

### **Piece on a weak spot of the own position**

-3cps for such a piece in any case, as this is as bad an arrangement as possible

### **Bishop on a weak spot of the enemy king shelter, defended by a pawn**

The bishop would deserve some additional bonus, as, even if the bishop is captured, the pawn would maintain the pressure on the enemy king

+5cps

### **Horizontal and vertical span of pawns for the weaker side**

When being the weaker side, usually in endgames, but also in other stages of the game, the chances for drawing the game would increase, when the distance in files between the 2 own pawns most horizontally apart, but also the distance in ranks between the 2 own pawns most vertically apart, is the smallest possible.

-5cps for each file of the horizontal span of the own pawns

-2cps for each rank of the vertical span of the own pawns

### **Storming pawns in terms of closeness of clash with enemy pawns**

Storming pawns' efficiency would depend on the closeness of clash with enemy pawns. This measurement would not overlap with rank placements for the pawns, as not all storming pawns would face a clash along their way forward.

The number of squares a pawn has to the clash with an enemy pawn would be counted.

Counting would proceed as if the p had a number of consecutive moves. If a square along its way forward is occupied by an enemy piece, 2 squares for the square where the piece is would be counted. That would concern both pawns, storming the enemy king position, and pawns, storming the other side of the board.

+15cps, in case a pawn, storming the enemy king position, is just 1 square away from the clash with an enemy pawn (a clash would mean a situation where both pawns attack each other)

+10cps, in case such a pawn is 2 squares away

+5cps, when the number of squares is 3

In case the storming ps are storming the side of the board, where the enemy king has not castled (usually the queen side), the following bonus points would be dispensed:

+10cps for just 1 square to the point of clash

+7cps for 2 squares to the clash

and +3cps in case of 3 squares

### **Knight attacking enemy bishop**

+1cp in any case, as usually, when attacked, the bishop will have to retreat

### **King on the same line with an own undefended piece**

Finding the king on the same line (file, rank or diagonal) with an own undefended piece will be due an additional penalty (-4cps), as such a feature would not be tactically wise.

### **Definition of a backward-fated pawn**

A backward-fated pawn would be one, whose advance is stopped by 2 enemy ps with no own ps able to support it, or, if there are such less advanced own ps, they would be either fixed, or backward.

Eg. wpsa3,b2,c3, bpsb5,b7 - b5 is such a p

Eg. wpsh4,g3,f4,e5, bpsh5,g6,f7,e6 - g6 is backward-fated, because f7 is backward

### **Considering mobility for the rooks**

In distinction to other pieces, when considering mobility for the rooks, mobility rules might not be applied as strictly, as sometimes mobility for the rooks tends to deviate from what their actual strength would be. In the middlegame taking control of files and doubling might be more important, compensating for low mobility numbers, while in the endgame sometimes mobility for the rooks is overvalued. A possible solution to balance things might be a slight increase in mobility in the middlegame, and a slight decrease in the endgame.

### **Doubling of rooks on a closed file**

Doubling of rooks on a closed file might be good in view of possible opening of such a file in the future, but it might also be a waste of time. Assigning a small bonus for such a feature would not hurt, even if it proves to be just a waste of time.

+5cps

### **Attacking weak pawns**

Pieces attacking enemy weak pawns (isolated, backward and double pawns) would, naturally, be due some higher bonus, by 1/5, as such ps are easier targets.

### **Attacking more central objects**

Pieces attacking more central enemy objects (pawns and pieces) would be due some higher bonus, as in the case of such a piece capturing an enemy object of this type, its piece positioning would automatically improve.

1/10 higher value for attacking objects within the focal center in relation to attacking objects within the wider center

1/10 higher value for attacking objects within the wider center in relation to attacking even less central objects, etc.

### **Pawns attacking enemy central pawns**

Pawns will get some bonus in the case they attack enemy central pawns, as this would be an attempt to challenge enemy control of center.

+7cps for a pawn attacking an enemy p within the focal center (placed on a square of the focal center)

+3cps for a pawn attacking an enemy p within the wider center

### **Undefended squares into the own camp**

It would make sense to assign some penalty points to undefended squares into the own camp (squares that are not defended by either pawns or pieces), as such squares are possible penetration points for enemy pieces.

-3mps for any such square into the own camp

But, of course, squares on the 1st and 2nd rank of the own camp could get a bit bigger penalty (-4mps), while squares on the 3rd and 4th ranks a bit smaller one (-2mps).

This would be considered independently from weak spots, which are the most important weak squares into the own camp, but could still be controlled by own pieces.

### **Pieces attacking undefended squares of the enemy camp**

Pieces attacking undefended squares of the enemy camp would be due some tiny bonus, as such squares are possible penetration points for them.

+2mps for any such piece

+1mp for a piece controlling such a square on an x-ray

### **Pawn attacking an enemy double p**

A pawn attacking an enemy double pawn should receive some bonus, as, while the double pawn could undouble, this will usually be associated with the creation of additional weaknesses for the side with the double pawn.

+3cps

Therefore, double ps are not only statically weak, but also structurally unreliable.

### **Rook on a semi-open file with the enemy p defended by another pawn**

Such a rook will not deserve its full bonus, as it would be difficult to make use of the semi-open file in this case.

1/3 lower value for the rook

## **Closure of files**

### ***Rules on closing or not closing the game***

This is really extremely important, because the positional implications of such closures would be drastic. Although nothing might be evident immediately, a wrong decision to close a file could actually seal the game the very moment it is made, with the consequences becoming transparent some 20 moves later. It would be difficult or absolutely impossible to reverse the outcome of the game, once the wrong choice is made. Therefore, such rules seem to be an essential knowledge. Skipping them would mean skipping one of the most important positional elements in chess.

Engines enjoy committing mistakes relating to closure of files/sides.

### ***Closing files on the side where the enemy has space advantage***

Closing files on the side where the enemy enjoys space advantage is the right strategic decision. Closing would mean fixing enemy pawns, building symmetrical pawn structure, but not changing pawns. A strategy of closing would make it more difficult for the enemy to exploit its space advantage.

+10cps for such an approach

Closing files on the side where you have space advantage would be, of course, the wrong strategy, as this could easily nullify previous achievements.

-10cps for any such move

### **Storming pawns on the side where space advantage has been gained**

Storming pawns on the side where you have gained space advantage are always to appreciate, as this could be helpful in opening the game advantageously. But fixing enemy ps would not count here.

+5cps additionally to other storming bonus points for such an arrangement

This will be considered both for pawns, storming the enemy king position, as well as for pawns, storming the other side of the board.

### **Pawn of the immediate king shelter, defended by another p**

+2cps additionally for such an arrangement

Obviously, in most cases, this would be a pawn on the 3rd rank. It is a well-deserved bonus, as, for once, pawns of the shelter in front of the king are more important, and, twice, in the case the pawn is captured, it will reproduce itself.

