.

Final decision

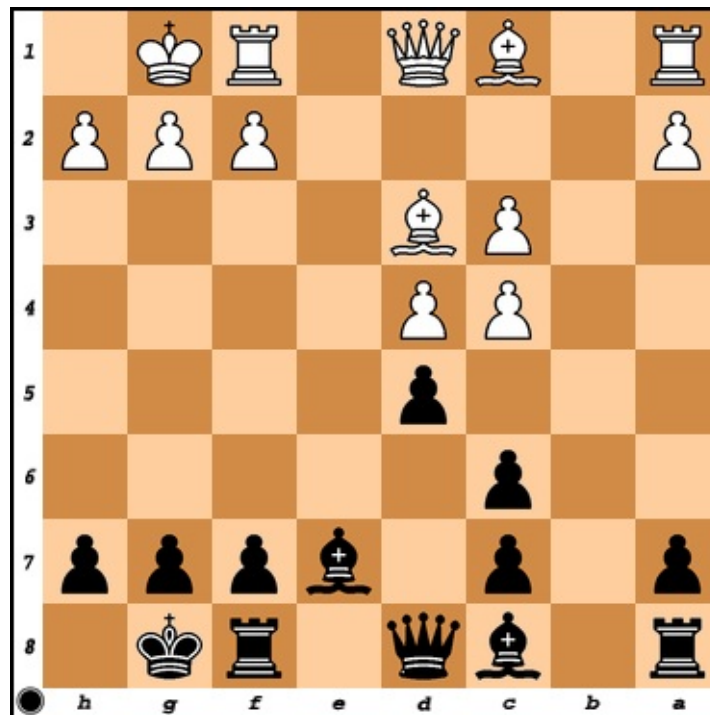
The effects both on space and global quality at the point of quiescence of the variation starts with Bxe6 are greater than the ones after f3. Therefore, selecting the approach that gives the better effects on the criteria of positional evaluation, we will play Bxe6!

What really happened in the game?

White did play Bxe6, maintaining a small advantage. Black managed to hold on not letting white increase his overall advantage, and in an equal position Hracek lost on time.

Example 2- advanced level

Vassily Ivanchuk- Artur Jussupow, Novgorod 1995



Final decision- positional or tactical approach?

The best positional move

Re8, improving the balance of local quality.

The best tactical move

Dxc, improves development and significantly improves the local quality for us at the point of quiescence of all the arising variations.

Final decision

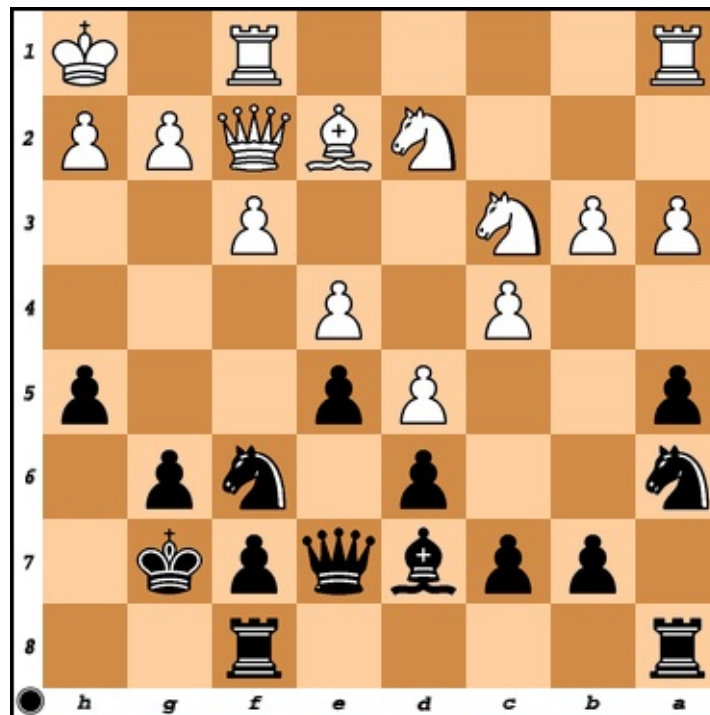
Overall, the effects of dxc is better in local quality, plus we get positive effects on development as well. The choice is easy- dxc!