### **Priority consideration of moves with the queen attacking the enemy king shelter**

When choosing which moves to consider first, a good option would be to start with moves with the queen, attacking the enemy king shelter. There will definitely be an added value to such an approach, as the queen is the most powerful attacking piece, and besides, in many situations attacking should be put before other considerations.

### **Priority consideration of moves with pieces having low activity**

One of the good options to start considering priority moves would be to consider first possible moves with the piece, having the lowest activity/mobility in the own camp. There should be ways to improve its status. And when it gets more active/mobile, this will have repercussions on the activity of all other own pieces.

### **The essence of chess in two words**

Chess is a game of capturing. This is the single most important thing worth considering. But in order to be able to capture well, you should consider a variety of other specific rules. The more rules you consider, the better you will be able to capture. If you consider 10 rules, you will be able to capture. If you consider 100 rules, you will be able to capture in a sufficiently good way. If you consider 1000 rules, you will be able to capture in an excellent way.

### **Double-edged positions**

Double-edged positions is the case when the own and the enemy king have castled on opposite sides of the board. It would make sense to weight some factors higher in such a situation with primary characteristics around the race for quicker attack of the enemy king. Both kings are exposed, so there are no other options and time will be essential.

The following factors might be weighted higher:

pawns storming the enemy king position - 30% higher

open files against the enemy king position - 30% higher (this could help considering sacrificing pawns and pieces to open lines)

control of center - 25% higher (control of center would have an impact upon the efficiency of conducted attacks)

### **Open positions**

Open positions will be the case when there are less than 8 ps overall on the board, with at most a single pair of fixed ps in the focal center.

In order for a position to qualify as open, there must be at most 2 or 3 pairs of fixed ps overall.

An open position would be one with ps on both sides of the board.

If ps are to be found just on a single side of the board, the position could rather be considered as closed, as all the pieces would concentrate on one and the same area.

Open positions have their specifics, and it might make sense to weight some factors differently from other types of positions. Open positions would not overlap with tactically

relevant positions, where the number of ps could be bigger. open positions are not necessarily solved in an extreme tactical manner, although this might be the case.

The following factors might be weighted higher, by 1/4 to 1/3:

attacks - in open positions pieces often communicate more

mobility

intensity of interaction

general defensive potential and undefended pieces

king shelters

### **Long-term and short-term positional factors**

It would make sense to distinguish between long-term and short-term positional factors. there are factors which remain relatively stable with time, while others change more frequently, and sometimes even evaporate. Long-term factors might score 1/3 higher bonus or penalty points than short-term ones. Medium-term factors might get some intermediate value.

What would be long-term and short-term factors.

Backward-fated ps would be long-term, while backward and semi-backward ps would be short to medium term, unless a backward pawn, when advancing, would leave another own p horizontally isolated.

Horizontally isolated ps would be long-term, when fixed or blocked by an enemy piece, making them static, and medium-term, when that is not the case.

Vertically isolated ps would be long-term, when severed from the rest of the own structure by enemy ps, and short to medium-term, when that is not the case.

Double ps would be long-term, when the more advanced double pawn is fixed by an enemy pawn, as this would make undoubling very difficult or impossible, and short to medium-term, when that is not the case.

Passers would be long-term, when they are protected, and medium term, in most cases when they are separate.

Space advantage would be long-term, when gained by fixed ps or pieces that are defended by own ps, and short-term, when the ps gaining space advantage are not fixed, or when the pieces gaining space advantage are not defended by ps.

Control of center would be long-term, when the ps in the center are fixed, and short-term, when that is not the case.

2 bishops are a short-term advantage in the middlegame, and definitely long-term in the endgame.

Weak spots are long-term, as they just can not disappear, but in the endgame their values could be halved, as considerably less pieces would depend on them.

Rook on an open file is short-term, unless most of the squares along the file, and especially the square, upon which an enemy rook could challenge control of the file, are controlled by own pieces.

Double rooks on an open file is short to medium-term, unless the above consideration is valid.

Queen and 2 rooks on an open file is undoubtedly long-term advantage.

General piece positioning is long-term, when the favourably placed pieces can not be attacked by enemy ps, otherwise, it would be short-term.

What concerns mobility, it is difficult to say what type of factor it constitutes. It would be better not to include it here.

King security is a very long-term factor. When the king shelter is in a bad shape, the best the king could do is start looking for an alternative cover.

**Pawn storming the enemy king position able to attack 2 enemy objects simultaneously**  
Such a pawn would be deserving some really nice bonus, as this would forcefully open files for attack.

+15cps for such a pawn

The defending side should do its best to avoid having 2 own objects of the king shelter under the threat of an advancing enemy pawn.

**Heavy pieces attacking bishop or knight on an enemy least advanced rank**

Heavy pieces attacking or x-ray attacking bishop or knight on an enemy least advanced rank (1st rank from the enemy's point of view) would deserve a small bonus, as, in the case of an executed capture, such pieces would land on an advantageous square of the enemy camp.

+3cps in case of a direct attack

half that value in case of an x-ray attack

**Differentiation between minors controlling own weak spots**

Of course, minors would be the best indicated pieces to control own weak spots, because of the efficiency of control of squares of pieces with lower power. Therefore, they should be almost exclusively considered for such a function.

In most cases, the bishop would be better suited than the knight to control such squares, because it can do so without losing too much of the rest of its functionality, while a knight statically bound to a defence of a weak spot, with sometimes being vulnerable itself, would not deliver so well.

1/3 lower value for the knight might be the appropriate decision

**Minor pieces gaining space advantage in terms of defending pawns**

Minor pieces that gain space advantage on the 5th and 6th ranks will get some additional bonus in terms of the number of pawns defending them, as obviously, in case such a minor piece is captured, space advantage will reproduce itself, but in terms of pawns.

+3cps for minor piece on the 5th rank, defended by just one own p

+7cps for a minor piece on the 5th rank, defended by 2 own ps

+5cps for a minor piece on the 6th rank, defended by one own p

+12cps, when 2 own ps defend it

***General rule for closing or not closing files***

A closed file is, of course, a file with one enemy and one own pawn on it. And a definitely closed file would be the case when the ps are fixed. For the purposes of considering closure of files/sides, the definition of a definitely closed file will apply.

In general, the side that has advantage should strive to open files, while the weaker side should strive to close files, because a winning position could be achieved only if there is access to enemy weaknesses, including the shelter.

+10cps for the weaker side closing a file

-10cps in case the stronger side would consider closing a file

### **Pawns attacking enemy central pawns, defended by other ps**

Pawns attacking enemy central ps would be in a more advantageous situation, in the case when they are defended by other own ps. That could have some implications for the fight for control of central squares.

+15mps additionally for any defending pawn

+5mps for any pieces, own or enemy, pressuring the central squares with such an arrangement, as this could influence different outcomes

### **Bishop, attacking the enemy king position, the colour of the square the king is placed on**

Bishop, attacking the enemy king position, even along an x-ray, being the colour of the square where the enemy king resides, would get a small tactical bonus, because of the possibility of ramifications with checking the king.

+2cps

### **Piece stuck with defence of an own object**

A piece stuck with defence of an own object (piece, or, most often, a static pawn) would deserve some penalty, as, even if it has available mobile squares, it will be difficult for the piece to make use of them, because of the necessity to defend the own object. Most stuck pieces would be either minors, or rooks.

-5cps for such a piece

Eg. wnb5,wpa6, bra8, bpa7 The rook on a8 is stuck with the defence of the static pawn on a7. It can not make use of possible available mobile squares, until the threat on the own p is maintained, and unless some other own piece relieves it.

### **Queen x-ray attacking the enemy king frontally**

Queen x-ray attacking the enemy king frontally (x-ray attacking would be the standard way of attacking the shelter), and not diagonally or from the side, would receive 1/2 higher value, as this type of attacking is the most forceful of all. In the case the queen captures an object, part of the shelter, the king will only have a limited choice of retreats, which will not always be the case with other types of attacking.

### **Bonus for rook behind a pawn, with the rook not on an endmost file**

When the rook is behind an own pawn, but not on an endmost a or h file, it will deserve a small bonus, as the advancing p will have better opportunities to progress, with possibilities to attack 2 enemy objects simultaneously along its advance occasionally, which will not be the case for an end file pawn, that could attack and capture only to one side. This, in turn, will produce better chances for opening files.

+2cps for such an arrangement

### **Double pawn attacking an enemy object**

+5mps, as such an attack could sometimes end with the pawn undoubling

### **2 bishops with double-edged positions**

The pair of 2 bishops will receive an additional bonus in double-edged positions (positions with the kings having castled on opposite sides of the board), as in this type of positions it will matter that black and white are not only able to attack rapidly, but to defend their own kings' positions efficiently at the same time. Bishops are ideally suited for this, in distinction to knights, as they could attack the enemy king shelter and defend the own one simultaneously, or, at least, transfer rapidly.

+10cps for a pair of bishops in such positions

## **2 heavy pieces on the same diagonal**

When 2 heavy pieces for one of the sides are placed on the same diagonal, they should be penalised slightly, as such an arrangement could come into the hands of the enemy side tactically.

-1mp for such an arrangement

But this will be considered only if the enemy side has a bishop the colour of the diagonal where the heavy pieces are placed.

-2mps in case of 3 heavy pieces on the same diagonal

## **Defending objects from more advanced ranks**

Defending objects (own pawns and pieces) from more advanced ranks will get some genuine bonus, as with such type of defence the defending piece will usually not have to attempt improving its general piece positioning, which will not always be the case with defending pieces on less advanced ranks.

More advanced ranks will mean here more advanced ranks relating to general piece positioning in terms of space advantage. I.e., the 6th rank will be more beneficial than the 5th, the 5th more beneficial than the 4th, etc., through the 1st rank. 7th and 8th ranks would not be considered here, as results for them for this specific parameter are sometimes inconsistent.

1/20 higher value for a defending piece on the 6th rank in relation to a defending piece on the 5th rank; still 1/20 higher value for a defending piece on the 5th rank in relation to a defending piece on the 4th rank, etc., through the 1st rank.

Defending pieces on least advanced ranks, when the defended objects are on nearby ranks, sometimes look pitiful.

## **Penalising retreats**

Pieces retreating to less advanced ranks from a position on a more advanced rank will be penalised in all cases, as, although the retreat might be forced, and with a specific mission in mind, the deteriorated general piece positioning will be a source of worries.

Retreats here will be linked to general piece positioning in terms of space advantage, i.e. ranks 6 through 1 will be considered. 7th and 8th rank would be excluded because of inconsistent results for most pieces in terms of space advantage.

-5cps in any case for a piece retreating to a less advanced rank

## **King staying in the center**

In case the side where the king intends to castle is more massively attacked by enemy pieces than the shelter in the center the king currently is in, an option worthwhile considering would be to leave the king in the center for some time.

+20cps for such a decision

## **Double attacks**

A double attack would be an attack of a piece on 2 enemy objects (pawns or pieces) or specific squares (weak spots, squares from where a double attack would be possible, etc.) at the same time. Double attacks would attach added value to the attacking piece's tactical ability, because it will be more difficult to defend 2 vulnerable spots simultaneously.

Pieces conducting double attacks will receive some additional bonus points to those already dispensed for attacking.

+2cps for each enemy object or specific square attacked

Multiple attacks are the case when a piece attacks more than 2 enemy objects or specific squares at the same time. Most often the queen will be doing multiple attacks, for which case specific values could be assigned, but in the general case other pieces also could do multiple attacks occasionally.

+4cps for each enemy object or specific square attacked, when they are multiple, as defence in such a case will be even more difficult

Double attacks could also refer to 2 pieces attacking one and the same enemy object or specific square, but in this case the option to be considered would be attacking objects in different ways.

### **Mutual attacks**

Mutual attacks is the case when two pawns or two pieces attack each other. Usually, the pieces attacking each other will be of same power, but sometimes pieces of different power could attack each other, too.

+15mps in all situations for a move, defending the own attacked piece, or pawn, instead of capturing, as generally this will be linked to beneficial piece development

### **Pieces attacking both the root and the lead pawn of a diagonal connection, consisting of 2 ps**

Pieces attacking both the root and the lead pawn of a diagonal connection, consisting of 2 ps (eg. wpsb2,a3), would deserve some additional bonus, as this could open the way to sacrificial combinations.

+4cps for each attacking piece

### **Pieces attacking at least 2 ps of a pawn structure, consisting of one root and two lead ps**

Pieces attacking at least 2 ps of a pawn structure, consisting of one root and two lead ps (eg. bpsf7,e6,g6), regardless of whether it is one root and one lead pawn, or both lead ps, would deserve some additional bonus, as this could open the way to sacrificial combinations.

+3cps for each attacking piece

double that, in case the ps are part of the enemy king shelter

### **Intersections for the rooks on the 7th and 8th ranks**

Intersections for the rooks on the 7th and 8th ranks will get some bonus points, as doubling will be around the corner.

+3cps for an intersection on the 7th rank (but only when one of the rooks is already on the 7th rank)

+15mps for an intersection on the 8th rank

### **Attacking an enemy object, defending another enemy object already attacked**

A piece or pawn, attacking an enemy object (piece or pawn), that is defending another enemy object, that has already been attacked, would deserve an additional bonus to the usual attacking one, as, in reality, such a piece or pawn is attacking both enemy objects, because the well-being of the second enemy object (the defended one) would depend on the well-being of the first.

1/3 bigger bonus for such a piece or pawn

### **Prevalence of pieces on the side, where the own king has castled**

A prevailing number of pieces on the side, where the own king has castled (kings will be excluded from the count), would receive a well-deserved bonus, as usually such an arrangement will favour beneficial developments with the own king security.

+10cps in such a case

With an even number of own pieces split between the sides, the bonus will not be dispensed.