What really happened in the game?

Jussupow also chose dxc, the only move that keeps black roughly equal. Eventually, the great Ivanchuk managed to outplay his opponent at a later stage and win.

Example 3- expert level

Boris Gulko- Garry Kasparov, Novgorod 1995



Final decision- positional or tactical approach?

The best positional move

Nc5, positively affects space and local quality.

The best tactical move

H4, significantly affects space, local and global quality at the point of quiescence of all the variations that arise.

Final decision

It's clear that at the point of quiescence, the effects of h4 on space and local quality are much stronger than the ones of Nc5, plus h4 also helps global quality. We choose h4!

What really happened in the game?

Kasparov, going through the same process as we did, has easily found h4 and eventually won the game. Nevertheless, the overall score between him and Gulko is still a plus to Boris.

Some words of encouragement

To conclude our journey through the theory of decision making in chess I wanted to give you, my reader, a number of practical advices.

It's obvious that at first, the full process will take you more time to complete than what you've got used to so far. But we could notice the same in almost every field- driving a car, solving math problems, programming and more. The first steps always take longer to make.

The method covered in the book is very practical for regular time control games. Applying it successfully for blitz or rapid games will take a bit of experience using it, as you don't have enough time in shorter games to use any constructive method to reach correct decisions.

Attached in the appendix are printable work pages that you can use to practice the process until it becomes second nature. Gaining experience in using this system you will start adapting it to your personality and your style of thinking; some parts will become intuitive for you (such as attaching value to squares, which eventually after some practice becomes subconscious) and the others will keep requiring discipline to go over them, at least for a period of time (such as making sure to look for every tactical motif possible, that becomes more and more intuitive but always requires full attention to details).

In any way you decide to use the information in this book, remember that studying the process of decision making is the biggest step you made towards chess expertise. Now, studying new subjects such as specific openings, endgames, or analyzing your or the masters' games will be much easier, because you now know exactly what you're doing and why you're doing it.

The second volume of this book will be released at around March 2013, and will mostly concentrate on extensive practice and fine tuning of the process you've studied.

Appendix

Making a decision- work pages

Stage 1: threats analysis

Checks

- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____

Captures

- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____

Pressure/tension

- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____
- _____ - dangerous (no good response)/ not dangerous, a good response is: _____

Vision for the opponent

On the kingside:

- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with
- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with
- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can

respond with

In the center:

- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with
- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with
- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with

On the queenside:

- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with
- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with
- _____ - _____ - _____ - _____ - _____ ; dangerous (no resources to respond) / not dangerous, we can respond with

Overall, the opponent's threats are:

Stage 2: positional evaluation

Full version (if there were no threats)

1) Space

White controls or contests the following squares in black's camp:

- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____

Black controls or contests the following squares in white's camp:

- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____
- _____ - controlled/ contested. Value-_____

The space advantage goes to _____/equal.

The requirement is to increase our advantage in space / decrease the opponent's advantage in space/ fight for space if equal (choose the appropriate one).

Solutions:

- _____.

Affected squares:

- _____ - change of status/value:_____
- _____ - change of status/value:_____

- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____

Other effects (benefits/drawbacks):

- Development: _____
- Quality of pieces (local/global) _____
- Material _____
- Safety check- can the opponent play strong tactics as a result of the move?

Overall- add to the list or discard? _____

• _____.

Affected squares:

- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____

Other effects (benefits/drawbacks):

- Development: _____
- Quality of pieces (local/global) _____
- Material _____
- Safety check- can the opponent play strong tactics as a result of the move?

Overall- add to the list or discard? _____

• _____.

Affected squares:

- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____

Other effects (benefits/drawbacks):

- Development: _____
- Quality of pieces (local/global) _____
- Material _____
- Safety check- can the opponent play strong tactics as a result of the move?

Overall- add to the list or discard? _____

• _____.