### **Pawn control of squares in terms of specific squares controlled**

Pawn control of squares on the board is very important, as on it would hinge the activity (mobility) of enemy pieces. Considering specific squares controlled by ps would be meaningful, because it would not overlap with doing ps in terms of files and ranks, as one and the same square could be controlled by different, more or less centrally placed ps.

The values in terms of ranks will more or less follow the method for general piece positioning in terms of space advantage, with the 7th rank also included into the count, as enemy pieces' mobility would suffer most appreciably close to the least advanced enemy ranks. The 8th rank might be considered separately.

1/10 higher value for controlling a square on the 7th rank in relation to a square on the 6th

1/10 higher value in turn for controlling a square on the 6th rank in relation to a square on the 5th, etc.

The values in terms of files will follow centralisation.

1/10 higher value for controlling a square on central d or e files in relation to controlling a square on semi-central c or f files

1/10 higher value for controlling a square on semi-central c or f files in relation to controlling a square on less central b or g files, etc.

Squares on which there are other own ps would be excluded, but not squares, of course, on which there are own pieces.

### **Intersections of queen and bishop on a diagonal, attacking the enemy king shelter**

Intersections of queen and bishop on a diagonal, from where the enemy king shelter could be attacked, will score some well-deserved bonus, as the battery of queen and bishop with the queen in front of the bishop is a mighty attacking weapon.

+5cps for such an intersection

But this will be considered, only if the square yields to constructing a battery with the queen in front.

Otherwise, the bonus could fall to 1cp.

### **Minor piece on the 1st rank**

A minor piece on the 1st rank will be penalised in all cases (-7cps), as, although it might fulfill some important functions (for example, defending the own king shelter), its general piece positioning value would be too unimportant to be left without consequences.

### **Minor piece on the 1st rank, obstructing the road to a central square of an own rook on initial position**

A minor piece on the 1st rank, that obstructs the road to a central square (c through f files) of an own rook on initial position would be due some well-deserved penalty points, as such an arrangement is really unfortunate, the rook probably having difficulties with mobility.

-12cps in such a case

### **Pawns attacking enemy fixed ps**

Pawns that are attacking enemy ps, that are fixed, would get some bonus to the usual attacking one, as, obviously, the enemy pawn's response options would be reduced, as it can not advance.

+3cps additionally

### ***Closing central files with king side attacks***

Closing central files when you attack the enemy king on one of the sides

Closing central files (e or d files), when you attack the enemy king on one of the sides (with storming ps, having open files, etc.), is the right strategy, as the enemy will be devoid of a fair portion of counterplay, essential for its survival.

+30cps for such moves

But, please, note, that that will be considered not when there is already a central file closed, but when there is an option to decide whether to close a further file.

### ***Closing central files when the opponent attacks you on one of the sides***

Closing central files (e or d), when the opponent attacks you on one of the sides, would be wrong, as you will deprive yourself of essential counterplay.

-30cps

### ***Closing central files when the opponent has chances to attack you on one of the sides***

Closing central files, when the opponent has chances to attack you on one of the sides, would be the wrong decision, as possible counterplay would very likely come through the center.

Having chances of attack would mean having chances to quickly deploy storming ps, open files, build structures with leading ps close to your own king, etc.

-15cps in such a case

### ***Closing files on one of the sides, when the opponent is in control of a single open file in the center***

Closing files on one of the sides, when the opponent is in control of a single open file in the center (e or d), would be counter-indicated, as in this way you will miss counterplay chances.

-20cps

### **Passer severed from the own forces**

A passer severed from the own forces would be one, that has an enemy pawn (sometimes also a passer) on a less advanced rank (from the point of view of the side with the passer) on the same file, where the passer is. Eg. white passer on c5, black pawn on c4.

-4cps for the passer in such a case, as the pawn in its back, severing it from the own forces, could make the advance of the passer, or even its stay on the square where it currently is, in case it is not a protected passer, more difficult and questionable

In the case of the enemy pawn severing the own passer from the own forces, the penalties for both ps would cancel each other. Usually, those would be protected passers (eg. wpsd5,e4, bpse5,d4). Such passers would not be vulnerable on the square where they are, but their advance would be questionable, as in many cases passers are supported by rooks from behind.

It would not be wise to consider an enemy piece for severing purposes, as, usually, such pieces do not last very long, but if it is a piece, defended by 2 own ps with no enemy ps being able to attack it, then the same penalty could be dispensed.

### **Intensity of interaction into the enemy camp**

Intensity of interaction for squares into the enemy camp could get 1/3 higher value, as this would be a nice and very promising way of measuring space advantage in terms of control of squares into the enemy camp. Of course, intensity of interaction within the enemy king shelter would be considered separately.

### **Knight attacking a square from where it can check the enemy king, with the enemy king having no free mobile squares**

Such a knight would be due some bonus (+10cps), as the threat of delivering a smothered mate, a very efficient mate in terms of the overall strength of pieces directly involved in the mate, would be quite real.

### **Increasing the pressure**

Engines are kings in increasing and converting their advantage, simply because they are able to compute many tactical subtleties conducive to such a development. I think that a score advantage of +40cps would already more or less mean that the game is decided. When you have some advantage, it is bound to only increase, under the supposition that both opponents are of roughly the same strength, as it will be increasingly difficult for the player down in score to find reasonable continuations, as the overall number of similar variations would decrease. At a certain point, reasonable variations will reach a point, from where they would not only decrease, but return even worse scores.

That is why it is important to play very well in the early stages of the game. That could be achieved in two ways: by allocating more time to those stages; and by playing better game without books, as books are undoubtedly detrimental to engine development in the opening. Another point worth considering for straightforward increase of pressure throughout the game is to apply relatively bigger weight to long-term positional factors, as those will be more representative of the situation on the board with a timeframe, and will return more consistent scores.

### **Concerning the use of books**

I think books no longer play the role they have played in the past. Nowadays, engines are so strong, that they undoubtedly play a better opening game than most grandmasters. In fact, because of their tactical ability, they are able to further refine opening lines, and that would happen more often than one would think. Engines would sometimes point to significantly improved variations even at move 3 or 4. So books are starting to lose their relevance.

But still, because engines are primarily tested with books, sometimes long and very long (even going to a depth of 15-20 moves, more than 35plies, which skips a good half of the game, and the most important part at that), they play a noticeably inferior game in the early opening without books, simply because the evaluation parameters are tested with different, sometimes pattern-biased positions.

The solution would be to start testing without books. This could be done by introducing some randomness in engines' play, of course. Every couple of moves, for example, an engine might pick up the second best variation, or choose such, when the scores for the first two variations are equal, or almost equal. I do not see any problem with such an approach. Very small difference in score would mean that the impact on strength would be minimal; besides, there

is always the chance that with longer thinking and bigger depths the second best variation will achieve a status of best variation. Humans do exactly the same thing: when they are hesitating between a couple of moves seemingly of equal value and are not able to decide beyond any doubt which one is actually better, in the end they simply execute a random move. It would be nice to see an improved understanding of intricacies for the most important part of the game.

### **Existing tensions**

Existing tensions would be the case when two pieces or pawns attack each other. It would be difficult to proceed with further considerations, until the tension is resolved, or, at least, you should always keep it in mind. In such situations, it would be indispensable to consider the impact of other pawns and pieces on the pair, creating the tension, as the logical outcome would hinge on that.

Pawns and pieces defending the own object of the tension, as well as pieces attacking the enemy object of the tension, would gain in importance.

+5mps additionally for any own pawn or piece, defending the own object of the tension

+5mps for any own piece, attacking the enemy object of the tension

1/3 higher values, in case one of the objects (either the own, or the enemy one) of the tension remains within the focal center, as the relevance of the existing tension would be bigger.

The main purpose of the exercise is to get some idea about possible outcomes, but, of course, it would be rational to refine the values by assigning bigger bonus points to attacking and defending objects of smaller power, pawns in the first place.

### **Challenging control of an open file of an enemy rook, defended by a pawn**

Challenging control of an open file of an enemy rook, defended by a pawn, should receive some penalty in all cases, as, in the case of an exchange of the rooks, the enemy pawn would warrant the option of favourable developments for the enemy side.

-7mps for a decision to challenge the enemy rook by placing an own rook on the same file double that, in case that the enemy rook is defended by 2 ps, as favourable options for the enemy would increase further

### **Scaling of evaluation factors with an eye to long-termness**

It would make sense to consider building a scale for evaluation factors, measuring their long-termness. Not all evaluation factors would last equally, some would change more rapidly than others, some would last really long, and some would evaporate in a couple of moves.

Considering factors with a time frame in mind would undoubtedly exhibit some added value, as the usual considerations, neglecting the effect of how enduring a factor is, are missing an awful lot of the essence of evaluation, returning lop-sided, and even untruthful scores.

Evaluation factors could be subdivided into 7 general categories: extremely long-term, very long-term, long-term, medium term, short-term, very short-term, and extremely short-term, bordering on evaporation.

The following scale might come in useful:

#### ***Evaluation factors in respect of long-termness***

Extremely long-term

Very long-term

Long-term  
Medium term  
Short-term  
Very short-term  
Extremely short-term

Extremely long-term factors could get 1/8 higher value on average than very long-term factors, which in turn could 1/8 higher value than very long-term factors, etc., through the bottom of the scale. Or, maybe, medium term factors would get a standard average value, longer-term factors would receive gradually increasing values, and shorter-term factors gradually decreasing ones.

The challenge would be to build a sample with the main evaluation factors falling into the above categories.

The following sample might be an attempt at a start:

***Extremely long-term factors***

Position of the king

Pawn shelter around the king (with the clarification, that sometimes kings would be able to find themselves alternative shelters, but that would not be very often)

Closure of sides (entire sides are meant, i.e. closing the last file on a side)

***Very long-term factors***

Closure of files (especially central e and d files)

Double horizontally isolated ps

Backward-fated ps

Passer protected by 2 own ps

Weak spots (but in the endgame their values should be decreased)

***Long-term factors***

Pair of bishops in the endgame (not that the pair would last, but that the impact of the pair would be felt longer)

Double pawns with the most advanced one fixed by an enemy pawn

Space advantage gained by ps that are fixed, when part of a single continuous group, consisting of at least 3 ps

Protected passers

Control of center when all controlling ps are fixed by enemy ps

Space advantage gained by a minor piece, defended by 2 own ps, and with no enemy ps able to attack it

Horizontally isolated pawn when fixed by an enemy pawn

Vertically isolated pawn when severed from own pawn groups by enemy ps

Backward pawn, whose advance would leave another own pawn horizontally isolated

General piece positioning, when the favourably placed pieces can not be attacked by enemy ps

Queen and 2 rooks on an open file

Lead ps, with all ps of the diagonal connection fixed by enemy ps

Root ps, when fixed by enemy ps

Blocking, when part of bigger fixed structures

### ***Medium term factors***

Double ps when part of a group, with the most advanced p not fixed by an enemy p (really, such ps might undouble sometimes, and even have some beneficial effects)

Attacking the enemy king shelter (the pattern of the attack and the pieces participating in the attack might change, but once started, a king-side attack will force the enemy to deploy sufficient forces to neutralise it, which will not always be easy to achieve)

Space advantage gained by a single fixed pawn

Separate passers

Control of center with just some of the controlling ps being fixed by enemy ps

Space advantage gained by a minor piece, defended by a single own pawn, and with no enemy pawn able to attack it

Horizontally isolated pawn, when not fixed by an enemy pawn

Double rooks on an open file

Rook on an open file with own minor pieces controlling the square on that file, where an enemy rook could challenge the own rook control

Double rooks on the 7th rank

Lead ps, with only some ps of the diagonal connection fixed by enemy ps

Blocking separate passers (in the usual case, it would not be that easy to remove the blocking piece)

### ***Short-term factors***

Most backward pawns

Semi-backward pawns

Most vertically isolated ps

Space advantage gained by ps that are not fixed by enemy ps

Control of center when all controlling ps are not fixed by enemy ps

Space advantage gained by a minor piece, undefended by own ps

Attacking static objects

Pair of bishops in the middlegame

Rook on an open file

Rook on the 7th rank

General piece positioning, when the favourably placed pieces could be attacked by enemy ps

Lead ps, with none of the ps of the diagonal connection fixed by enemy ps

Root ps that are not fixed by enemy ps

### ***Very short-term factors***

Most direct attacks

X-ray attacks

Pins

### ***Extremely short-term factors***

Undefended pieces and undefended squares into the own camp (such squares and pieces might remain undefended longer time, but they are not supposed to do so)

A variety of tactical shots, based on specific features of the position, for example, 2 minor pieces on the same file or rank (with the possibility for a double attack of an enemy rook)

Winning/losing tempo

It is easy to see that most factors below the short-term line are purely tactical, while most factors above the long-term line are very positional, i.e., when measuring long-termness, positional factors are supposed to receive much higher scaling points. That would guarantee

playing a game along sound positional lines, and, undoubtedly, be productive in the longer term. But, at the same time, if tactical factors with a reduced time frame are not taken sufficient account of, that would risk the overall conduct of the game failing because of omissions in the very short term. Tactics should be considered properly all the way.

Factors like intensity of interaction and control of complementary squares are basically very short term, although sometimes they might endure longer with fortunate circumstances. Still, they are very important for an overall balanced play, and therefore it would be better not to try scaling them.

What concerns mobility, it is really difficult to say what kind of factor it actually is, and, since it is undoubtedly the most important collective factor, it would be wise not to experiment too much with scaling it.

### **Pawns attacking more central enemy ps**

Pawns that are attacking more central enemy ps (at least what concerns file placements) would be due some bonus, as there are definite chances that the less central pawn is traded for a more central enemy one.

+5mps for such attacks in any case

### **Priority checking of knight moves**

When deciding which variations to consider first, possible knight moves might be checked in a priority way, as the knight is the slowest-moving piece and finding for it appropriate squares is an important thing to do at an early stage. A wise way of proceeding might be to check all available squares for the knight and see if the piece can go there.