Affected squares:

- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____

Other effects (benefits/drawbacks):

- Development: _____
- Quality of pieces (local/global): _____
- Material: _____
- Safety check- can the opponent play strong tactics as a result of the move?

Overall- add to the list or discard? _____

• _____.

Affected squares:

- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____
- _____ - change of status/value: _____

Other effects (benefits/drawbacks):

- Development: _____
- Quality of pieces (local/global) _____
- Material _____
- Safety check- can the opponent play strong tactics as a result of the move?

Overall- add to the list or discard? _____

2) Development

Current development advantage goes to _____/ equal.

Potential development advantage goes to _____/ equal.

Overall: advantage to _____/ equal.

The requirement is to increase our advantage in development/ decrease the opponent's advantage in

development/ fight for development if equal.

Solutions:

• _____.
Effect (current/potential/rare cases, and for which pieces?):

Other effects:

- Space:_____
- Quality of pieces:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard? _____

• _____.
Effect (current/potential/rare cases, and for which pieces?):

Other effects:

- Space:_____
- Quality of pieces:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard?_____

• _____.
Effect (current/potential/rare cases, and for which pieces?):

Other effects:

- Space:_____
- Quality of pieces:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard?_____

• _____.
Effect (current/potential/rare cases, and for which pieces?):

Other effects:_____

- Space:_____
- Quality of pieces:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard?_____

- _____.

Effect (current/potential/rare cases, and for which pieces?):

Other effects:

- Space:_____
- Quality of pieces:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard? _____

3) Quality of pieces

Global quality

- The nature of the pawn structure for white:
Open/closed on the light square diagonals, open/closed on the dark square diagonals.
Open/semi-open files:_____.
- The nature of the pawn structure for black:
Open/close on the light square diagonals, open/close on the dark square diagonals.
Open/semi-open files:_____.
- Pieces white owns:_____.
- Pieces black owns:_____.
- Which pieces are affected by the pawn structure (negatively/positively)?

- Which pieces have low global quality?_____

The advantage in global quality goes to _____/equal.

The requirement is to increase our advantage in global quality/ decrease the opponent's advantage in global quality / fight for global quality if equal.

Solutions (only pawn moves, creating only long lasting effects):

• _____.

Effect: _____

Other effects:

- Space: _____
- Development: _____
- Local quality: _____
- Material: _____
- Safety check: _____

Overall- add to the list or discard?

• _____.

Effect: _____

Other effects:

- Space: _____
- Development: _____
- Local quality: _____
- Material: _____
- Safety check: _____

Overall- add to the list or discard? _____

• _____.

Effect: _____

Other effects:

- Space: _____
- Development: _____
- Local quality: _____
- Material: _____
- Safety check: _____

Overall- add to the list or discard? _____

Local quality

Comparing pairs of same pieces for both sides based on effective squares and potential local quality, the advantage in local quality goes to_____/equal.

The requirement is to increase our advantage in local quality/ decrease the opponent's advantage in local quality / fight for local quality if equal.

Solutions:

• _____.

Effects (current local quality/potential local quality and of which pieces- yours or the opponent's?) :

Other effects:

- Space:_____
- Development: _____
- Global quality:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard?_____

• _____.

Effects (current local quality/potential local quality and of which pieces- yours or the opponent's?) :

Other effects:

- Space:_____
- Development: _____
- Global quality:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard?_____

• _____.

Effects (current local quality/potential local quality and of which pieces- yours or the opponent's?) :

Other effects:

- Space:_____
- Development: _____
- Global quality:_____
- Material:_____
- Safety check:_____

Overall-add to the list or discard?_____

• _____.

Effects (current local quality/potential local quality and of which pieces- yours or the opponent's?) :

Other effects:

- Space:_____
- Development: _____
- Global quality:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard? _____

• _____.

Effects (current local quality/potential local quality and of which pieces- yours or the opponent's?) :

Other effects:

- Space:_____
- Development: _____
- Global quality:_____
- Material:_____
- Safety check:_____

Overall- add to the list or discard? _____

4) Material

The material advantage in the position goes to _____/equal.