### **Minor piece defending and occupying the square immediately in front of the own king vertically**

Minor piece that defends or occupies the square immediately in front of the own king vertically should get higher points for defending and constituting part of the king shelter, as this square is usually the most important square of the shelter.

### **Bonus for general piece positioning for the queen**

The queen would deserve some additional bonus for general piece positioning, as a good piece positioning would certainly mean fair possibilities for quick targeted transfers across a wide area of the board, and that would be of essence for the most important piece on the board.

1/2 higher bonus might be indicated

### **Bishop horizontally adjacent to own pawn**

A bishop that is horizontally adjacent to an own pawn would get a small bonus for control of complementary squares.

+8mps for such an arrangement

### **Separate passer defended by a more advanced minor**

Separate passer, that is defended by a more advanced minor piece (meaning placed on a more advanced rank), would receive an incentive, as, in most cases, the minor piece will not only defend the passer currently, but will also be able to support its advance.

+3cps for such an arrangement

### **Double rooks on an open file in terms of the number of squares in between the rooks**

Double rooks on an open file will get an additional bonus, in case there is only one square in between the rooks.

+3mps for such an arrangement

This seems to be the most favourable positioning for the 2 rooks on the file. With more squares in between, chances of enemy pieces and pawns intervening to attempt cutting the connection between the rooks would increase, while the rooks being vertically adjacent would mean that their mobility would be exposed to risk.

### **Pawn controlling 2 squares with both controlled by enemy pieces or pawns**

When a pawn controls two squares of the board, and both are under the control of either enemy pieces, or enemy ps, it is supposed to be slightly penalised, as this way of controlling makes possible favourable tactical solutions for the enemy side.

-5mps in any case

This is what an overloaded pawn is supposed to be.

### **Closure of sides**

Closure of entire sides (meaning considering as closed all 4 files on a particular side of the board) is very important indeed, as its consequences would be as long-term as possible. When an entire side is closed, there is almost nothing left to do there, and the game concentrates on the other side of the board. If some of the files on the side that is already fully closed were still not closed, it would be possible to seek counterplay on that area, so the advantage of one of the players on the other side would not be as important and irreversible. But, since the entire side is closed, it becomes irrelevant, and the advantage of one of the players on the opposite side would be vital. It is impossible for both sides to have advantage at one and the same side, the area is just too small for that. Therefore, the player enjoying advantage on the side of the board still not closed will have definite chances of success. Having advantage would mean attacking, deploying storming pawns, gaining space advantage on that side, etc. Engines are very often tricked by such developments. They seem to think that they enjoy some advantage points on the area that is fully closed, but in reality factors like space advantage gained on the fully closed side, either by ps or pieces, favourable piece positioning on that side, good mobility of pieces measured within the area of the side, become partially, or, in most cases, even completely irrelevant, as the play is concentrated elsewhere, and those ps and pieces do not participate in real life events.

The player that has closed an entire side and is at a disadvantage on the other side seems more or less doomed. It is only a matter of time that the advantage of the opponent increases further, because of inexistent counterplay. Therefore, rules guiding the closure of files/sides seem of essence.

The solution might be to partially or fully neglect advantage points on the side that is fully closed, when the enemy has advantage points on the side that is still not fully closed. When you have advantage points on a side that is fully closed, however, with having advantage also on the side that is still not fully closed, that could only increase your chances of a win.

Closing an entire side would mean closing the last file on that side of the board (either queen or king). The player that closes the last file is said to have closed the entire side. The situation with one file still open, and when all files are closed, would be completely different, as, instead on the whole area of the board, the battle now will proceed exclusively on the side which is not completely closed. Counterplay possibilities would be reduced enormously, if non-existent at all.

A file could be closed usually with an own pawn fixing an enemy one.

But there are also other possibilities.

One would be having a pair of backward-fated ps on a certain file. Eg. wpsb4,c3,d4, bpsb5,c6,d5 In this case the c file should be counted as closed, even if one of the backward-fated ps is squares further back, eg. a pawn on c7 instead of c6 in the above case.

Another would be blocking when part of bigger fixed structures. Eg. wpsc3,e5, wnd4, bpsc4,d5,e6 The d file should be counted as closed, as the blocking piece is impossible to remove.

When considering closure of files for defensive purposes, blocking of enemy passers with bigger fixed structures should also be counted as such. Eg. wpsa6,b5,c4, bpsc5,b6, bna6 The a file could be counted for closed, as the blocking knight on a6 is really difficult or impossible to remove, because of the lack of access of enemy pieces to it. But that would be valid, only if the number of all pairs of fixed ps (the knight file included) is at least 5 or 6, as drawing chances in that case would increase.

With bigger fixed structures, and when there are no alternatives, a king could also be considered for blocking purposes, counting the file where the king would block an enemy pawn as closed.

On some particular occasions, a single move would close 2 files at the same time, and such a decision is even more responsible. Eg. wpsa3,b2,c3, bpsa5,b5,c4 Currently, the only closed file would be c. If black plays b4, some files might be opened, although it might not be very clear which player's best interests they will serve more. If black plays a4 instead, however, 2 additional files will be closed at the same time - the a file, because of fixed ps, and the b file, because of the presence of backward-fated ps (or semi-fixed structures). In case the situation on the other side (the king side) is unclear, or black enjoys some advantage, that would be fine, because it would be white that would need some counterplay. If, however, on the king side white has the advantage, in terms of space, attacking, etc., the closing move (actually closing an entire side, in case the d file is also closed) would be enormously unfortunate, as black is already devoid of the slightest counterplay chances. That would be a major positional mistake, difficult or impossible to correct. Beneficial factors for black on the queen side, and actually half of the pieces, would suddenly become largely irrelevant, as the center of events now revolves exclusively around the king side.

### **Attacking a piece whose capture will deteriorate your position in some way, with existing tensions**

Attacking a piece, whose capture will deteriorate your position in some way, with existing tensions (i.e. pieces of equal power mutually attacking each other), will carry some penalty with it, as the attack might be just a waste of time, if linked to a number of variations, having to do with positional concessions.

-12mps in any case for such attack

Positional concessions might include possible pawn recaptures, opening a file to the enemy's benefit, improving piece positioning values for enemy pieces with possible recaptures, etc.

### **Attacking squares of the enemy king shelter that are more central**

Attacking squares of the enemy king shelter that are more central (for example, for a king on g1, that would be f3, f2 and g3) would be due some well deserved bonus, as, in spite of the fact that such squares are usually better defended, because more pieces yield influence closer to the center, a successful attack would mean doing away with the rest of the king's bastions would be an easier task.

1/4 higher value for attacking such squares

### ***King attack with both central files closed***

When both central e and d files are closed, an attack upon the enemy king would have a priority, as, with the focal center closed, it will be more difficult to find counterplay on the other side of the board, even if possible.