If not equal, does the side that is behind in material have enough compensation? Look for significant improvements in the criteria of positional evaluation caused by the loss of material:

- Space: _____
- Development: _____
- Quality of pieces (local and global): _____
- New tactical possibilities: _____

Is it enough compensation for the material deficit? _____

If we are the side who is behind in material, can we create/increase the compensation for the material difference in ways we haven't mentioned yet before?

If the opponent is behind in material, can we stop him from getting enough compensation or decrease his compensation for the material difference in ways we haven't mentioned yet before?

In case material is equal we will search for hanging pieces/pawns and decide whether to capture them or not.

Solutions:

- _____.
Effects: _____
Safety check: _____
Overall- add to the list or discard? _____
- _____.
Effects: _____
Safety check: _____
Overall- add to the list or discard? _____

The list of moves

Overall, we currently have the following moves on our list:

- _____.
Answered the requirements of space/development/quality of pieces
(local/global)/material.
How many requirements were answered by the move in total?_____
- _____.
Answered the requirements of space/development/quality of pieces
(local/global)/material.
How many requirements were answered by the move in total?_____
- _____.
Answered the requirements of space/development/quality of pieces
(local/global)/material.
How many requirements were answered by the move in total?_____
- _____.
Answered the requirements of space/development/quality of pieces
(local/global)/material.
How many requirements were answered by the move in total?_____
- _____.
Answered the requirements of space/development/quality of pieces
(local/global)/material.
How many requirements were answered by the move in total?_____
- _____.
Answered the requirements of space/development/quality of pieces
(local/global)/material.
How many requirements were answered by the move in total?_____
- _____.
Answered the requirements of space/development/quality of pieces
(local/global)/material.
How many requirements were answered by the move in total?_____

The most number of requirements answered by a move on our list is:_____

All the other moves that answer less than that by more than one requirement are discarded (for example, if the greatest number of requirements answered by a move on our list is 3, we will discard all those that answer only 1 requirement, keeping moves that answer 2 requirements. A difference of a single requirement answered is not enough to decide between moves).

The remaining moves are:

(if only a single move remains, it would be the final candidate positional move)

- _____.
Answered the requirements of space/development/quality of pieces

(local/global)/material.

How many requirements were answered by the move in total? _____

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many requirements were answered by the move in total? _____

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many requirements were answered by the move in total? _____

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many requirements were answered by the move in total? _____

The remaining list of urgent moves:

(if only a single move remains, it would be the final candidate positional move)

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many requirements were answered by the move in total? _____

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many requirements were answered by the move in total? _____

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many requirements were answered by the move in total? _____

If we still have more than a single move remaining, which requirements are less relevant to the position and can be ignored?

The remaining list of moves, taking into account only the relevant requirements:

(if only a single move remains, it would be the final candidate positional move)

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many relevant requirements were answered by the move in total?_____

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many relevant requirements were answered by the move in total?_____

- _____.

Answered the requirements of space/development/quality of pieces
(local/global)/material.

How many relevant requirements were answered by the move in total?_____

If more than one move remained on the list, we will choose the one that answers the relevant criteria in the best way. That would be the best positional move in the given position.

Stage 2: positional evaluation

Short version (use if there were real threats by the opponent, instead of using the full version)

Solutions to the threats:

- _____.
Solves the threats of: _____, _____, _____,
_____.
Effects on the criteria of positional evaluation at the point of quiescence:
 - Space: _____
 - Development: _____
 - Quality of pieces (global and local): _____

 - Material: _____
 - Safety check: _____

Keep the move as a solution? _____

- _____.
Solves the threats of: _____, _____, _____,
_____.
Effects on the criteria of positional evaluation at the point of quiescence:
 - Space: _____
 - Development: _____
 - Quality of pieces (global and local): _____

 - Material: _____
 - Safety check: _____

Keep the move as a solution? _____

- _____.
Solves the threats of: _____, _____, _____,
_____.
Effects on the criteria of positional evaluation at the point of quiescence:
 - Space: _____
 - Development: _____
 - Quality of pieces (global and local): _____

 - Material: _____
 - Safety check: _____

Keep the move as a solution? _____

- _____.