+20cps for attacking the enemy king in such a case (meaning attacking with pieces, storming pawns, gaining space advantage, etc.)

+5cps for any enemy ps, challenging control of the closed center, as this would challenge also the king-side attack (challenging control would mean attacking with ps the focal center in the hope it will crumble)

### ***Seeking counterplay in the center with enemy king-side attacks***

When the enemy attacks your king side, the appropriate strategy would be to seek counterplay in the center, and only when that does not work, to try counterplay on the more distant side of the board. Counterplay in the center (meaning, attacking the enemy pawn center with ps and pieces, trying to open central e or d files, etc.) is generally much more efficient than counterplay at the other, more distant, side of the board, because the pieces involved in it, with their central positions, will be well prepared not only to defend the own king, but to influence the overall play on the entire board, including glancing at the enemy king. Control of central files (e and d) by heavy pieces is also a more efficient combating tool than control of a file near the end of the board, simply because the impact of central control is bigger.

+30cps for such a strategy

### **Counter-attacks**

A counter-attack would be the case when, with both kings castled on the same side of the board, one of them would be better prepared to attack the enemy king; as, in most cases, sticking just to defensive strategy would sooner or later lead the defending side to passivity and probable loss, the other side is compelled to search for a way to decrease the pressure upon the own king. The right decision is usually found in attacking on the other side of the board or in the center, where chances for an appropriate response would usually be better. The end goal will be, of course, too, to come closer to the enemy king.

Bonus points could be dispensed for a decision and counter-attacking pattern along one of the 2 possible counter-attacking options:

+30cps for a counter-attack in the center (attacking the enemy pawn center with ps and pieces, trying to open central e or d files, etc.)

Such type of counter-attacking would be more compelling, because of the overall importance of central control (including activities in the center) and the relative closeness to events on different areas of the board.

+20cps for a counter-attack on the more distant opposite side of the board, where the opponent's superiority might be not that difficult to challenge (the substance of the counter-

attack would be attacking enemy objects on that side with pieces, advancing storming ps, gaining space advantage in that area, etc., with the aim of opening files and reducing the distance to the enemy king)

Of course, when the center is not available, you should try attacking through the more distant side, although this will suppose the need for more time until the own forces approach the enemy king from the side.

Storming pawns on that side might be incentivized by considerably increasing their values. But such ps should, at any rate, avoid closing files, as this would be contrary to the purpose of the attack.

Counter-attacks are possible with double-edged positions also (with kings castled on different sides of the board), but in that case it is pretty much obvious that there is no other chance than virulent attacks, as both kings are pretty much exposed.

Counter-attacking is sometimes synonymous with counterplay, although counterplay is the broader term, and is not limited only to attacks.

### **King on a fully closed side**

King on a square pertaining to a fully closed side of the board should, of course, receive a nice bonus (+50cps), as it is difficult to imagine a better shelter for the king. Enemy pieces will hardly have access to it. The problem with this arrangement is to manage to transfer the king somehow on such a side.

### **Pawn storming the enemy king position, that is backward**

1/4 lower value for the storming pawn, as its advance might somewhat depend on its backwardness

But its status as a backward p should be penalised, too.

### **Pawn storming the enemy king position, that is backward-fated**

1/2 lower value for the storming pawn, as its advance would be extremely difficult, and sacrifice-prone

But its status as a backward-fated pawn should be considered, too, as it is vulnerable in this quality.

### **King on an end file of the board with a pawn of the shelter horizontally adjacent to it**

+10cps for the pawn in such a case, as this would be the most important pawn of the shelter again.

Obviously, the position of the king will be somewhere either on the 2nd, or even the 3rd rank.

### **Pawn attacking an enemy pawn that has gained space advantage**

+15mps in such a case, as this will be an attempt to challenge the superiority of the pawn, relating to space

### **End file pawn, defending a piece**

End file a or h pawn, defending a piece, would be due a tiny bonus, as, in the event of a capture of the piece, it will become more centralised.

+1mp

### **Minor piece in between own double ps**

Minor piece in between own double ps on a file is a positive development, as this would be generally good for the ps, the minor, constituting a more or less compact formation with the ps, possibly controlling squares, on which the well-being of the ps would depend.

+3mps in any case

### **Minor piece into the enemy camp, defended by 2 own ps**

Minor piece into the enemy camp, defended by 2 ps, would be a positive development, even if on the file in front of it there is an enemy p, because, in the not so unlikely event of a capture, not a passer, but still a relatively important lead pawn will appear.

+3cps for such an arrangement in any case

### **Attacking more valuable objects**

It would make sense to assign bonus points for attacking more valuable objects. Enemy objects placed in the center of the board, or gaining space advantage, would be, of course, relatively more valuable, as, in the first case, if such an object is captured, the piece positioning of the capturing piece will automatically improve, and, in the second case, a relatively more valuable enemy asset will disappear. Assigning bonus points in such a way could follow the relative value of the enemy piece in terms of specific factors, and would be, undoubtedly, much more realistic than attacking in the usual way. This is what actually is done with attacking squares of the king shelter, that would otherwise be relatively unimportant, if it were not for the enemy king to have taken refuge there. I expect such handling of attacks, if already not done, to provide significant added value.

### **Pawns defending more central pieces**

Pawns defending more centrally placed pieces in terms of files (i.e., the pawn would be on a less central file relative to the piece) would be due some tiny incentive, as, in the event of a capture of the defended piece (with whatever probability), the pawn will become more central.

+2mps in any case

Pawns defending less centrally placed pieces in terms of files, however, would be penalised slightly, as, obviously, there are chances that the pawn will become less central.

-2mps

### **Correlation parameters**

Measuring parameters in the usual way is not always very precise, as sometimes the measurements simply do not reflect the reality on the board. Measuring space advantage or piece positioning on the side of the board, where the enemy king has not castled, for example, might in a variety of cases be not that significant as the measurements would like it to be. The reason for this is that the measurement of such parameters is badly correlated to the truthful situation on the board, which supposes taking into consideration, in the first place, the position of both kings.

Correlation parameters will strive to remedy such shortcomings. Correlation parameters would measure different factors in relation to the position of the enemy king. This would be much more precise an approach than the usual one, because the ultimate goal of chess would be, of course, attacking the enemy king. Such considerations will always take a priority place.

For the purpose we must try to define the distance of attacking and positioned pieces to the enemy king.

A succession of lines around the enemy king, gradually becoming more distant, will be drawn. For an enemy king on g1, the first line will comprise the squares h2-f2-f1, the second line the squares h3-e3-e1, the third line the squares h4-d4-d1, the fourth line the squares h5-c5-c1, the fifth line the squares h6-b6-b1, and the sixth line the squares h7-a7-a1. Bonus points for attacking and piece positioning will be dispensed in accordance with the relative distance to the enemy king.

***Attacking enemy objects in terms of closeness to the enemy king***

Attacking enemy objects (squares), falling within the first line, will score 1/10 higher value than attacking enemy objects (squares), falling within the second line, which in turn will score 1/10 higher value than attacking objects within the third line, etc.