Solves the threats of: _____, _____, _____,
_____.

Effects on the criteria of positional evaluation at the point of quiescence:

- Space: _____
- Development: _____
- Quality of pieces (global and local): _____
- Material: _____
- Safety check: _____

Keep the move as a solution?

- _____.

Solves the threats of: _____, _____, _____,
_____.

Effects on the criteria of positional evaluation at the point of quiescence:

- Space: _____
- Development: _____
- Quality of pieces (global and local): _____
- Material: _____
- Safety check: _____

Keep the move as a solution?

If we have a move that is significantly better than others, we will choose it as a solution to the threat. If not, we will use the "importance of criteria" filter.

Which criteria play a lesser role in the given position?

The remaining list of solutions:

- _____.

Solves the threats of: _____, _____, _____,
_____.

Affected the relevant criteria of space/development/quality of pieces
(local/global)/material.

How many relevant requirements were affected by the move in total? _____

- _____.

Solves the threats of: _____, _____, _____,

_____.
Affected the relevant criteria of space/development/quality of pieces
(local/global)/material.

How many relevant requirements were affected by the move in total? _____

• _____.

Solves the threats of: _____, _____, _____,
_____.

Affected the relevant criteria of space/development/quality of pieces
(local/global)/material.

How many relevant requirements were affected by the move in total? _____

If more than one move remained on the list of solutions, we will choose the one that affects the relevant criteria in the best way. That would be the best solution to the threats present in the given position.

Stage 3: tactical evaluation

Checks

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.

- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:
 - Space: positive/negative/no effect.
 - Development: positive/negative/no effect.
 - Quality of pieces (global/local): positive/negative/no effect.
 - Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:
 - Space: positive/negative/no effect.
 - Development: positive/negative/no effect.
 - Quality of pieces (global/local): positive/negative/no effect.
 - Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

Captures

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:
 - Space: positive/negative/no effect.
 - Development: positive/negative/no effect.
 - Quality of pieces (global/local): positive/negative/no effect.
 - Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:
 - Space: positive/negative/no effect.
 - Development: positive/negative/no effect.
 - Quality of pieces (global/local): positive/negative/no effect.
 - Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

Pressure/tension

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:
 - Space: positive/negative/no effect.
 - Development: positive/negative/no effect.
 - Quality of pieces (global/local): positive/negative/no effect.
 - Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:
 - Space: positive/negative/no effect.
 - Development: positive/negative/no effect.
 - Quality of pieces (global/local): positive/negative/no effect.
 - Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

- _____ - results in the following effects on the criteria of positional evaluation at the point of quiescence:
 - Space: positive/negative/no effect.
 - Development: positive/negative/no effect.
 - Quality of pieces (global/local): positive/negative/no effect.
 - Material: positive/negative/no effect.

Keep as a tactical candidate move? Yes/no

Vision for us

On the kingside:

- _____ - _____ - _____ - _____ - _____ ; useful (improves our position, no resources for the opponent to respond) /
not useful, the opponent has the following resources:

- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:

- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:

In the center:

- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:
- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:
- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:

On the queenside:

- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:
- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:
- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:
- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:
- _____ - _____ - _____ - _____ - _____ ; useful /not useful, the opponent has the following resources:

Based on the effects each tactical option has at the point of quiescence on the criteria of positional evaluation, we will now select the best one.

If we have a number of tactical options that give us roughly equal results, we will apply the urgency and importance of criteria filters as before.

The best tactical move:_____.

The final decision

The best positional move affected the following criteria:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

The best tactical move affected the following criteria at the point of quiescence:

- Space: positive/negative/no effect.
- Development: positive/negative/no effect.
- Quality of pieces (global/local): positive/negative/no effect.
- Material: positive/negative/no effect.

We will now select the one that had the best effects on the position.

If both approaches giving roughly equal effects, we will apply the importance of criteria filter.

The best move in the position: _____.