Such way of attacking will be much more reality-driven than the usual way of attacking.

***Piece positioning in terms of closeness to the enemy king***

Own pieces placed within the first line of squares will score 1/10 higher than own pieces within the second line, which in turn will score 1/10 higher than pieces placed within the third line, etc.

Such way of measuring piece positioning will be much more objective than the usual approach.

I expect significant added value with similar measurements and a drastic decrease of off-target decisions.

***Space advantage in terms of closeness to the enemy king***

+30cps for a pawn within the first line of squares

+20cps for a pawn within the second line

+10cps for a pawn within the third line

Other lines will not be considered for this.

+70cps for a minor piece within the first line

+50cps for a minor piece within the second line

+30cps for a minor piece within the third line

Other lines will not be considered for this.

***Mobility in terms of closeness to the enemy king***

Available mobile squares within the sixth line of squares could get the standard value.

1/10 higher value for available mobile squares within the fifth line.

Still 1/10 higher value for available mobile squares within the fourth line, etc.

Intensity of interaction is another parameter that could be successfully considered in terms of correlation.

When the king is not on g1, the corresponding lines will move accordingly, gradually expanding towards the center. After that, calculation of correlation parameters might start in the above-mentioned way.

For a king on g2, the first line of squares will consist of the line h3-f3-f1, the second line of squares of the line h4-e4-e1, etc.

For a king on f2, the first line of squares will consist of the line g1-g3-e3-e1, the second line of squares of the line h1-h4-d4-d1, etc.

### **Double horizontally isolated pawn when part of the king shelter**

Double horizontally isolated pawn, part of the king shelter, should be penalised heavily, as such an arrangement will expose the king and thwart the appropriate development of own pieces at the same time.

double penalty for such a pawn is indicated

### **Two consecutive moves with one and the same piece in the middlegame**

Two consecutive moves with one and the same piece in the middlegame are not as tragic as in the opening, but still, in most cases, when the move is not forced, or obviously good, it would be doubtful that there is not actually a better continuation, involving a different piece.

-9mps in any situation

### **Rook on an open file in terms of closeness to the enemy king**

It would always be better that the rook is closer to the enemy king in terms of files in between the 2 pieces. Less files would mean possibility for an attack at a closer range in the future, and proximity of attack is, doubtless, important.

+7cps for no files in between (rook and enemy king on adjacent files)

+6cps for just one file in between

+5cps for 2 files in between

etc., ending with +1cp for 6 files in between

### **Bonus for storming ps winning tempo**

Storming ps winning tempo (by attacking an enemy piece, of course) is a fortunate circumstance, as one of the most important features of such ps would be rapid advance. That would concern both ps, storming the enemy king position, and ps, storming the other side of the board.

+15mps for a pawn, winning tempo, storming the side, where the enemy king has not castled

+3cps for a pawn, winning tempo, storming the enemy king side

even larger bonus in the case of double-edged positions

### **Asymmetry of forces, attacking the enemy king shelter, and forces, defending it**

Asymmetry of forces, attacking the enemy king shelter, and forces, defending it (either defending squares of the shelter, or being part of it), will matter. Similarity between attacking and defending pieces would in many situations be tantamount to symmetrical constructions, and symmetry generally favours the defending side, while asymmetry - the attacking.

The number of attacking pieces that do not have counterparts in the defence will be measured. (counterparts will mean pieces of same power, knights vs knights, queen vs queen, etc.)

+5cps additional bonus in the case of a presence of an attacking piece with no enemy counterpart in the defence

+10cps, if there are two such pieces

+15cps, if there are three such pieces

**King with no ps in the immediate shelter**

King with no own ps in the immediate shelter zone will always be due some penalty, even if otherwise it would enjoy some overall advantages in terms of the positioning of own pieces, as its exposure would simply be bigger than it is supposed to be.

-25cps in any case (but not in the late endgame)

**Free mobile square for the king immediately in front of it vertically**

Such a square would get some additional bonus (+5cps), as usually this is the most appropriate free mobile square for the king. Eg. for wkg1, such a square would be g2, for wkh1 - h2. But, obviously, almost the same could be said for a free mobile square for the king immediately behind it vertically.

**Rook on a file that would otherwise be open if it were not for an own pawn behind it**

Rook on a file that would otherwise be open, if it were not for an own pawn behind it on the file, would certainly deserve some bonus points, as the main function of a rook on an open file would consist in controlling squares in the enemy camp (on the 7th, 8th ranks, etc.). But that will be considered, only if the pawn is still into the own camp.

half the points for a rook on an open file would be a wise decision; The rook undoubtedly controls important squares, but its mobility on the file is a bit deficient.

Such a rook on a file against the enemy king position could score almost full points, as in this case attacking the enemy king shelter would be worth almost everything.

**Minor piece on an open file of the own king position, defended by a pawn**

Minor piece on an open file of the own king position, defended by a pawn, would be worth some bonus points, even when enemy rooks have already taken control of the file, as it obviously fulfills an important defensive function.

+5cps in any case

+10cps, in case an enemy pawn is not able to attack it

**Bishop on an end file of the board**

Bishop on an end file of the board will always deserve some penalty, as, even if it is otherwise active, such a positioning is simply at least a bit degrading.

-2cps in any case

**King immediately behind a medium pawn vertically**

King placed immediately behind a medium pawn vertically will be due some bonus points, regardless of the position of the king, as in this case the king will be assured of a relatively significant presence of own pawns around it.

+3cps in any situation

**Bonus for pieces defending the square immediately in front of the king vertically**

Pieces defending the square immediately in front of the king vertically will be due higher bonus, as usually this is the most important square of the shelter.

1/4 higher points

**Passer winning tempo**

Passer winning tempo (obviously by attacking an enemy piece along its advance) is due some stimulus, as its progress would be quicker.

+3cps additionally to other bonus points

**Bonus for an existing option of castling**

An existing option of castling (when the king and a rook still have not moved, and there are no own pieces in between) is worth, of course, some bonus, as defensive opportunities for the king will increase.

+5cps for any such option (two at most)

**Diagonal battery of queen and bishop attacking the enemy king shelter on an x-ray**

Diagonal battery of queen and bishop, with the queen in front of the bishop, attacking the enemy king position on an x-ray, would be due some incentive, as, even if there are a couple of objects in between along the x-ray, the enemy king is still under threat.

1/3 the standard bonus for such a battery

**Bonus for rooks in terms of existing open files**

Rooks will get some bonus for each open file on the board, occupied or not by own or enemy rooks.

+3cps for each file

This might make sense especially with material imbalances.

Existing semi-open files might get 15mps each, whether or not they are occupied by own or enemy rooks.

**Immediate king shelter consisting of 2 vertically adjacent pawns**

Immediate king shelter, consisting of 2 vertically adjacent pawns (eg. wkh2, wpsg2,g3), deserves a small bonus in all cases, as such an arrangement will be optimal for facing lateral attacks.

+2cps